LEROY D. BACA, SHERIFF

County of Los Angeles
Sheriff's Department Headquarters
4700 Ramona Boulevard
Monterey Park, California 91754-2169

A Tradition of Service

ADOPTED
BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES
36 November 20, 2012
SACHI A. HAMAI
EXECUTIVE OFFICER

November 20, 2012

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

Dear Supervisors:

APPROVE SOLE SOURCE REPLACEMENT AGREEMENT WITH CERNER CORPORATION TO CONTINUE SERVICES FOR THE SHERIFF'S DEPARTMENT JAIL HEALTH INFORMATION SYSTEM (ALL DISTRICTS) (3 VOTES)

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

SUBJECT

The Los Angeles County Sheriff's Department (Department) is seeking the Board's approval and execution of a sole source replacement agreement and related documents (Agreement) with Cerner Corporation (Cerner) to provide, among other things, remote hosting, new application functionality, and maintenance services with respect to the Department's Jail Health Information System (JHIS). On June 21, 2012, the Department submitted a letter to the Board providing Advance Notification of Intent to Negotiate a replacement agreement with Cerner. The Agreement has a maximum contract sum of $36,551,523.

IT IS RECOMMENDED THAT THE BOARD:

1. Approve and instruct the Chairman of the Board to sign the attached Agreement with Cerner to provide remote hosting services, software upgrades, significant new application functionality, sublicense software, application management services and related services, as well as maintenance services (Services) for Cerner's proprietary JHIS software. The Agreement shall be effective upon Board approval and continue for 60 months with an option to extend up to 5 additional and consecutive 12 month periods.

2. Delegate authority to the Sheriff or his designee to: (1) modify the Agreement to include new or revised standard County contract provisions adopted by the Board as required from time to time, including all applicable documents; and (2) execute Change Notices and Amendments to the Agreement as set forth throughout the Agreement and with prior notice to the CIO.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

Approval of the recommended actions will allow the Department to engage Cerner to provide the required and upgraded Services on Cerner's proprietary JHIS, which is a mission-critical application to the Department, remotely hosted by Cerner at its data centers.

JHIS enables the Department to track the medical and mental health services provided to the approximate 150,000 inmates admitted annually and housed in the Department's custody facilities, which are geographically dispersed throughout the County. JHIS continues to be at risk for failure in the Department's Data Center's outdated hardware and software environment. Additionally, this outdated environment is not capable of handling implementation of several JHIS software releases, which the County pays for and is entitled to under the current Agreement Number 71710 (JHIS Agreement), and the additional functionality necessary to meet the evolving business needs of the Department.

Implementation of Strategic Plan Goals

The services provided under the Agreement support the County's Strategic Plan, Goal 1, Operational Effectiveness; and Goal 3, Integrated Services Delivery, by enabling the Department to provide an improved level of inmate medical services.

FISCAL IMPACT/FINANCING

Cerner has agreed to provide all Services for the initial five-year term of the Agreement for a maximum amount of $36,551,523 which is allocated as follows: (a) $7,006,198 for new application functionality; (b) $9,893,006 for system maintenance fees; (c) $10,384,670 for remote hosting fees, (d) $1,404,270 for software upgrade fees; (e) $2,832,405 for application management fees; (f) $302,892 for travel reimbursement fees; and (g) $4,728,082 of pool dollars.

The amount allocated to pool dollars may be used for specific projects under the proposed Agreement through a Change Notice as described in Subparagraph 6.2 of the Agreement or through an amendment as described in Subparagraph 6.3 of the Agreement.

The Department will establish appropriate allocations in its Inmate Welfare Fund to meet the funding required to continue Services throughout the duration of the Agreement. The Department will also allocate required staffing of subject matter experts, project management, and technical support

personnel throughout the duration of the Agreement including travel of County staff to Cerner's Kansas City, Missouri, offices for JHIS design and build sessions at various stages during the implementation process of new application software modules.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

On August 11, 1998, the Board approved the JHIS Agreement with Cerner to develop, implement, and maintain JHIS for the Department for a five-year time period and a maximum total contract sum of $20,141,006. JHIS addressed the concerns and mandates of the Department of Justice for improved efficiencies and effectiveness within the inmate health care delivery system. There have been eight amendments to the JHIS Agreement that extended the maintenance services to the JHIS Agreement, added additional services and increased the maximum total Contract Sum to $41,118,122. The recommended Agreement will replace the existing JHIS Agreement and will allow the Department to continue using Cerner's proprietary JHIS.

Amendment Number Six (Amendment 6), adopted by the Board on August 2, 2011, engaged Cerner to provide services needed to prepare for the eventual transition of JHIS to be remotely hosted by Cerner. Amendment 6 also engaged Cerner and the County to prepare and negotiate an Agreement to perform, among other things, hosting services. The proposed Agreement is, to the maximum extent possible, modeled after Agreement Number 77285, Probation Electronic Medical Records System (PEMRS), with changes that were mutually agreed upon by the parties.

The proposed Agreement provides for: 1) transition of the Department's JHIS to Cerner's remote hosting environment in Kansas City, Missouri, and 2) ongoing upgrade implementation, security, application management, maintenance, and support services.

The proposed Agreement includes County-required provisions, such as non-responsibility and debarment, jury service, safely surrendered baby, and defaulted property tax reduction. It should be noted that Paragraph 12 of the proposed Agreement (relating to assignment and delegation) adopts a revision to the provision required under Board Policy #5.053 that was originally negotiated under both County JHIS Agreement and PEMRS Agreement.

County Counsel has reviewed and approved the Agreement as to form. In addition, in accordance with the Board's policy, outside counsel (Hanson Bridgett LLP) assisted in the review and negotiation of the Agreement.

The Chief Information Officer recommends approval of the Agreement (CIO Analysis attached).

CONTRACTING PROCESS

In October 1997, the Department issued a Request for Proposals for a JHIS, Cerner was the selected vendor. On August 11, 1998, the Board approved the JHIS Agreement with Cerner. JHIS was subsequently implemented in three phases and has been successfully operating for over ten years.

The proposed Agreement is a sole source agreement with Cerner. On May 3, 2011, the Department submitted an Advance Notification of Intent letter to negotiate Amendment Number 6 to the JHIS Agreement, which allowed for the negotiation of a replacement agreement. In addition on June 21,

2012, the Department submitted an Advance Notification of Intent letter to advise the Board the Department was entering into negotiations for a replacement agreement with Cerner to perform among other things remote hosting and maintenance services.

IMPACT ON CURRENT SERVICES (OR PROJECTS)

If the Agreement is not approved, JHIS software will not have maintenance services beyond November 10, 2012. JHIS is a mission-critical application that is currently at risk for failure in the Department's Data Center's outdated hardware and software environment. Additionally, this outdated environment is not capable of handling implementation of several JHIS software releases, which the County pays for and is entitled under the Agreement, and the additional functionality necessary to meet the evolving business needs of the Department.

Currently, Cerner provides remote hosting services to over 250 of their worldwide clients representing 65 percent of the client base. The County's Probation Department's PEMRS, approved by your Board on June 1, 2010, is a remote hosted Cerner system. Remote hosting provides the Department with a number of advantages among which are: (1) a more predictable level of annual expenditures; (2) avoidance of periodic capital investments to upgrade the Department's Data Center to accommodate new releases, additional application modules and operating platform obsolescence, and (3) improved disaster recovery capability from what is currently available in the Department's Data Center. The Department will experience less planned downtime, avoid ongoing operational costs associated with staff training and technical support of this complex health care system, more readily take advantage of new software upgrades and additional application modules, and benefit from increased scalability to support more users.

CONCLUSION

Upon approval by the Board, please return two adopted copies of this Board letter and two original executed copies of the Agreement to the Department's Contracts Unit.

Sincerely,

LEROY D. BACA
Sheriff

RICHARD SANCHEZ
Chief Information Officer

LDB:IS:is

Enclosures

RICHARD SANCHEZ
CHIEF INFORMATION OFFICER

Office of the CIO

CIO Analysis

NUMBER:	DATE:
CA 12-18	10/4/2012

SUBJECT:

SOLE SOURCE REPLACMENT AGREEMENT WITH CERNER CORPORATION FOR THE JAIL HEALTH INFORMATION SYSTEM

RECOMMENDATION:

☒ Approve ☐ Approve with Modification ☐ Disapprove

CONTRACT TYPE:

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

CONTRACT COMPONENTS:

☒ Software ☐ Hardware
☐ Telecommunications ☒ Professional Services

SUMMARY:

Department Executive Sponsor: Leroy D. Baca, Sheriff

Description: The Sheriff's Department (Sheriff) is requesting approval for an Agreement with Cerner Corporation (Cerner) to provide remote hosting services, application management services, new software licenses, and implementation of new functionality for the Department's Jail Health Information System (JHIS).

Contract Amount: $36,551,523 Funding Source: Inmate Welfare Fund

☐ Legislative or Regulatory Mandate ☐ Subvened/Grant Funded:

Strategic and Business Analysis	PROJECT GOALS AND OBJECTIVES:
	Provide remote hosting services, application management services, new software licenses, and implementation of new system functionality.

BUSINESS DRIVERS:

JHIS is used to support the delivery of inmate health services by the Sheriff's Custody Bureau Medical Unit. The Sheriff has been operating JHIS for over 11 years. Maintaining this system has become costly requiring significant investment in hardware, software, and staff to keep the application current and to implement additional application modules.

To address these issues, the Sheriff is planning to transition JHIS from the Sheriff's Data Center to Cerner's remote hosting environment. This migration will provide the following benefits:

- Mitigate the risk of system failure due to the Department's obsolete hardware and software environment;
- Avoid expenditures for hardware and software upgrades required to maintain operating system currency, accommodate new system releases, and add new application modules; and
- Improve system disaster recovery capability.

PROJECT ORGANIZATION:

The Sheriff's Custody Bureau is driving this project programmatically. The project has a dedicated Project Manager who is managing the JHIS migration.

PERFORMANCE METRICS:

The Agreement includes a Service Level Agreement identifying metrics for software maintenance, remote hosting services, implementation services, application management, help desk support, network and data center management, database management, and disaster recovery.

STRATEGIC AND BUSINESS ALIGNMENT:

The JHIS application is strategically aligned with the Sheriff's Custody Bureau.

PROJECT APPROACH:

This Project will be completed in three phases:

- Phase I – Remote Hosting Cutover, System Upgrade, and Enhancements.
- Phase II – System Application Software Development.
- Phase III – Additional Application Software Modules.

ALTERNATIVES ANALYZED:

JHIS software is proprietary to Cerner and they are sole provider of this service. Maintaining this system on the Sheriff's current environment requires significant investment in hardware, software and staff to keep the application current and to implement additional application modules.

Technical Analysis	ANALYSIS OF PROPOSED IT SOLUTION: The project will be in implemented in three phases: • Phase I – Remote Hosting Services Cutover, System Upgrade and System Enhancements. In this phase, JHIS application will be cutover from the Sheriff's data center to Cerner's data center in Kansas City, Missouri. After the remote hosting environment is stable and performing optimally, the application software will be upgraded to the Millennium 2012, the most recent version of the software. • Phase II – System Application Software Development. This phase consists of implementation of several additional application modules selected by the Sheriff, such as Chart Search, Power Chart Woman's Health, Patient Accounting Interface, and Point of Care Medication. • Phase III – Additional Application Software Modules. Implementation of larger more complex system application modules, such as Lighthouse Statistical Exporting Tools and Powerinsight Data Warehouse.

Financial Analysis	BUDGET: Contract costs One-time costs: Hardware..... $ 0 Software ..... $ 2,232,486 Services ..... $ 4,773,712 Pool Dollars ..... $ 4,728,082 Travel Reimbursement ..... $ 302,892 Ongoing annual costs: Hardware..... $ 0 Software ..... $ 0 Remote Hosting ..... $ 10,384,670 Services ..... $ 14,129,681 **Sub-total Contract Costs:** **$** 36,551,523 Other County costs: One-time costs: Hardware ..... $70,000 Software..... $ 23,000 Services (ISD) ..... $ 0 County staff (existing)..... $ 3,360,000 County staff (net new) ..... $ 0 **Sub-total one-time County costs:** **$** 3,453,000 Ongoing annual costs: Hardware..... $ 10,000 Software..... $ 4,000 Services (ISD)..... $ 0 Services (Contractor) ..... $ 60,000 County staff (existing)..... $ 1,684,000 County staff (net new) ..... $ 0 **Sub-total ongoing County costs:** **$** 1,758,000 **Total one-time costs:** **$** 15,490,172 **Total ongoing annual costs:** **$** 26,272,351
Risk Analysis	RISK MITIGATION: 1. There are minimal risks to this proposed Agreement. Preparatory services, such as installation and configuration of the network infrastructure, JHIS application in advance of the transition to Cerner's remote hosting environment has been completed and tested. 2. The Chief Information Information Security Officer (CISO) has reviewed the Agreement and did not identify any security risks or issues.

CIO Approval	PREPARED BY:	
	Fred Nazarbegian, Sr. Associate CIO	10-17-12 Date
	APPROVED:	
	Richard Sanchez, County CIO	10-17-12 Date

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



AGREEMENT

BY AND BETWEEN

COUNTY OF LOS ANGELES

AND

CERNER CORPORATION

FOR A

JAIL HEALTH INFORMATION SYSTEM

FOR THE

LOS ANGELES COUNTY SHERIFF'S DEPARTMENT

77871

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Attachment A –JHIS Technical and Operational Requirements
Attachment B - Schedule of JHIS Software
Attachment C - Related CONTRACTOR Software Product Descriptions
Attachment D - JHIS Interfaces
Attachment E - JHIS Training
Attachment F - Other Professional Services Fee Schedule
Attachment G – COUNTY Facilities

Exhibit B - Schedule of Payments

Exhibit C - Project Schedule

Exhibit D - Service Level Agreement

Exhibit E - Healthe Intent Master Services Agreement

Exhibit F - CONTRACTOR's EEO Certification

Exhibit G - [RESERVED]

Exhibit H - [RESERVED]

Exhibit I - Required Subcontract Provisions

Exhibit J - CONTRACTOR'S Obligations As a "Business Associate" Under Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the Health Information

Technology for Economic and Clinical Health Act (HITECH)

Exhibit K - COUNTY's Administration

Exhibit L - CONTRACTOR's Administration

Exhibit M - Sexual Harassment/Discrimination/Retaliation Prohibited & Acknowledgement Form

Exhibit N - Confidentiality of CORI

Exhibit O- Source Code Escrow Agreement

AGREEMENT

THIS AGREEMENT NO. 77871 (as further defined below, "Agreement") dated as of November 20, 2012 , is made and entered into by and between the County of Los Angeles ("COUNTY") and Cerner Corporation, a Delaware corporation ("CONTRACTOR"), with regard to the following:

RECITALS

1. COUNTY's Sheriff's Department ("Sheriff's Department") currently operates correctional facilities that are geographically dispersed throughout Los Angeles County.

2. COUNTY and CONTRACTOR previously entered into that certain Agreement No. 71710 dated as of August 11, 1998, as amended from time to time (the "JHIS Agreement") for the benefit of COUNTY and, more specifically, its Sheriff's Department.

3. Under the JHIS Agreement, CONTRACTOR granted COUNTY a perpetual, nonexclusive license to the "Application Software" as defined in the JHIS Agreement ("JHIS Application Software"), for use by three thousand (3,000) COUNTY-named users ("User Licenses") in support of the operations at specified facilities operated by the Sheriff's Department, with COUNTY having the right to change the named users under the User Licenses at any time.

4. COUNTY desires under this Agreement to (a) acquire from CONTRACTOR certain additional software for JHIS that is not currently licensed under the JHIS Agreement, and (b) engage CONTRACTOR to implement such additional software and to provide ongoing maintenance, support, hosting, operation, implementation and management services, and other professional services for JHIS, all as further described in, and subject to the terms and conditions of, this Agreement.

NOW THEREFORE, in consideration of the foregoing, all of which are incorporated as a part of this Agreement, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, CONTRACTOR and COUNTY agree as follows:

1. APPLICABLE DOCUMENTS

1.1 Interpretation

Exhibits A through F and I through O, together with their respective attachments, are attached to and form a part of this Agreement. Exhibits G and H, together

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with their respective attachments, not attached hereto, are incorporated by this reference into and form a part of this Agreement. Exhibits A through O, together with their respective attachments, are referred to individually and collectively below as the "Exhibits." In the event of any conflict or inconsistency in the definition or interpretation of any word, responsibility, schedule, or the contents or description of any task, subtask, deliverable, good, service, or other work, or otherwise, between the body of this Agreement and the Exhibits, or between Exhibits, such conflict or inconsistency shall be resolved by giving precedence first to the body of this Agreement, and then to the Exhibits according to the following priority:

1. Exhibit A - Statement of Work

    Attachment A –JHIS Technical and Operational Requirements
    Attachment B - Schedule of JHIS Software
    Attachment C - Related CONTRACTOR Software Product Descriptions
    Attachment D - JHIS Interfaces
    Attachment E - JHIS Training
    Attachment F - Other Professional Services Fee Schedule
    Attachment G – COUNTY Facilities

2. Exhibit B - Schedule of Payments

3. Exhibit C - Project Schedule

4. Exhibit D - Service Level Agreement

5. Exhibit E - Healthe Intent Master Services Agreement

6. Exhibit F - CONTRACTOR's EEO Certification

7. Exhibit G - [RESERVED]

8. Exhibit H - [RESERVED]

9. Exhibit I - Required Subcontract Provisions

10. Exhibit J - CONTRACTOR'S Obligations As a "Business Associate" Under Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the Health Information Technology for Economic and Clinical Health Act (HITECH)

11. Exhibit K - COUNTY's Administration

12. Exhibit L - CONTRACTOR's Administration

13. Exhibit M - Sexual Harassment/Discrimination/Retaliation Prohibited & Acknowledgement Form

14. Exhibit N - Confidentiality of CORI

15. Exhibit O - Source Code Escrow Agreement

1.2 Entire Agreement

The body of this Agreement, together with the Recitals and all Exhibits and attachments hereto and thereto, shall constitute the complete and exclusive statement of understanding between the parties which supersedes all previous agreements, written or oral, and all communications between the parties relating to the subject matter of this Agreement.

1.3 Definitions

1.3.1 Additional Interfaces

As used herein, the term "Additional Interfaces" shall have the meaning set forth in Subparagraph 7.5 (Other Professional Services).

1.3.2 Agreement

As used herein, the term "Agreement" means this Agreement No. _____, by and between COUNTY and CONTRACTOR, together with the Recitals and all Exhibits and attachments hereto and thereto.

1.3.3 Amendment

As used herein, the term "Amendment" shall mean each Amendment to this Agreement which has been prepared and entered into in accordance with the applicable provisions of Paragraph 6 (Change Notices and Amendments).

1.3.4 Application Management Services

As used herein, the term "Application Management Services" shall have the meaning set forth in Exhibit D (Service Level Agreement).

1.3.5 Application Software

As used herein, the term "Application Software" shall mean all Baseline

Software, Tailoring and Custom Programming Modifications supplied by CONTRACTOR pursuant to this Agreement. Reference to the Application Software may include one or more components or modules thereof or all Application Software in the System.

1.3.6 Baseline Software

As used herein, the term "Baseline Software" shall mean (a) the Specified JHIS Application Software and all other CONTRACTOR software, including, but not limited to, object code, data structures and related Documentation, supplied by CONTRACTOR pursuant to this Agreement, (b) all Tailoring and configuration to such software pursuant to Exhibit A (Statement of Work), (c) all CONTRACTOR tools identified in Exhibit A (Statement of Work) necessary for COUNTY to configure the configurable aspects of such software on an ongoing basis, and (d) all Updates and Upgrades. The Baseline Software is based on and incorporates all CONTRACTOR software products listed in Attachment B (Schedule of JHIS Software) and described in Attachment C (Related CONTRACTOR Software Product Descriptions) to Exhibit A (Statement of Work). Reference to Baseline Software may include one or more components or modules thereof or all Baseline Software in the System.

1.3.7 Change Notice

As used herein, the term "Change Notice" shall mean each Change Notice to this Agreement which has been prepared and entered into in accordance with the applicable provisions of Paragraph 6 (Change Notices and Amendments).

1.3.8 Claims

As used herein, the term "Claims" shall mean all actual or threatened actions, suits, proceedings, hearings, investigations, charges, complaints, claims, demands, petitions, liens, or encumbrances brought by any person or entity (including but not limited to, Federal, State and/or local governmental entities, Subcontractors, officers, employees or other agents of CONTRACTOR, any Subcontractor or COUNTY) other than COUNTY or its administered districts.

1.3.9 Compatible; Compatibility

As used herein, the terms "Compatible" and "Compatibility" shall mean, as the case may be:

(a) The applicable Specified Hardware and Specified Operating Software are capable of supporting, operating, and otherwise performing all anticipated functions of such Specified Hardware or Specified Operating Software, as

the case may be, when used in conjunction with the System Software;

(b) The System Software is capable of performing in accordance with the Specifications and otherwise with this Agreement when used in conjunction with the applicable Specified Hardware and Specified Operating Software;

(c) The System Software with respect to each Phase is capable of interconnecting, integrating and performing in accordance with the Specifications and otherwise with this Agreement when used in conjunction with the System Software for each other Phase;

(d) The Application Software and Interfaces are capable of interconnecting, integrating and performing in accordance with the Specifications and otherwise with this Agreement when used in conjunction with the Third Party Software; and/or

(e) The Third Party Software is capable of interconnecting, integrating and performing all anticipated functions of such Third Party Software when used in conjunction with the Application Software and Interfaces.

1.3.10 Contract Sum

As used herein, the term "Contract Sum" shall have the meaning set forth in Subparagraph 7.1 (General).

1.3.11 CONTRACTOR

As used herein, the term "CONTRACTOR" shall have the meaning set forth in the preamble to this Agreement.

1.3.12 CONTRACTOR's Project Director

As used herein, the term "CONTRACTOR's Project Director" shall have the meaning set forth in Subparagraph 3.1 (CONTRACTOR's Project Director).

1.3.13 CONTRACTOR's Project Manager

As used herein, the term "CONTRACTOR's Project Manager" shall have the meaning set forth in Subparagraph 3.2 (CONTRACTOR's Project Manager).

1.3.14 CONTRACTOR Work Product

As used herein, the term "CONTRACTOR Work Product" means the Application

Software, external systems Interfaces which are not proprietary to COUNTY, as set forth in Attachment D (JHIS Interfaces) to Exhibit A (Statement of Work), medical devices Interfaces, related Documentation and other non-public and proprietary materials, products, processes and procedures developed by CONTRACTOR outside of the scope of this Agreement (whether prior to or during the term of this Agreement), which CONTRACTOR desires to use hereunder, as well as any improvements, developments, or modifications to the foregoing, including derivative works, developed by CONTRACTOR, but excluding COUNTY Materials.

1.3.15 COUNTY

As used herein, the term "COUNTY" shall have the meaning set forth in the preamble to this Agreement.

1.3.16 COUNTY Facility; COUNTY Facilities

As used herein, the term "COUNTY Facility" shall mean any one, and the term "COUNTY Facilities" shall mean any two or more, of the facilities identified in Attachment G (COUNTY Facilities) to Exhibit A (Statement of Work) and any other COUNTY facilities from time to time, provided COUNTY stays within the scope limitations described in the License, (a) housing COUNTY's inmates, (b) providing health and/or mental health services to such inmates, and/or (c) providing correctional services in respect of such inmates, in each case, as designated in writing by COUNTY's Project Director.

1.3.17 COUNTY Materials

As used herein, the term "COUNTY Materials" shall have the meaning set forth in Paragraph 19 (Other Proprietary Considerations).

1.3.18 COUNTY's Project Director

As used herein, the term "COUNTY's Project Director" shall have the meaning set forth in Subparagraph 2.1 (COUNTY's Project Director).

1.3.19 COUNTY's Technical Project Manager

As used herein, the term "COUNTY's Technical Project Manager" shall have the meaning set forth in Subparagraph 2.2 (COUNTY's Technical Project Manager).

1.3.20 COUNTY's Administrative Project Manager

As used herein, the term "COUNTY's Administrative Project Manager" shall have

the meaning set forth in Subparagraph 2.2 (COUNTY's Administrative Project Manager).

1.3.21 Custom Programming Modifications

As used herein, the term "Custom Programming Modifications" shall mean those software programming and/or modifications (other than Tailoring), together with object code and related Documentation, which COUNTY may request, and which CONTRACTOR shall provide, in accordance with Subparagraph 7.5 (Other Professional Services) and Task 8 (Custom Programming Modifications and/or Additional Interfaces) of Exhibit A (Statement of Work).

1.3.22 Day(s)

As used herein, the term "day(s)" shall mean calendar days and not business or working days, unless otherwise indicated.

1.3.23 Deficiency(ies)

As used herein, the term "Deficiency(ies)" shall mean and include defect(s) in design, development, implementation, materials, or workmanship; error(s); omission(s); deviation(s) from published or mutually agreed upon standards, any of the Specifications; or other problem(s) which result in the System not performing in accordance with the provisions of this Agreement, including, without limitation, the Specifications.

1.3.24 Deliverable

As used herein, the terms "Deliverable" and "deliverable" shall mean an item and/or a service to be provided by CONTRACTOR under this Agreement identified as a numbered Deliverable in Exhibit A (Statement of Work) or in a Change Notice or Amendment. The term "Key Deliverable" as used herein shall mean the Deliverables marked with the word "Key" on Exhibit C (Project Schedule). Key Deliverables include, without limitation, Milestones.

1.3.25 Documentation

As used herein, the term "Documentation" shall mean all training course materials, Specifications, customer technical manuals, customer handbooks, customer flow charts, customer technical information, customer reference materials, customer user manuals, customer operating manuals and all other user instructions provided by CONTRACTOR regarding the capabilities, operation, installation and use of the System and/or applicable System Components.

1.3.26 Downtime; Scheduled Downtime; Unscheduled Downtime

As used herein, the term "Downtime" shall mean that period of time when the System or any System Component fails to function in accordance with the Specifications and this Agreement, and as a result COUNTY is unable to utilize the System or any System Component in accordance with the Specifications and this Agreement. Downtime consists of "Scheduled Downtime" and "Unscheduled Downtime," each as defined in Exhibit D (Service Level Agreement).

1.3.27 Due Date

As used in herein, the term "Due Date" shall have the meaning set forth in Subparagraph 7.2 (Credits to COUNTY).

1.3.28 Effective Date

As used herein, the term "Effective Date" shall mean the date set forth in the preamble to this Agreement, which is the date on which this Agreement has been approved and executed by COUNTY's Board of Supervisors and executed by an authorized officer of CONTRACTOR.

1.3.29 Exhibits

As used herein, the term "Exhibits" shall have the meaning set forth in Subparagraph 1.1 (Interpretation). Reference to an Exhibit includes without limitation the body of such Exhibit and its attachments.

1.3.30 Final System Acceptance

As used herein, the term "Final System Acceptance," with respect to each Phase, shall have the meaning set forth in Subparagraph 9.1 (General).

1.3.31 Initial Term

As used herein, the term "Initial Term" shall have the meaning set forth in Paragraph 5 (Term).

1.3.32 Interface(s)

As used herein, the term "Interface(s)" shall mean the software mechanisms, including, but not limited to, object code and related Documentation, which are (a) required to complete the interface(s) referred to in Attachment D (JHIS Interfaces) to Exhibit A (Statement of Work) as either Phase 1, Phase 2, Phase 3 Interfaces or Optional Application Software Module Interfaces, and/or (b)

required to complete any Additional Interfaces. "Interface(s)" additionally includes any modifications to such software mechanisms provided under and in accordance with this Agreement to allow for additional and/or different data to be transmitted over such software mechanisms. Reference to the Interfaces may include one or more components thereof or all Interfaces in the System.

1.3.33 License

As used herein, the term "License" shall have the meaning set forth in Subparagraph 11.2 (License).

1.3.34 Milestone

As used herein, the term "Milestone" shall have the meaning set forth in Subparagraph 4.5 (Phases and Milestones). Milestones also constitute Key Deliverables.

1.3.35 Optional Application Software Modules

As used herein, the term "Optional Application Software Modules" shall mean all Application Software, Third Party Software, Interfaces, conversions and related services for each Optional Application Software Module as set forth in Exhibit A (Statement of Work). Provision of each Optional Application Software Module is optional and shall only be provided by CONTRACTOR under this Agreement following a Change Notice or Amendment under Subparagraph 6.3.

1.3.36 Out-of-Pocket Fixed Price Expenses

As used herein, the term "Out-of-Pocket Fixed Price Expenses" shall mean CONTRACTOR's reasonable and necessary expenditures for CONTRACTOR's staff transportation, per diem, and lodging, at the fixed price daily rate and not to exceed the allowable maximum amount as set forth in Exhibit B (Schedule of Payments).

1.3.37 Phase

As used herein, the term "Phase" shall have the meaning set forth in Subparagraph 4.5 (Phases and Milestones).

1.3.38 Phase 1

As used herein, the term "Phase 1" shall mean all Phase 1 Application Software, Third Party Software, Interfaces, conversions and related services.

1.3.39 Phase 2

As used herein, the term "Phase 2" shall mean all Phase 2 Application Software, Third Party Software, Interfaces, conversions and related services.

1.3.40 Phase 3

As used herein, the term "Phase 3" shall mean all Phase 3 Application Software, Third Party Software, Interfaces, conversions and related services.

1.3.41 Pool Dollars

As used herein, the term "Pool Dollars" shall mean the amount identified as such on Exhibit B (Schedule of Payments), which is the amount that may be allocated under this Agreement to pay for other professional services as described in Subparagraph 7.5 (Other Professional Services) and for the work described in Subparagraphs 6.2 and 6.3, in each case, which have been authorized to be performed and performed as provided in this Agreement.

1.3.42 Production Use

As used herein, the term "Production Use" shall mean the actual use of System Software, conversions and Interfaces of any Phase to perform COUNTY's applicable normal business operations.

1.3.43 Project Control Document

As used herein, the term "Project Control Document" shall mean the project plan and related documentation of the Project Control Document described in Task 1 (Project Planning and Management) of Exhibit A (Statement of Work). The Project Control Document and all reports or other Documentation developed pursuant to Exhibit A (Statement of Work) shall automatically become a part of this Agreement immediately upon COUNTY's approval following their creation or delivery, as the case may be, pursuant to Exhibit A (Statement of Work).

1.3.44 Recitals

As used herein, the term "Recitals" shall have the meaning set forth in the preamble to this Agreement.

1.3.45 Release Conditions

As used herein, the term "Release Conditions" shall have the meaning set forth

in Subparagraph 11.4.C (Source Code Release Conditions).

1.3.46 Remote Hosting Services

As used herein, the term "Remote Hosting Services" shall have the meaning given to such term in Exhibit D (Service Level Agreement).

1.5.47 Sheriff

As used herein, the term "Sheriff" shall mean the elected official who is the Sheriff of the County of Los Angeles.

1.3.48 Sheriff's Department

As used herein, the term "Sheriff's Department" shall have the meaning set forth in the Recitals.

1.3.49 Source Code

As used herein, the term "Source Code" shall have the meaning set forth in Subparagraph 11.4.B (Source Code Escrow).

1.3.50 Specifications

As used herein, the term "Specifications" shall mean any or all of the following, as applicable:

(a) All specifications, requirements and standards set forth in Attachment A (JHIS Technical and Operational Requirements) to, and all Documentation and other specifications, requirements and standards included as Deliverables in, Exhibit A (Statement of Work);

(b) All specifications, requirements and standards set forth in Attachments B (Schedule of JHIS Software) and/or C (Related CONTRACTOR Software Products Descriptions) to Exhibit A (Statement of Work);

(c) The Documentation, to the extent not inconsistent with any of the foregoing in Subparts (a) and/or (b) of this definition;

(d) All specifications identified as such by CONTRACTOR, including, but not limited to, all System design Documentation provided by CONTRACTOR under this Agreement, but only to the extent (i) not inconsistent with any of the foregoing in Subparts (a), (b) and/or (c) of this definition, and (ii) acceptable to COUNTY in its sole discretion; and

(e) All written or electronic materials furnished by or through CONTRACTOR regarding CONTRACTOR's pre-developed and generally available software products, but only to the extent not inconsistent with any of the foregoing in Subparts (a), (b), (c) and/or (d) of this definition, and which outline, describe, or specify (i) functionality, (ii) features, (iii) capacity, (iv) availability, (v) response times, (vi) accuracy, or (vii) any other performance or other criteria for the System or any element of the System.

1.3.51 Specified Hardware

As used herein, the term "Specified Hardware" shall have the meaning set forth in Subparagraph 10.1 (System Warranties and Covenants).

1.3.52 Specified Operating Software

As used herein, the term "Specified Operating Software" shall have the meaning set forth in Subparagraph 10.1 (System Warranties and Covenants).

1.3.53 Subcontractor; Permitted Subcontractor

As used herein, the term "Subcontractor" shall mean any person, entity, or organization to which CONTRACTOR proposes to delegate or has delegated any of its obligations hereunder in accordance with Paragraph 16 (Subcontracting). "Subcontractor" includes, but is not limited to, each "Permitted Subcontractor" as defined in Subparagraph 16.1.

1.3.54 Subtask

As used herein, the terms "Subtask" and "subtask" shall mean one of the sub-areas of work to be performed under this Agreement identified as a numbered Task in Exhibit A (Statement of Work) or in a Change Notice or Amendment.

1.3.55 System

As used herein, the terms "System" shall mean all System Software, Application Upgrades Implementation Services, Application Management Services, , Remote Hosting Services and other services, in each case, described in this Agreement and as otherwise agreed to in writing by CONTRACTOR and COUNTY pursuant to Paragraph 6 (Change Notices and Amendments), collectively comprising the JAIL HEALTH INFORMATION System ("JHIS"). Reference to the System may include one or more components or modules thereof or the entire System.

1.3.56 System Component

As used herein, the term "System Component" shall mean, individually and collectively, each and every component of the System Software.

1.3.57 System Software

As used herein, the term "System Software" shall mean the Application Software, Third Party Software, Interfaces and conversions. Reference to the System Software may include one or more components or modules thereof or all System Software in the System.

1.3.58 Tailor; Tailored; Tailoring

As used herein, the terms "Tailor," "Tailored" and "Tailoring" shall have the meanings set forth in Exhibit A (Statement of Work).

1.3.59 Task

As used herein, the terms "Task" and "task" shall mean one of the areas of work to be performed under this Agreement identified as a numbered Task in Exhibit A (Statement of Work) or in a Change Notice or Amendment.

1.3.60 Third Party Software

As used herein, the term "Third Party Software" shall have the meaning specified in Subparagraph 10.5 (Third Party Software).

1.3.61 Updates

As used herein, the term "Updates" shall have the meaning set forth in Exhibit D (Service Level Agreement).

1.3.62 Upgrades

As used herein, the term "Upgrades" shall have the meaning set forth in Exhibit D (Service Level Agreement).

1.3.63 Upgrades Implementation Services

As used herein, the term "Upgrades Implementation Services" shall have the meaning set forth in Exhibit D (Service Level Agreement).

1.3.64 User

As used herein, the term "User" shall mean any person or entity authorized by the Sheriff's Department to access or use the System or a System Component.

1.3.65 User Acceptance Tests

As used herein, the terms "User Acceptance Tests" and "User Acceptance Testing" shall mean the tests described in Subparagraph 9.3 (User Acceptance Tests).

1.3.66 User Licenses

As used herein, the term "User Licenses" shall have the meaning set forth in the Recitals.

1.3.67 Viruses

As used herein, the term "Viruses" shall mean any device, method or means including, without limitation, the use of any "virus", "lockup", "time bomb", or "key lock", "worm", "back door" or "Trojan Horse" device or program, any disabling code or malware, which has the potential or capability of compromising the security of COUNTY's confidential or proprietary information or of causing any unplanned interruption of the operations of, or accessibility of COUNTY's systems to COUNTY or any User or which could alter, destroy, or inhibit the use of COUNTY's systems, or the data contained therein, or introduce a vulnerability to COUNTY's systems or networks.

1.3.68 Working Day(s)

As used herein, the terms "Working Day(s)" and "working day(s)" shall mean 8:00 a.m. to 5:00 p.m. Pacific Time, Monday through Friday, excluding COUNTY observed holidays.

2. ADMINISTRATION OF AGREEMENT – COUNTY

2.1 COUNTY's Project Director

2.1.1 COUNTY's Project Director for this Agreement shall be the person designated as such on Exhibit K (COUNTY's Administration), or such person's designee.

2.1.2 COUNTY shall notify CONTRACTOR in writing of any change in the name or address of COUNTY's Project Director.

2.1.3 COUNTY's Project Director shall be responsible for COUNTY's performance of its tasks and ensuring CONTRACTOR's compliance with

this Agreement.

2.1.4 COUNTY's Project Director shall meet or confer with CONTRACTOR's Project Director on a regular basis.

2.1.5 Except as expressly set forth in this Agreement, COUNTY's Project Director is not authorized to make any changes in any of the terms or conditions of this Agreement and is not authorized to further obligate COUNTY in any respect whatsoever.

2.1.6 COUNTY's Project Director shall have the right at all times to inspect any and all tasks, Deliverables, goods, services, and/or other work provided by or on behalf of CONTRACTOR.

2.2 COUNTY's Technical and Administrative Project Managers

2.2.1 COUNTY's Technical and Administrative Project Managers for this Agreement shall be the persons designated as such on Exhibit K (COUNTY's Administration), or such person's designee.

2.2.2 COUNTY shall notify CONTRACTOR in writing of any change in the name or address of COUNTY's Technical and Administrative Project Managers.

2.2.3 COUNTY's Technical and Administrative Project Managers shall be responsible for ensuring that the technical and administrative standards and requirements of COUNTY's performance under this Agreement are met.

2.2.4 COUNTY's Technical and Administrative Project Managers are not authorized to make any changes in any of the terms and conditions of this Agreement and is not authorized to further obligate COUNTY in any respect whatsoever.

2.2.5 COUNTY's Project Managers shall advise COUNTY's Project Director as to CONTRACTOR's performance in areas relative to requirements and technical standards.

2.3 COUNTY Personnel

Unless otherwise expressly stated in this Agreement, all COUNTY personnel assigned to this Agreement shall be under the exclusive supervision of COUNTY. Except as otherwise expressly provided in this Agreement, CONTRACTOR understands and agrees that all such COUNTY personnel are assigned only for the convenience of COUNTY.

2.4 Approval of Work

All completed tasks, Deliverables, goods, services and other work provided by CONTRACTOR must have the written approval of COUNTY's Project Director and COUNTY's Technical and Administrative Project Managers, which approval shall be provided or denied in a timely manner considering the circumstances and the procedures set forth in this Agreement and as provided in Exhibit A (Statement of Work) and/or in any applicable Change Notice or Amendment. In no event shall COUNTY be liable or responsible for any payment prior to such written approval.

For each Deliverable, COUNTY will provide to CONTRACTOR written approval or disapproval by COUNTY's Project Director and COUNTY's Technical and Administrative Project Managers within thirty (30) days (or such other period, if any, as may be specified in the Project Control Document with respect to such Deliverable), from delivery to COUNTY's Project Director and COUNTY's Technical and Administrative Project Managers of such Deliverable, provided that CONTRACTOR provides COUNTY's Project Director and COUNTY's Technical and Administrative Project Managers with a written notice simultaneously with the delivery of such Deliverable specifying the date on which such Deliverable was delivered to COUNTY's Project Director and COUNTY's Technical and Administrative Project Managers and specifying the last date for COUNTY's written approval or disapproval of such Deliverable. COUNTY's Project Director shall determine if there is any discrepancy between the date specified by CONTRACTOR for COUNTY's approval or disapproval and the time limit set forth in this Subparagraph 2.4 for such approval or disapproval, and the determination of COUNTY's Project Director as to the correct such date shall be final, subject to Paragraph 46 (Dispute Resolution Procedure). In the event COUNTY fails to provide written approval or disapproval of such Deliverable by the last date for such approval or disapproval, CONTRACTOR may then deliver to COUNTY's Project Director and COUNTY's Technical and Administrative Project Managers a written notice which shall include at the top of the first page, in all capital letters, in bold type face, the following:

"NOTICE TO COUNTY OF LOS ANGELES OF FAILURE TO PROVIDE WRITTEN APPROVAL OR DISAPPROVAL OF A DELIVERABLE IN A TIMELY MANNER PURSUANT TO THE AGREEMENT BY AND BETWEEN THE COUNTY OF LOS ANGELES AND CERNER CORPORATION FOR A JAIL HEALTH INFORMATION SYSTEM FOR THE LOS ANGELES COUNTY SHERIFF'S DEPARTMENT. A WRITTEN RESPONSE IS REQUIRED AS DEFINED IN THE PROJECT CONTROL DOCUMENT"

Such written notice shall specify the Deliverable for which CONTRACTOR is

seeking written approval or disapproval and the date on which such Deliverable was delivered to COUNTY's Project Director and COUNTY's Technical and Administrative Project Managers. If CONTRACTOR provides to COUNTY's Project Director and COUNTY's Technical and Administrative Project Managers a written notice that fully conforms to the foregoing requirements, then COUNTY will provide to CONTRACTOR written approval or disapproval by COUNTY's Project Director and COUNTY's Technical and Administrative Project Managers of such Deliverable within ten (10) working days following receipt by COUNTY's Project Director and COUNTY's Technical and Administrative Project Managers of such a written notice fully conforming to the foregoing requirements. If COUNTY fails to provide such written approval or disapproval within such ten (10) working day period, such written approval or disapproval shall be obtained pursuant to Paragraph 46 (Dispute Resolution Procedure). Any written notice of disapproval from COUNTY's Project Director or COUNTY's Technical and Administrative Project Managers which specifies one or more bases for disapproval shall not be deemed or construed to constitute an exhaustive itemization of the bases for such disapproval, and shall not limit in any manner at any time prior to written approval of such Deliverable by COUNTY's Project Director and COUNTY's Technical and Administrative Project Managers, COUNTY's rights subsequently to disapprove such Deliverable on the same basis or on another basis.

2.5 Approval of Invoices

All invoices submitted by CONTRACTOR for payment must have the written approval of COUNTY's Project Director and COUNTY's Technical and Administrative Project Managers prior to any payment thereof less any offsets due to COUNTY, which approval shall be provided or denied in a timely manner (not to exceed thirty (30) days following submission of the invoice) following COUNTY's approval of the applicable Deliverable or other work pursuant to Subparagraph 2.4 (Approval of Work)) considering the circumstances and the procedures set forth in this Agreement. In no event shall COUNTY be liable or responsible for any payment prior to such written approval. Failure to approve or disapprove of a properly prepared invoice within the specified timeframe shall be deemed to constitute approval of such invoice.

3. ADMINISTRATION OF AGREEMENT - CONTRACTOR

3.1 CONTRACTOR's Project Director

3.1.1 CONTRACTOR's Project Director shall be the person designated as such on Exhibit L (CONTRACTOR's Administration), who shall be a full-time employee of CONTRACTOR.

3.1.2 CONTRACTOR's Project Director shall be responsible for CONTRACTOR's performance of all its tasks and assuring CONTRACTOR's compliance with this Agreement.

3.1.3 CONTRACTOR's Project Director shall be responsible for ensuring that the Deliverables and all other work (a) are in accordance with the requirements of this Agreement, including but not limited to the Specifications, and (b) meet CONTRACTOR's standards of quality for presentation, accuracy and completeness, prior to submitting such Deliverables and other work to COUNTY for approval under this Agreement.

3.1.4 CONTRACTOR's Project Director shall meet or confer with CONTRACTOR's Project Manager and COUNTY's Project Director on a regular basis.

3.2 CONTRACTOR's Project Manager

3.2.1 CONTRACTOR's Project Manager shall be the person designated as such on Exhibit L (CONTRACTOR's Administration), who shall be a full-time employee of CONTRACTOR.

3.2.2 CONTRACTOR's Project Manager shall be responsible for CONTRACTOR's day-to-day activities as related to this Agreement and for reporting to COUNTY in the manner set forth in Subparagraph 3.9 (Reports by CONTRACTOR).

3.2.3 CONTRACTOR's Project Manager shall meet or confer with COUNTY's Project Director and COUNTY's Technical and Administrative Project Managers on a regular basis.

3.3 CONTRACTOR's Integration Architect

3.3.1 CONTRACTOR's Integration Architect shall be the person designated as such on Exhibit L (CONTRACTOR's Administration), who shall be a full-time employee of CONTRACTOR.

3.3.2 CONTRACTOR's Integration Architect shall be responsible for identifying key application integration points that may affect design decisions working across multiple solutions.

3.3.3 CONTRACTOR's Integration Architect shall serve as the application team lead for the CONTRACTOR's project team and works closely with the COUNTY's Technical Project Manager.

3.4 Approval of CONTRACTOR's Staff

3.4.1 Subject to Subparagraph 3.6 (Background Check of CONTRACTOR's Staff), COUNTY, acting through COUNTY's Project Director or otherwise, has the absolute right to approve or disapprove each member or proposed member of CONTRACTOR's key personnel as defined in this Subparagraph 3.4, including, but not limited to, CONTRACTOR's Project Director and CONTRACTOR's Project Manager, prior to, and during, their performing any work hereunder, as well as so approving or disapproving any proposed deletions from or other changes in such personnel. COUNTY agrees to remain reasonable in any such approval or disapproval. COUNTY, acting through COUNTY's Project Director or otherwise, may require replacement of any member of CONTRACTOR's staff performing, or offering to perform, work hereunder, including, but not limited to, CONTRACTOR's Project Director and CONTRACTOR's Project Manager. For CONTRACTOR's key personnel, CONTRACTOR shall provide COUNTY with a resume of each such proposed initial staff member, including, but not limited to, CONTRACTOR's Project Director and CONTRACTOR's Project Manager, and proposed substitute and an opportunity to interview such person prior to such person performing any work hereunder.

3.4.2 For purposes of this Subparagraph 3.4, CONTRACTOR's key personnel shall mean the following positions: (a) CONTRACTOR's Project Director; (b) CONTRACTOR's Project Manager; and (c) CONTRACTOR's Integration Architect.

3.4.3 The following persons shall be provided by CONTRACTOR and are hereby approved as of the Effective Date by COUNTY in the following key roles:

Key Role	Individual
Project Director	Jodi Drury
Project Manager	Eric Urqiza
Integration Architect	Jen Gregg

3.4.4 In addition, CONTRACTOR represents and warrants that it shall, to the maximum extent possible, take all necessary steps to assure continuity over time of the membership of the group constituting CONTRACTOR's

staff, including, but not limited to, CONTRACTOR's Project Director and CONTRACTOR's Project Manager. To this end, CONTRACTOR agrees that it shall not replace, reassign or reallocate any of CONTRACTOR's key personnel without the prior written consent of COUNTY's Project Director, except upon such individual's resignation, termination, death, incapacity or personal reasons. COUNTY's Project Director shall not unreasonably withhold its consent in connection with replacement, reassignment or reallocation of any of CONTRACTOR's key personnel. CONTRACTOR shall promptly fill any staff vacancy with personnel having qualifications at least equivalent to those of the staff member(s) being replaced.

3.4.5 In fulfillment of its responsibilities under this Agreement, CONTRACTOR shall utilize, and permit utilization of, only staff fully trained and experienced, and as appropriate, licensed or certified in the technology, trades, and tasks required by this Agreement.

3.4.6 CONTRACTOR shall supply sufficient staff to discharge its responsibilities hereunder in a timely and efficient manner, including, without limitation, as required to comply with the Project Control Document.

3.4.7 In the event CONTRACTOR should ever need to remove any staff from performing work under this Agreement, CONTRACTOR shall provide COUNTY with notice at least fifteen (15) days in advance, except in circumstances in which such notice is not possible, and shall work with COUNTY on a mutually agreeable transition plan so as to provide an acceptable replacement and ensure project continuity.

3.4.8 CONTRACTOR shall notify the COUNTY's Project Director within two (2) Working Days when any staff who either (a) has access to inmate records or (b) is assigned to come onsite to any COUNTY Facility is no longer performing work under this Agreement for any reason.

3.4.9 All staff employed by and on behalf of CONTRACTOR shall be adults who are fully fluent in both spoken and written English.

3.5 Compliance With COUNTY Rules And Regulations

Without limiting Paragraph 21 (Compliance with Applicable Law), all CONTRACTOR and all staff performing work hereunder on behalf of CONTRACTOR shall abide by all policies, procedures and directives applicable to a COUNTY Facility while present at such COUNTY Facility, as these may be

amended from time to time. COUNTY's Project Director and/or COUNTY's Technical and Administrative Project Managers will provide written copies to CONTRACTOR and such staff on the applicable policies, procedures and directives prior to CONTRACTOR or such staff entering a COUNTY Facility.

3.6 Background Check of CONTRACTOR's Staff

3.6.1 No staff performing work hereunder on behalf of CONTRACTOR who have access to the Sheriff's Department's Data Network, Criminal Records or that come into the secured side of the custody environment within a COUNTY Facility shall have a criminal conviction record or pending criminal trial unless such information has been fully disclosed and use of such staff hereunder is approved (in writing) by the Sheriff's Department. No staff member who have access to the Sheriff's Department's Data Network, Criminal Records or that come into the secured side of the custody environment within a COUNTY Facility shall be on active probation or parole currently or within the last three (3) years.

3.6.2 COUNTY reserves the right (a) to require a background investigation of CONTRACTOR's prospective staff prior to assignment to work hereunder, (b) to require further background investigation (not including the records check conducted under Subparagraph 3.6.4) of such staff at any time, (c) to bar any such staff from working on hereunder under appropriate circumstances and (d) to preclude the CONTRACTOR from assigning any staff member to perform work or to continue performing work hereunder.

3.6.3 CONTRACTOR staff that fall into the categories specified in 3.6.1 of this Agreement that will be performing work on hereunder shall be under a continuing obligation to disclose any prior or subsequent criminal conviction record or any pending criminal trial to COUNTY's Project Director.

3.6.4 CONTRACTOR shall submit the names of staff to the COUNTY's Project Director prior to such staff starting work hereunder. For CONTRACTOR staff that have access to the Sheriff's Department's Data Network, Criminal Records, or that come into the secured side of the custody environment within a COUNTY Facility, COUNTY will schedule appointments to conduct an in-person background investigation/record checks based on fingerprints of such staff at a designated location to be determined by the Sheriff's Department. Notwithstanding the foregoing, CONTRACTOR may obtain written authorization from Sheriff's Department to do either of the following with respect to members of

CONTRACTOR's staff that fall into the categories specified in section 3.6.1 of this Agreement; (a) conduct a background investigation/record checks based upon fingerprints of such staff member through a local law enforcement agency, or (b) obtain fingerprints of such staff member through a local law enforcement agency and forward such fingerprints to Personnel Administration Captain Los Angeles County Sheriff's Department, 101 Centre Plaza Drive, Monterey Park, California 91754, for COUNTY to conduct the background investigation/records check. Regardless of whether COUNTY or CONTRACTOR conducts the background investigation/records check, the Sheriff's Department shall be listed as the reporting agency for all such background investigations/records checks. CONTRACTOR'S staff performing work hereunder shall not begin any such work before receiving written notification of clearance from COUNTY.

3.6.5 Because COUNTY is charged by the State for checking the criminal conviction records of CONTRACTOR's staff, COUNTY will bill CONTRACTOR to recover the expense for all background investigations/records checks conducted by COUNTY under this Subparagraph 3.6. The current amount is $32.00 per record check, which is subject to change by the State. CONTRACTOR will bear all expense of the background investigations/records checks conducted by CONTRACTOR under this Subparagraph 3.6.

3.6.6 CONTRACTOR shall indemnify, defend, and hold harmless COUNTY, its districts administered by COUNTY, and its elected and appointed officers, employees, and agents, from and against any and all Claims, damages, liabilities, losses, costs, and expenses, including, but not limited to, reasonable defense costs and legal, accounting and other expert, consulting or professional fees, arising from or related to COUNTY's performance of criminal background checks and any limitations imposed on CONTRACTOR's staff, except to the extent such Claims, damages, liabilities, losses, costs and expenses result directly from the sole negligence of COUNTY in performing criminal background checks under this Subparagraph 3.6. Although the parties have agreed to limit CONTRACTOR's indemnification obligation under this Subparagraph 3.6 as expressly provided in the immediately preceding sentence, the parties understand and agree that such limitation is not intended to, and shall not, reduce in any respect (a) CONTRACTOR's obligation to conduct its own due diligence in connection with its hiring practices and (b) CONTRACTOR's liability, whether under this Agreement, at law or in equity, for the actions of its staff. Any legal defense pursuant to CONTRACTOR's indemnification obligations under this Subparagraph 3.6 shall be conducted by CONTRACTOR and

performed by counsel selected by CONTRACTOR and approved by COUNTY (which approval shall not be unreasonably withheld) in writing. Notwithstanding the preceding sentence, COUNTY shall have the right to participate in any such defense at its sole cost and expense, except that in the event CONTRACTOR fails to provide COUNTY with a full and adequate defense, as required by law or this Agreement, COUNTY shall be entitled to reimbursement for all such costs and expenses.

3.6.7 CONTRACTOR shall be responsible for the ongoing implementation and monitoring of this Subparagraph 3.6. On at least a quarterly basis, CONTRACTOR shall deliver a written report to COUNTY's Project Director, which report shall identify (a) all staff that have received a background investigation during the reporting period, (b) all staff that have been disqualified or otherwise removed from performing work under this Agreement under this Subparagraph 3.6, (c) all staff that have been cleared to perform work under this Agreement under this Subparagraph 3.6, (d) any prior or subsequent criminal conviction record or any pending criminal trial with respect to any staff of which CONTRACTOR becomes aware, and (e) any staff member on active probation or parole currently or within the last three (3) years of which CONTRACTOR becomes aware.

3.6.8 COUNTY represents and warrants that with respect to, and during the performance of, criminal background checks performed by COUNTY under this Subparagraph 3.6, COUNTY will comply with all Federal, California State and local laws that are applicable to such criminal background checks.

3.7 CONTRACTOR's Staff Identification

3.7.1 CONTRACTOR shall provide, at CONTRACTOR's expense, all staff performing work under this Agreement with a CONTRACTOR identification badge, which identifies staff by name and photo. All staff who are assigned to come onsite to any COUNTY Facility are required to have a COUNTY-approved identification badge (in this Subparagraph 3.7, "Contractor's Staff ID") on their person and visible at all times.

3.7.2 CONTRACTOR is responsible to ensure that employees have obtained a Contractor's Staff ID before they are assigned to work in a COUNTY Facility. CONTRACTOR personnel may be asked to leave a COUNTY Facility by a COUNTY representative if they do not have the proper Contractor's Staff ID on their person.

3.8 Sexual Harassment/Discrimination/Retaliation Training

3.8.1 CONTRACTOR shall provide training to all staff who either (a) may come onsite to any COUNTY Facility or (b) are named in or are otherwise dedicated by CONTRACTOR to this Agreement, on sexual harassment, discrimination, and retaliation. This training shall be substantially in accordance with California Government Code section 12950.1 and otherwise with applicable law.

3.8.2 CONTRACTOR shall provide COUNTY's Project Director with a certified document in the form attached as Exhibit M (Sexual Harassment/Discrimination/Retaliation Prohibited Form) with respect to each such staff member. Such certified document will be required from the CONTRACTOR before such staff member may perform work under this Agreement.

3.9 Reports by CONTRACTOR

In order to control expenditures and to provide COUNTY with ongoing information as to all tasks, subtasks, Deliverables, goods, services, and other work provided by CONTRACTOR, CONTRACTOR shall provide COUNTY's Project Director and COUNTY's Technical and Administrative Project Managers with written reports as described in Task 1 (Project Planning and Management) in Exhibit A (Statement of Work) which shall include, but not be limited to, the following information:

A. Period covered by the report.

B. Overview of the reporting period.

C. Tasks, subtasks, Deliverables, goods, services, and other work scheduled for the reporting period which were not completed.

D. Tasks, subtasks, Deliverables, goods, services, and other work for the reporting period which were completed.

E. Tasks, subtasks, Deliverables, goods, services, and other work completed in the reporting period which were not scheduled.

F. Tasks, subtasks, Deliverables, goods, services, and other work to be completed in the next reporting period.

G. Issues to be resolved.

H. Issues resolved.

I. Summary of project status as of reporting date.

J. Any other information which COUNTY's Project Director or COUNTY's Technical and Administrative Project Managers may from time-to-time reasonably require.

Each report shall be signed by CONTRACTOR's Project Manager. CONTRACTOR shall deliver copies of each report to COUNTY's Technical and Administrative Project Managers electronically via e-mail.

4. WORK

4.1 General

Pursuant to the provisions of this Agreement, CONTRACTOR and COUNTY shall on a timely basis provide, complete, and deliver all tasks, subtasks, Deliverables, goods, services, and other work as set forth in this Agreement, including, without limitation, Exhibit A (Statement of Work) and Exhibit C (Project Schedule), as may be updated from time to time by the Project Control Document in accordance with Exhibit A (Statement of Work), Exhibit D (Service Level Agreement), and/or in any Change Notice or Amendment.

4.2 Unapproved Work

If CONTRACTOR provides any tasks, subtasks, Deliverables, goods, services or other work to COUNTY other than those specified in this Agreement or in any Change Notice or Amendment, or if CONTRACTOR provides such items requiring COUNTY's prior written approval without first having obtained such written approval, the same shall be deemed to be a gratuitous effort on the part of CONTRACTOR and CONTRACTOR shall have no claim whatsoever against COUNTY therefor. COUNTY reserves the right to reject any tasks, subtasks, Deliverables, goods, services, and/or other work not approved in writing by COUNTY pursuant to Subparagraph 2.4 (Approval of Work) or other provisions of this Agreement.

4.3 System

CONTRACTOR shall provide the System to COUNTY in accordance with the terms and conditions set forth in this Agreement.

4.4 Service Level Agreement

4.4.1 General

In exchange for payment of the applicable fees set forth on Exhibit B (Schedule of Payments) in accordance with this Agreement, CONTRACTOR shall provide COUNTY with maintenance, support, Upgrades Implementation, Application Management and Remote Hosting Services, in each case, for the System Software as set forth in, and in accordance with, the terms of Exhibit D (Service Level Agreement). Without limiting the foregoing, provided that COUNTY is paying the applicable fees set forth in Exhibit B (Schedule of Payments) in accordance with this Agreement, then all Updates and Upgrades to the System Software, or any System Component, and all Documentation shall be provided to COUNTY, at no additional cost over and above the sums otherwise payable by COUNTY under this Agreement, promptly after the creation thereof, and in no event later than thirty (30) days after COUNTY's request therefor.

4.4.2 Service Level Commitment Credits

COUNTY shall be entitled to service level commitment credits in connection with CONTRACTOR's performance of maintenance, support, Application Management and/or Remote Hosting Services, under the circumstances described in, and calculated in accordance with, Exhibit D (Service Level Agreement).

4.5 Phases and Milestones

4.5.1 The work to be carried out under this Agreement shall be carried out in phases (each a "Phase"), as described in Exhibit A (Statement of Work) and Exhibit C (Project Schedule), as may be updated from time to time by the Project Control Document in accordance with Exhibit A (Statement of Work), except that provision of each Optional Application Software Module is optional and shall only be provided by CONTRACTOR following a Change Notice to this Agreement pursuant to Subparagraph 6.3.

4.5.2 Such Phases and the work to be carried out hereunder recognize the milestones identified in Exhibit C (Project Schedule) (each a "Milestone"), each of which must be completed by the date identified therefor in Exhibit C (Project Schedule), as may be updated from time to time by the Project Control Document in accordance with Exhibit A (Statement of Work).

4.5.3 A Milestone shall be deemed completed for purposes of this

Subparagraph 4.5 on the earliest date that all of the tasks, subtasks, Deliverables, goods, services and other work required for completion of such Milestone are completed and delivered to COUNTY, provided that all of such tasks, subtasks, Deliverables, goods, services and other work required for completion of such Milestone are thereafter approved in writing by COUNTY pursuant to Subparagraph 2.4 (Approval of Work). The determination of whether each Milestone has been so completed and so approved, and of the date upon which such Milestone was completed, shall be made by COUNTY's Project Director as soon as practicable after COUNTY is informed by CONTRACTOR that such Milestone has been completed and is given all the necessary information, data and documentation to verify such completion.

4.6 Delivery of Work

Except as otherwise approved in writing and in advance by COUNTY's Project Director, CONTRACTOR agrees that the System Software (including all related Documentation, Updates and Upgrades provided under Exhibit A (Statement of Work), and/or other deliveries and associated documentation under Exhibit A (Statement of Work), Exhibit D (Service Level Agreement) or other professional services) shall be delivered solely in electronic form, by "load and leave" method, or as otherwise mutually agreed by COUNTY and CONTRACTOR. COUNTY agrees to facilitate electronic delivery of the System Software through: (a) participation with CONTRACTOR's technical team delivering such software electronically (including identification of CONTRACTOR team member electronically delivering software); (b) providing appropriate high-speed connectivity; (c) providing back-up and recovery services including required server(s) and CD burner(s); and (d) providing or acquiring other items or services reasonably required, as determined by COUNTY's Project Director, to assure such software delivered is adequately protected and readily available on a timely basis for implementation processes. CONTRACTOR shall not deliver or provide any System Software, related Documentation or training materials on magnetic, optical, print or other tangible media under this Agreement, including under Exhibit A (Statement of Work), Exhibit D (Service Level Agreement), or other professional services and COUNTY shall refuse to accept delivery of such items so delivered by or on behalf of CONTRACTOR. Further, no hardware or other equipment is being purchased by COUNTY pursuant to this Agreement, including Exhibit A (Statement of Work), Exhibit D (Service Level Agreement), under other professional services or otherwise.

4.7 Healthe Intent Master Services Agreement

The Chart Search and St. Johns Sepsis Agent services (the "Cloud Services") shall be governed by the terms and conditions of the Healthe Intent Master

Services Agreement, dated _____, and the Cerner Sales Order, dated _____, entered into between the parties (the "Healthe Intent Agreements") attached hereto as Exhibit E. For the avoidance of doubt, the Healthe Intent Agreements shall supersede all terms and conditions of this Agreement with respect to the Cloud Services.

5. TERM

The term of this Agreement shall commence upon the Effective Date and shall continue for sixty (60) months ("Initial Term"), and thereafter may be extended, upon Board approval, for up to five (5) additional and consecutive twelve (12) month periods (in this Paragraph 5, each an "Extended Term"), unless sooner terminated, in whole or in part, as provided in this Agreement. As used herein, the words "term of this Agreement" mean and include the Initial Term and all exercised Extended Terms.

The COUNTY maintains databases that track/monitor contractor performance history. Information entered into such databases may be used for a variety of purposes, including determining whether the COUNTY will exercise a contract term extension option

6. CHANGE NOTICES AND AMENDMENTS

6.1 COUNTY reserves the right to change any portion of the work required under this Agreement and any other provision of this Agreement. All such changes shall be accomplished only as provided in this Paragraph 6.

6.2 For any change which either (a) does not affect the scope of work, term of this Agreement, payments, or any term or condition included in this Agreement, or (b) engages CONTRACTOR to provide work under Subparagraph 7.5 (Other Professional Services), such change may be effected, but only on mutual agreement, by means of a Change Notice executed by the Sheriff's Department and an authorized officer of CONTRACTOR; provided that Change Notices that engage CONTRACTOR to provide work under Subparagraph 7.5 (Other Professional Services) (i) do not require any amendment of any term or condition of this Agreement, (ii) use then-available Pool Dollars, (iii) price all services at or below the applicable pricing set forth on Attachment F (Other Professional Services Fee Schedule) to Exhibit A (Statement of Work), if any, and (iv) for Custom Programming Modifications and Additional Interfaces, have the prior written approval of County Counsel and COUNTY's Chief Information Officer.

6.3 Except as expressly provided in the remainder of this Subparagraph 6.3 and/or in Subparagraphs 6.2, 6.4, and/or 6.5, for any change which affects

the scope of work, term of this Agreement, payments, or any term or condition included in this Agreement, a negotiated Change Notice or Amendment to this Agreement shall be prepared and executed by COUNTY's Board of Supervisors and an authorized officer of CONTRACTOR. Notwithstanding the foregoing, the Sheriff's Department may execute Change Notices or Amendments on behalf of COUNTY under this Subparagraph 6.3 which do any of the following:

A. Subject to the other provisions of this Paragraph 6, update the attachments to Exhibit A (Statement of Work) during implementation as is necessary to accurately reflect the as-built System; provided that (i) any such Amendment shall not affect any other provision of this Agreement and (ii) written approval of any such Amendment by County Counsel has been obtained;

B. Move one or more Optional Application Software Modules to Phase 1, Phase 2 and/or Phase 3 as contemplated by Subparagraph 9.1.A; provided that (i) any such Change Notice uses then-available Pool Dollars, (ii) pricing of all software included in any such Change Notice or Amendment is at or below the applicable pricing set forth on Attachment B (Schedule of JHIS Software) to Exhibit A (Statement of Work), if any, and (iii) pricing of all services included in any such Change Notice is at or below the applicable pricing set forth on Attachment F (Other Professional Services Fee Schedule) to Exhibit A (Statement of Work), if any;

C. Move (i) one or more Application Software modules or Interfaces then-included in Phase 1, Phase 2, and/or Phase 3 to any other phase and (ii) all amounts then-allocated on Exhibit B (Schedule of Payments) to such Application Software modules or Interfaces to Pool Dollars.

6.4 CONTRACTOR and COUNTY have agreed upon a project schedule for all tasks and subtasks as listed in Exhibit C (Project Schedule), as may be updated from time to time by the Project Control Document in accordance with Exhibit A (Statement of Work). Notwithstanding any other provision of this Paragraph 6, changes to the project schedule which do not impact either scope of work or cost of this Agreement may be made, but only upon mutual agreement in writing, by COUNTY's Project Director and CONTRACTOR's Project Director; provided that COUNTY's Project Director and CONTRACTOR's Project Director's agreement to alter the project schedule

shall not prejudice either party's right to claim that such alterations constitute a Change Notice or Amendment to this Agreement that shall be governed by the terms of Subparagraph 6.3. Additionally notwithstanding any other provision of this Paragraph 6, to the extent that extensions of time for CONTRACTOR performance do not impact either scope of work or cost of this Agreement, COUNTY's Project Director may, in such person's sole discretion, grant CONTRACTOR requests for extensions of time in writing for the work listed in the project schedule, provided that such extensions shall not exceed a total of six (6) months and such extensions shall not extend the term of this Agreement.

6.5 Notwithstanding any other provision of this Paragraph 6 or Paragraph 32 (Termination for Convenience), the Sheriff's Department shall take all appropriate action to carry out any orders of COUNTY's Board of Supervisors and/or Chief Executive Officer relating to this Agreement, and, for this purpose, the Sheriff's Department is authorized to: (1) issue written notice(s) of partial or total termination of this Agreement pursuant to Paragraph 32 (Termination for Convenience) without further action by COUNTY's Board of Supervisors and Chief Executive Officer and/or (2) prepare and sign Amendments to this Agreement which reduce the scope of work and the Contract Sum without further action by COUNTY's Board of Supervisors and Chief Executive Officer.

A. Notices of partial or total termination under this Subparagraph 6.5 shall be authorized under the following conditions:

1. Notices shall be in compliance with all applicable Federal, State, and COUNTY laws, rules, regulations, ordinances, guidelines, and directives.

2. The Sheriff's Department shall obtain the approval of County Counsel for any notice.

3. The Sheriff's Department shall file a copy of all notices with the Executive Office of COUNTY's Board of Supervisors and COUNTY's Chief Executive Office within fifteen (15) days after execution of each notice.

B. Amendments under this Subparagraph 6.5 shall be authorized under the following conditions:

1. Amendments shall be in compliance with all applicable Federal, State, and COUNTY laws, rules, regulations, ordinances, guidelines, and directives.

2. COUNTY's Board of Supervisors has appropriated sufficient funds for purposes of such Amendments and this Agreement.

3. The Sheriff's Department shall obtain the approval of County Counsel for any Amendment.

4. The Sheriff's Department shall file a copy of all Amendments with the Executive Office of COUNTY's Board of Supervisors and COUNTY's Chief Executive Office within fifteen (15) days after execution of each Amendment.

7. CONTRACT SUM

7.1 General

7.1.1 Subject to Subparagraph 2.4 (Approval of Work) and Subparagraph 4.2 (Unapproved Work), Paragraph 9 (Acceptance of System by COUNTY), the "Contract Sum" under this Agreement, including, without limitation, Pool Dollars, and all applicable taxes, shall not exceed Thirty Six Million Five Hundred Fifty One Thousand Five Hundred Twenty Three dollars ($36,551,523) which amount is allocated as set forth on Exhibit B (Schedule of Payments). The Contract Sum is the maximum monetary amount payable by COUNTY to CONTRACTOR for supplying all the tasks, subtasks, Deliverables, goods, services, and other work specified under this Agreement during the Initial Term as shown on Exhibit B (Schedule of Payments).

7.1.2 CONTRACTOR acknowledges that all tasks, subtasks, Deliverables, goods, services and other work specified under this Agreement are payable on a firm, fixed price basis in accordance with the terms and conditions of this Agreement, including but not limited to Paragraphs 4 (Work), 7 (Contract Sum) and 8 (Invoices and Payments). Without limiting the foregoing, the Contract Sum shall not be increased for any costs or expenses whatsoever of CONTRACTOR, and may be modified only pursuant to a Board approved Amendment to this Agreement. Notwithstanding any provision of this Agreement to the contrary, CONTRACTOR shall perform and complete all work set forth in this Agreement in exchange for the amounts to be paid to CONTRACTOR as set forth in this Agreement.

7.2 Credits to COUNTY

7.2.1 For each and every occasion upon which a Key Deliverable has not been completed by CONTRACTOR within forty-five (45) days after the date for completion thereof as set forth in Exhibit C (Project Schedule), as may be updated from time to time by the Project Control Document in accordance with Exhibit A (Statement of Work) (hereafter "Due Date"), other than as a result of delays caused by acts or omissions of COUNTY as determined by COUNTY's Project Director in such person's sole judgment and for which a notice of delay has been delivered in accordance with Paragraph 34 (Notice of Delays), and unless otherwise approved in writing by COUNTY's Project Director in such person's sole discretion, COUNTY shall receive a credit against any or all amounts due to CONTRACTOR, under this Agreement or otherwise, in the total amount of Five Hundred Dollars ($500) for each day of the first thirty (30) days after the Due Date that the Key Deliverable is not completed, and in the total amount of One Thousand Dollars ($1,000) per day for each day in excess of thirty (30) days after the Due Date that the Key Deliverable is not completed, provided that the total aggregate credits pursuant to this Subparagraph 7.2 shall not exceed Five Hundred Thousand Dollars ($500,000). All of the foregoing credits shall apply separately, and cumulatively, to each Key Deliverable in Exhibit C (Project Schedule).

7.2.2 Notwithstanding the foregoing, and provided that COUNTY has not terminated this Agreement as provided in Subparagraph 7.3 (Termination), if any Key Deliverable is not completed by the Due Date, resulting in any of the above credits, but such Key Deliverable is thereafter completed by the date of the Milestone to which such Key Deliverable pertains, and if all other Deliverables required for the completion of such Milestone are completed by the Milestone date specified in Subparagraph 4.5 (Phases and Milestones), then from and after the date such Milestone is completed the foregoing credits shall be reversed and shall no longer be deemed to apply as to any such Key Deliverable. For Key Deliverables that are not associated with a specific Milestone, the credits set forth above shall continue to accrue until the Key Deliverable is completed and shall not be reversed. A Deliverable shall be deemed completed for purposes of this Subparagraph 7.2 and Subparagraph 7.3 (Termination) on the earliest date that all of the tasks, subtasks, deliverables, goods, services and other work required for the completion of such deliverable are completed and delivered to COUNTY, provided that all of such tasks, subtasks, deliverables, goods, services and other work required for the completion of such Deliverable are

thereafter approved in writing by COUNTY pursuant to Subparagraph 2.4 (Approval of Work). For purposes of this Subparagraph 7.2 and Subparagraph 7.3 (Termination), the determination of whether a Deliverable has been so completed and is so approved, and of the date upon which such Deliverable was completed, shall be made by COUNTY's Project Director as soon as practicable after COUNTY is informed by CONTRACTOR that such Deliverable has been completed and is given all the necessary information, data and documentation to verify such completion.

7.2.3 For purposes of this Subparagraph 7.2 and Subparagraph 7.3 (Termination), if a Milestone is also a Key Deliverable, the Milestone completion date shall be within forty-five (45) days after the date specified in Subparagraph 4.5 (Phases and Milestones), and no other extensions shall be allowed for such Milestone or Key Deliverable, unless otherwise mutually agreed to in writing in accordance with this Agreement.

7.3 Termination

In addition to the foregoing provisions of Subparagraph 7.2 (Credits to COUNTY), if any Key Deliverable is not completed within fifteen (15) days after the Due Date, and thereafter approved in writing by COUNTY pursuant to Subparagraph 2.4 (Approval of Work), other than as a result of delays caused by acts or omissions of COUNTY as determined by COUNTY's Project Director in such person's sole judgment and for which a notice of delay has been delivered in accordance with Paragraph 34 (Notice of Delays), and unless the COUNTY's and CONTRACTOR's Project Director have otherwise agreed, in writing, prior to such date for completion, then COUNTY may, upon notice to CONTRACTOR, terminate this Agreement, which termination may, in the sole discretion of COUNTY, be deemed a termination for default within the meaning of Paragraph 31 (Termination for Default) or a termination for convenience within the meaning of Paragraph 32 (Termination for Convenience).

7.4 COUNTY's Obligation in Future Fiscal Years

Notwithstanding any other provision of this Agreement, COUNTY shall not be obligated for CONTRACTOR's performance hereunder or by any provision of this Agreement during any of COUNTY's future fiscal years unless and until COUNTY's Board of Supervisors appropriates funds for this Agreement in COUNTY's Budget for each such future fiscal year. In the event that funds are not appropriated for this Agreement, then this Agreement shall terminate as of June 30 of the last fiscal year for which funds were appropriated. COUNTY shall

notify CONTRACTOR in writing of any such non-appropriation of funds at the earliest possible date. In the event of such a termination, CONTRACTOR shall be entitled to seek payment for Deliverables completed by CONTRACTOR and approved by COUNTY in accordance with this Agreement prior to the effective date of such termination, as is provided under Subparagraph 32.3 with respect to COUNTY's termination for convenience.

7.5 Other Professional Services

7.5.1 Subject to the terms of this Subparagraph 7.5, upon the written request of COUNTY's Project Director made at any time and from time to time during the term of this Agreement, and upon written agreement of the parties in accordance with this Agreement, CONTRACTOR shall provide to COUNTY other professional services, including, but not limited to, (A) Interfaces other than those identified in Attachment D (JHIS Interfaces) to Exhibit A (Statement of Work) and/or (B) Custom Programming Modifications, as set forth in Task 8 (Custom Programming Modifications and Additional Interfaces) of Exhibit A (Statement of Work) as to which COUNTY shall make such request(s). All such other professional services shall be provided at or below the Maximum Hourly Rates for such services as set forth in Attachment F (Other Professional Services Fee Schedule) to Exhibit A (Statement of Work). Out-of-Pocket Fixed Price Expenses may be available for other professional services, and all Out-of-Pocket Fixed Price Expenses shall be subject to approval in advance, in writing, by COUNTY's Project Director, which approval may be granted or withheld in such person's sole discretion.

7.5.2 Without limiting the foregoing, other professional services additionally include maintenance, support, Upgrades Implementation, Application Management and Remote Hosting Services under Exhibit D (Service Level Agreement) for Optional Application Software Module. Such maintenance, support, Upgrades Implementation, Application Management and Remote Hosting Services shall be at the applicable rates set forth on Exhibit B (Schedule of Payments), if any.

7.5.3 Custom Programming Modifications and Additional Interfaces shall be provided in the manner set forth in Task 8 (Custom Programming Modifications and Additional Interfaces) of Exhibit A (Statement of Work) and shall only include requirements not-then reflected in Exhibit A (Statement of Work), as determined in the sole judgment of COUNTY's Project Director.

7.5.4 Requests for other professional services shall proceed as follows:

A. COUNTY will submit an Additional Work Request (in this Subparagraph 7.5, "AWR") to CONTRACTOR. Each AWR must be approved in writing by COUNTY's Project Director, which approval may be granted or withheld in his sole discretion.

B. If the AWR is for Custom Programming Modifications or Additional Interfaces, then within ten (10) working days of CONTRACTOR's receipt of COUNTY's AWR (or such other time period as mutually agreed upon between COUNTY's Project Director and CONTRACTOR's Project Manager), CONTRACTOR shall develop written Specifications for the Custom Programming Modification or Additional Interface.

C. For all AWRs, CONTRACTOR shall additionally develop (1) a description of the requested other professional service, (2) a not-to-exceed estimate of the maximum total fixed price for the requested other professional service and (3) a project schedule for completion of the requested other professional service (in this Subparagraph 7.5, collectively "Estimate"). The estimated maximum total fixed price for the requested other professional service shall be computed at the applicable Maximum Hourly Rate(s) from Attachment F (Other Professional Services Fee Schedule) to Exhibit A (Statement of Work), multiplied by the applicable estimated number of hours to implement the requested other professional service (including, as applicable, development, testing, documentation, certification, installation and training).

E. Within sixty (60) days of receipt of the Estimate and, if applicable, Specifications, COUNTY's Project Director will return the approved or disapproved Estimate and, if applicable, Specifications to CONTRACTOR, which approval or disapproval may be granted or withheld in the sole discretion of COUNTY's Project Director.

F. If COUNTY does not return the approved or disapproved Estimate and, if applicable, Specifications to CONTRACTOR within sixty (60) days, the Estimate and, if applicable, Specifications will be deemed to have been cancelled effective at the expiration of such sixty (60) day period. COUNTY may request an extension within such sixty (60) day period.

G. When CONTRACTOR receives written approval by COUNTY's Project Director, in his sole discretion, of the Estimate and, if

applicable, Specifications, CONTRACTOR shall provide COUNTY, within twenty (20) days of receipt of such request (or such other time period as mutually agreed upon between CONTRACTOR's Project Director and COUNTY's Project Director), a written quotation of a maximum total fixed price (including, without limitation, CONTRACTOR staff level recommended as described on Attachment F (Other Professional Services Fee Schedule to Exhibit A (Statement of Work), and estimated Out-of-Pocket Fixed Price Expenses, if applicable) in response to COUNTY's request. CONTRACTOR's quotation shall be valid for at least sixty (60) days from submission.

H. If COUNTY finds the quotation acceptable, the parties shall mutually and cooperatively draft a Change Notice or Amendment to this Agreement under the applicable provisions of Paragraph 6 (Change Notices and Amendments). The Change Notice or Amendment shall, at a minimum, include a project schedule for completion of the requested other professional service and a payment schedule for such other professional service. If the Change Notice or Amendment is for a Custom Programming Modification or an Additional Interface, the Change Notice or Amendment shall additionally include a statement of work addressing, at a minimum, the Subtasks and Deliverables under Task 8 (Custom Programming Modifications and Additional Interfaces) of Exhibit A (Statement of Work).

I. Upon execution of such Change Notice or Amendment in accordance with the applicable provisions of Paragraph 6 (Change Notices and Amendments), CONTRACTOR shall perform all tasks, subtasks, Deliverables, goods, services and/or other work described in such Change Notice or Amendment and such performance shall be subject to the terms and conditions of this Agreement in addition to the terms and conditions of such Change Notice or Amendment, including any applicable performance and/or service level standards set forth herein.

7.5.5 If COUNTY requests a Custom Programming Modification which CONTRACTOR determines will be incorporated in CONTRACTOR's next release provided to COUNTY and its other customers of any CONTRACTOR software products furnished to COUNTY under this Agreement and if COUNTY's Project Director determines that COUNTY can wait for such next release to obtain such Custom Programming Modification, then CONTRACTOR shall provide such Custom Programming Modification to COUNTY in such next release and

CONTRACTOR shall not charge COUNTY for such next release or such Custom Programming Modification.

7.5.6 If COUNTY requests a Custom Programming Modification which CONTRACTOR determines will be incorporated in CONTRACTOR's next release provided to COUNTY and its other customers of any CONTRACTOR software products furnished to COUNTY under this Agreement and if COUNTY's Project Director determines that COUNTY cannot wait for such next release to obtain such Custom Programming Modification, then CONTRACTOR shall provide such Custom Programming Modification to COUNTY prior to such next release and CONTRACTOR shall charge COUNTY for such Custom Programming Modification in accordance with this Subparagraph 7.5 and Task 8 (Custom Programming Modifications and Additional Interfaces) of Exhibit A (Statement of Work).

7.5.7 If COUNTY requests a Custom Programming Modification which CONTRACTOR determines is unique to COUNTY and would probably not be used by CONTRACTOR's other customers but CONTRACTOR nonetheless determines to incorporate such Custom Programming Modification in CONTRACTOR's next release provided to COUNTY and its other customers of any CONTRACTOR software products furnished to COUNTY under this Agreement and if COUNTY's Project Director determines that COUNTY cannot wait for such next release to obtain such Custom Programming Modification, then CONTRACTOR shall provide such Custom Programming Modification to COUNTY prior to such next release and CONTRACTOR shall charge COUNTY for such Custom Programming Modification in accordance with this Subparagraph 7.5 and Task 8 (Custom Programming Modifications and Additional Interfaces) of Exhibit A (Statement of Work); provided, however, that in the event that within thirty-six (36) months after CONTRACTOR's completion of such Custom Programming Modification for COUNTY, CONTRACTOR sells to another customer for purposes of a correctional facility or other custodial environment any of CONTRACTOR's software products which include such Custom Programming Modification, then for the first such other customer, CONTRACTOR shall provide COUNTY with a one-time credit in the amount of fifty percent (50%) of the Maximum Total Fixed Price charged to COUNTY for such Custom Programming Modification and COUNTY may use such credit throughout the term of this Agreement as described in the next following sentence. COUNTY's Project Director, in such person's sole discretion, may use such credit to reduce the amount due by COUNTY to CONTRACTOR for Cerner Education Classes provided as other professional services pursuant to this Subparagraph 7.5,

provided that the credit amount available for each such class shall be between twenty-five percent (25%) and one hundred percent (100%) of CONTRACTOR's standard published price for such class, and the applicable credit percentage for each such class shall be the same as the percentage shown as an allowable credit for such class on CONTRACTOR's standard published prices.

7.5.8 Without limiting Paragraph 18 (Records and Audits), COUNTY shall have the right to audit CONTRACTOR's compliance with this Subparagraph 7.5 pursuant to Paragraph 18 (Records and Audits).

7.6 Implementation Out-of-Pocket Fixed Price Expenses

Out-of-Pocket Fixed Price Expenses may be available as is necessary for CONTRACTOR to complete and deliver to COUNTY the work under (Tasks 1-6 of Exhibit A (Statement of Work). The Pool Dollars are the maximum amount available under this Agreement for COUNTY's reimbursement of such Out-of-Pocket Fixed Price Expenses. Prior to incurring Out-of-Pocket Fixed Price Expenses under this Subparagraph 7.6 with respect to a particular Task other than as provided for in the Project Control Document with respect to such Task, CONTRACTOR shall obtain the approval in advance, in writing, of COUNTY's Project Director, which approval may be granted or withheld in such person's sole discretion.

8. INVOICES AND PAYMENTS

8.1 General

CONTRACTOR shall invoice COUNTY for all tasks, subtasks, Deliverables, goods, services, and other work which are specified in Exhibit A (Statement of Work), Exhibit B (Schedule of Payments), and/or any Change Notice or Amendment and which have been provided by CONTRACTOR and approved in writing by COUNTY pursuant to the terms of this Agreement and any applicable Change Notice or Amendment. CONTRACTOR shall invoice COUNTY for the fees set forth in Exhibit B (Schedule of Payments) as is specified in Exhibit D (Service Level Agreement). All invoices shall be subject to COUNTY's written approval pursuant to Subparagraph 2.5 (Approval of Invoices). CONTRACTOR shall prepare invoices which shall include the charges owed to CONTRACTOR by COUNTY under the terms of this Agreement. CONTRACTOR's payments shall be as provided in Exhibits B (Schedule of Payments) and D (Service Level Agreement) and any applicable Change Notice or Amendment.

All invoices under this Agreement shall be submitted to the attention of

COUNTY's Project Director at the address listed in Exhibit K (COUNTY's Administration).

Each invoice submitted by CONTRACTOR shall indicate:

A. The tasks, subtasks, Deliverables, goods, services, or other work as described in Exhibits A (Statement of Work), B (Schedule of Payments), D (Service Level Agreement) or any Change Notice or Amendment for which payment is claimed.

B. If applicable, the date of written approval of the tasks, subtasks, Deliverables, goods, services, or other work by COUNTY's Project Director.

C. Indication of any applicable withhold or holdback amounts for payments claimed or reversals thereof.

D. Indication of any applicable credits due COUNTY under the terms of this Agreement or reversals thereof.

E. If the invoice includes Out-of-Pocket Fixed Price Expenses permitted under Subparagraph 7.6 (Out-of-Pocket Fixed Price Expenses), (i) evidence of COUNTY's Project Director's prior approval of such Out-of-Pocket Fixed Price Expenses, if applicable, (ii) supporting documentation for such Out-of-Pocket Fixed Price Expenses, and (iii) the amount of Pool Dollars remaining available under this Agreement. The amount noted as remaining Pool Dollars assumes, for calculation purposes only, the payment by COUNTY of the amount set forth on the particular invoice and any prior or current credits owed to COUNTY.

F. If the invoice is for other professional services described in Subparagraph 7.5 (Other Professional Services) or for the work described in Subparagraphs 6.2 or 6.3, the amount Pool Dollars remaining available under this Agreement will be documented as a note on the invoice. The amount noted as remaining Pool Dollars assumes, for calculation purposes only, the payment by COUNTY of the amount set forth on the particular invoice and any prior or current credits owed to COUNTY.

8.2 Sales/Use Tax

The Contract Sum listed in Paragraph 7 (Contract Sum) shall be deemed to include all amounts necessary for COUNTY to reimburse CONTRACTOR for all applicable California sales/use taxes on all components of the System procured by COUNTY pursuant to or otherwise due as a result of this Agreement. All

California sales/use taxes shall be paid directly by CONTRACTOR to the State. CONTRACTOR shall be solely liable and responsible for, and shall indemnify, defend, and hold harmless COUNTY, its districts administered by COUNTY, and its elected and appointed officers, employees, and agents from, any and all third party Claims arising out of a failure by CONTRACTOR to pay any and all such California sales/use taxes.

Notwithstanding the preceding paragraph, COUNTY acknowledges that the amounts payable by COUNTY to CONTRACTOR in respect of the Application Software or Third Party Software, do not include sales/use tax for products or services provided by CONTRACTOR thereunder. COUNTY shall be solely responsible for any sales/use tax (including penalties) charged or assessed by the State of California on amounts payable thereunder by COUNTY to CONTRACTOR (including but not limited to amounts payable pursuant to the applicable tax rulings, changes in California tax laws or interpretation of such laws), provided that CONTRACTOR shall make commercially reasonable efforts to comply with the provisions set forth in Subparagraph 4.6 (Delivery of Work).

8.3 Payments

A. For tasks, Deliverables, goods, services and other work set forth in (Tasks 2-6 of Exhibit A (Statement of Work), upon approval of such work in accordance with Subparagraph 2.4 (Approval of Work), CONTRACTOR shall submit one or more invoices to COUNTY's Project Director and COUNTY's Technical and Administrative Project Managers for such work in the amounts identified with respect to such work in Exhibit B (Schedule of Payments).

B. For all other professional services requested pursuant to Subparagraph 7.5 (Other Professional Services), including but not limited to Custom Programming Modifications and Additional Interfaces, unless otherwise specified in the applicable Change Notice or Amendment, upon approval of all work associated with such other professional services in accordance with Subparagraph 2.4 (Approval of Work), CONTRACTOR shall submit one or more invoices in the amount of the Maximum Total Fixed Price set forth in the applicable Change Notice or Amendment.

C. For the fees set forth in Exhibit B (Schedule of Payments), CONTRACTOR shall submit invoices as specified in Exhibit D (Service Level Agreement).

D. Subject to COUNTY's rights to withholds and credits under this Agreement, COUNTY will pay the amounts shown in a properly prepared invoice within thirty (30) days of COUNTY's approval thereof under

Subparagraph 2.5 (Approval of Invoices).

E. If COUNTY terminates this Agreement under Paragraph 31 (Termination For Default), then, without excusing such default, and without prejudice to any other rights of COUNTY in this Agreement or as provided by law, CONTRACTOR shall be entitled to none of the sums not paid theretofore under the provisions of this Subparagraph 8.3.

F. In addition, if COUNTY terminates this Agreement in part under Paragraph 31 (Termination For Default) for CONTRACTOR's failure to timely achieve any of the Milestones for a Phase, then, without excusing such default, and without prejudice to any other rights of COUNTY in this Agreement or as provided by law, in addition CONTRACTOR shall immediately repay to COUNTY the entire amount of the Contract Sum that CONTRACTOR has received from COUNTY with respect to such Phase.

8.4 Holdbacks

Except with respect to the fees set forth in Exhibit B (Schedule of Payments) and the fees for Deliverables expressly identified in Exhibit B (Schedule of Payments), COUNTY will hold back ten percent (10%) of the dollar amount of each invoice (in this Subparagraph 8.4, "Holdback Amount"), approved by COUNTY, including invoices for Change Notices and Amendments. Other than for Change Notices and Amendments that the parties intend will be completed after Final System Acceptance for all Phases. The aggregate Holdback Amount will be due and payable to CONTRACTOR following the applicable Final System Acceptance for such Phase, in each case, subject to adjustment for any amounts owed to COUNTY by CONTRACTOR, including but not limited to any amounts arising from Subparagraph 8.5 (COUNTY's Right to Withhold Payment) and any partial termination of any task, subtask, or Deliverable set forth in Exhibit A (Statement of Work) as provided hereunder. As to Change Notices and Amendments that are to be completed after Final System Acceptance for all Phases, the aggregate Holdback Amount for such Change Notice or Amendment will be due and payable to CONTRACTOR upon approval by COUNTY in accordance with Subparagraph 2.4 (Approval of Work), of all work to be provided under such Change Notice or Amendment.

8.5 COUNTY's Right to Withhold Payment

Notwithstanding any other provision of this Agreement, and in addition to the provisions of Subparagraph 8.3 (Payments) and to any rights of COUNTY given by law or provided in this Agreement, COUNTY may upon written notice to CONTRACTOR withhold payment for any Deliverable while CONTRACTOR is in default hereunder, or at any time that CONTRACTOR has not provided a

COUNTY-approved Deliverable which under the approved Project Control Document is identified as dependent on and is scheduled to be delivered prior to or concurrently with the Deliverable for which payment would otherwise be due and is withheld. COUNTY's right to withhold payment shall not be deemed to impair any claims that CONTRACTOR may have against COUNTY or CONTRACTOR's rights to assert such claims pursuant to Paragraph 46 (Dispute Resolution Procedure).

9. ACCEPTANCE OF SYSTEM BY COUNTY

9.1 General

A. The Phase 1 shall achieve Final System Acceptance by COUNTY when and if: COUNTY's Project Director has approved, in writing, Deliverable 2.4.9 (Production Use of Phase 1 System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities) of Exhibit A (Statement of Work) confirming that Phase 1 has been maintained in Production Use with no material Deficiencies, as determined in the sole judgment of COUNTY's Project Director, for thirty (30) consecutive days subsequent to COUNTY's Project Director's written approval of all Deliverables specified in Deliverable 2.4.7 (Production Use of Phase 1 System at all COUNTY Facilities) of Exhibit A (Statement of Work).

B. The Phase 2 shall achieve Final System Acceptance by COUNTY when and if: COUNTY's Project Director has approved, in writing, Deliverable 3.11 (Production Use of Phase 2 System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities) of Exhibit A (Statement of Work) confirming that Phase 2 has been maintained in Production Use with no material Deficiencies, as determined in the sole judgment of COUNTY's Project Director, for thirty (30) consecutive days subsequent to COUNTY's Project Director's written approval of all Deliverables specified in Deliverable 3.9 (Production Use of Phase 2 System at all COUNTY Facilities) of Exhibit A (Statement of Work). Notwithstanding the foregoing, it is expressly understood and agreed that if and only if any Optional Application Software Module has been elected by COUNTY prior to COUNTY's approval of Deliverable 3.3.1 (Design Document for each Phase 2 System Application Software Module) of Exhibit A (Statement of Work) for Phase 2 under Subparagraph 2.4 (Approval of Work), then such period shall not be commenced until such time as (i) the parties have entered into a Change Notice or Amendment pursuant to Subparagraph 6.3 making all Change Notices and Amendments necessary to move all applicable Optional Application Software Modules to the Phase 2 such Optional Application Software Module thereafter constituting part of the Phase 2 for all purposes under this Agreement, and (ii) thereafter, all

prerequisites to commencing such time period described in Exhibit A (Statement of Work) have been completed by CONTRACTOR and approved by COUNTY in accordance with Subparagraph 2.4 (Approval of Work) with respect to Phase 2 as supplemented by the Change Notice or Amendment. It is also expressly understood and agreed that if COUNTY has not elected an Optional Application Software Module prior to COUNTY's approval of Deliverable 3.3.1 (Design Document for each Phase 2 System Application Software Module) of Exhibit A (Statement of Work), then COUNTY shall not elect any Optional Application Software Module until such time as CONTRACTOR has achieved Final System Acceptance for Phase 2.

C. The Phase 3 shall achieve Final System Acceptance by COUNTY when and if: COUNTY's Project Director has approved, in writing, Deliverable 4.11 (Production Use of Phase 3 System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities) of Exhibit A (Statement of Work) confirming that Phase 3 has been maintained in Production Use with no material Deficiencies, as determined in the sole judgment of COUNTY's Project Director, for thirty (30) consecutive days subsequent to COUNTY's Project Director's written approval of all Deliverables specified in Deliverable 4.9 (Production Use of Phase 3 System at all COUNTY Facilities) of Exhibit A (Statement of Work). Notwithstanding the foregoing, it is expressly understood and agreed that if and only if any Optional Application Software Module has been elected by COUNTY prior to COUNTY's approval of Deliverable 4.3.1 (Design Document for each Phase 3 System Application Software Module) of Exhibit A (Statement of Work) for Phase 3 under Subparagraph 2.4 (Approval of Work), then such period shall not be commenced until such time as (i) the parties have entered into a Change Notice or Amendment pursuant to Subparagraph 6.3 making all Change Notices and Amendments necessary to move all applicable Optional Application Software Modules to the Phase 3 such Optional Application Software Module thereafter constituting part of the Phase 3 for all purposes under this Agreement, and (ii) thereafter, all prerequisites to commencing such time period described in Exhibit A (Statement of Work) have been completed by CONTRACTOR and approved by COUNTY in accordance with Subparagraph 2.4 (Approval of Work) with respect to Phase 3 as supplemented by the Change Notice or Amendment. It is also expressly understood and agreed that if COUNTY has not elected an Optional Application Software Module prior to COUNTY's approval of Deliverable 4.3.1 (Design Document for each Phase 3 System Application Software Module) of Exhibit A (Statement of Work), then COUNTY shall not elect any Optional Application Software Module until such time as CONTRACTOR has achieved Final System Acceptance for Phase 3.

D. For purposes of this Subsection 9.1, CONTRACTOR acknowledges and agrees that the determination by COUNTY's Project Director in such person's sole judgment, with respect to whether a Deficiency is material may include, without limitation, the determination that the following are material Deficiencies: (a) any Deficiency that results in data loss, data corruption, abnormal termination of a program (i.e., a crash, quit, exit or similar phenomenon), an infinite loop, a "hang," an arithmetic or logic error, or similar manifest malfunction; (b) any Deficiency that allows data being stored in the System to be corrupted by other programs that are accessing any hardware connected to the System or on which the System is running (known as Random Access Memory mismanagement or memory leaks); (c) any Deficiency that results in System Components that COUNTY's Project Director, in such person's sole judgment, determines to be important or essential in the daily operations of any COUNTY Facility, becoming inoperable or nonfunctional; (d) any Deficiency that has a significant adverse impact on the daily operations to be performed using the System or any System Component(s) as determined by COUNTY's Project Director, in such person's sole judgment; (e) any Deficiency that substantially reduces Users' ability to use, or causes intermittent inoperability of, one or more material functions of the System or any System Component(s) as determined by COUNTY's Project Director, in such person's sole judgment; and (f) any other Deficiency that COUNTY's Project Director, in such person's sole judgment, determines to be material. CONTRACTOR further acknowledges and agrees that the determination by COUNTY's Project Director in such person's sole judgment with respect to whether a Deficiency is material may include, without limitation, the determination that it constitutes a material Deficiency for the System to have a significant number of Deficiencies, even if each individual Deficiency, when evaluated individually, may not be considered to be material.

E. All COUNTY approvals described under this Subparagraph 9.1 will be subject to the provisions of Subparagraph 2.4 (Approval of Work).

9.2 CONTRACTOR Tests

For each Phase, CONTRACTOR shall conduct all tests described in the Exhibit A (Statement of Work), including unit testing, System testing, integration testing, Interface testing and operational readiness testing, along with the participation and validation of COUNTY as described in Exhibit A (Statement of Work). Notwithstanding the foregoing, the User Acceptance Tests as specified in Subparagraph 9.3 (User Acceptance Tests) shall be conducted by COUNTY. Upon satisfactory completion of each of CONTRACTOR's tests, CONTRACTOR

shall deliver to COUNTY a written certification of successful completion of the applicable CONTRACTOR test as described in Exhibit A (Statement of Work).

9.3 User Acceptance Tests

For each Phase, after CONTRACTOR delivers the certification of successful completion of all applicable CONTRACTOR tests as to such Phase in accordance with Subparagraph 9.2 (CONTRACTOR Tests), COUNTY shall conduct User Acceptance Testing, as also described in Subtask 2.4.5 (Conduct User Acceptance Testing of Phase 1 System), Subtask 3.8 (Conduct User Acceptance Testing of Phase 2 System), Subtask 4.8 (Conduct User Acceptance Testing of Phase 3 System), and Subtask 7.6 (Conduct User Acceptance Testing of each Optional Application Software Module), as the case may be, of Exhibit A (Statement of Work), with respect to such Phase. User Acceptance Tests shall include such tests as COUNTY may deem appropriate to confirm whether each System Component and all System Components of that Phase and all prior Phases work in accordance with applicable Specifications and otherwise with this Agreement. CONTRACTOR shall actively assist and support COUNTY in the conduct of User Acceptance Testing.

9.4 Failed Testing

If COUNTY's Project Director makes a good faith determination that the System as a whole, or a System Component, has not successfully completed any CONTRACTOR test described in Subparagraph 9.2 (CONTRACTOR Tests) or the User Acceptance Test described in Subparagraph 9.3 (User Acceptance Tests) (in this Subparagraph 9.4, collectively "Designated Tests"), COUNTY's Project Director shall promptly notify CONTRACTOR in writing of such failure, specifying with as much detail as possible the manner in which the System Component or System failed to pass the applicable Designated Test. CONTRACTOR shall immediately commence all reasonable efforts to complete, as quickly as possible, such necessary corrections, repairs and modifications to the System Component or the System as will permit the System Component and the System to be ready for retesting. CONTRACTOR shall notify COUNTY's Project Director in writing when such corrections, repairs and modifications have been completed, and the applicable Designated Test shall begin again. If, after the applicable Designated Test has been completed for a second time, COUNTY's Project Director makes a good faith determination that the System Component or System again fails to pass the applicable Designated Test, COUNTY's Project Director shall promptly notify CONTRACTOR in writing, specifying with as much detail as possible the manner in which the System Component or System failed to pass the applicable Designated Test. CONTRACTOR shall immediately commence all reasonable efforts to complete, as quickly as possible, such necessary corrections, repairs and modifications to

the System Component or the System as will permit the System Component and the System to be ready for retesting. Such procedure shall continue, subject to COUNTY's rights under Subparagraph 4.5 (Phases and Milestones), Subparagraph 7.2 (Credits to COUNTY) and Subparagraph 7.3 (Termination) in the event CONTRACTOR fails to timely complete any Milestone or to timely deliver any Key Deliverable, until such time as COUNTY notifies CONTRACTOR in writing either: (i) of the successful completion of such Designated Test or (ii) that COUNTY has concluded in its sole judgment that satisfactory progress toward such successful completion of such Designated Test is not being made, in which latter event COUNTY shall have the right, in COUNTY's sole judgment, to make a determination, which shall be binding and conclusive on CONTRACTOR, that a non-curable default has occurred and to terminate this Agreement in accordance with Paragraph 31 (Termination for Default) on the basis of such non-curable default. Such a termination by COUNTY may be, in COUNTY's sole judgment, either: (i) a termination with respect to one or more System Components, or (ii) if COUNTY believes the failure to pass the applicable Designated Test materially affects the functionality, performance or desirability to COUNTY of the System as a whole, the entire Agreement. In the event of a termination under this Subparagraph 9.4, COUNTY shall have the right to receive from CONTRACTOR, within ten (10) days of written notice of termination, reimbursement of all payments made to CONTRACTOR by COUNTY under this Agreement for the System Component(s) and related Deliverables as to which the termination applies, or, if the entire Agreement is terminated, all amounts paid by COUNTY to CONTRACTOR under this Agreement. If the termination applies only to one or more System Components, at COUNTY's sole option, any reimbursement due to it may be credited against other sums due and payable by COUNTY to CONTRACTOR. The foregoing is without prejudice to any other rights that may accrue to COUNTY or CONTRACTOR under the terms of this Agreement or by law. Upon CONTRACTOR's repayment of the amounts required by this Subparagraph 9.4, COUNTY's License to the affected components of System Software shall terminate automatically.

10. WARRANTIES AND COVENANTS

10.1 System Warranties and Covenants

CONTRACTOR represents, warrants, covenants and agrees that throughout the term of this Agreement:

A. Each System Component shall be Compatible with the other System Components and, when taken together, shall be capable of performing in accordance with the Specifications and otherwise with this Agreement.

B. The Application Software, Interfaces and each component of either of

them with respect to each Phase shall be fully Compatible with all Application Software and Interfaces of each other Phase.

C. The Application Software and Interfaces shall be fully Compatible with the Third Party Software.

10.2 Warranty Services Response

Provided that COUNTY is paying the applicable fees set forth in Exhibit B (Schedule of Payments) in accordance with this Agreement, CONTRACTOR shall respond to and resolve each System Component's failure to perform in accordance with the applicable warranties set forth in Subparagraph 10.1 as is required under Exhibit D (Service Level Agreement). With respect to each failure constituting a Severity Level 1 or 2 Deficiency under and as defined in Exhibit D (Service Level Agreement), if CONTRACTOR is unable to resolve such a Deficiency after two (2) attempts within the timeframes set forth in (i) Exhibit D (Service Level Agreement) or (ii) the written action plan agreed to with respect to such Deficiency pursuant to Exhibit D (Service Level Agreement) (or such other number of attempts as may be agreed to between the parties in writing in accordance with this Agreement), CONTRACTOR shall, at CONTRACTOR's expense and upon COUNTY's return of the affected System Component, replace the affected System Component with another CONTRACTOR and/or third party product having at least equivalent functionality, as reasonably determined by COUNTY's Project Director, to the affected System Component, and make all modifications to the remaining System Components as is necessary for such CONTRACTOR or third party product to be Compatible with the remaining System Components. Each such CONTRACTOR or third party product shall constitute the applicable of Application Software, Interfaces, and/or Third Party Software comprising part of the System and shall be subject to the applicable warranty provisions set forth in this Agreement, including without limitation Paragraph 10 (Warranties and Covenants). If CONTRACTOR fails to replace an affected System Components as provided in this Subparagraph 10.2 within sixty (60) calendar days of County's initiation of such remedy under this Subparagraph 10.2, then COUNTY may terminate this Agreement under Paragraph 31 (Termination for Default) or as otherwise provided for under this Agreement. UNLESS AND UNTIL COUNTY TERMINATES THIS AGREEMENT FOR DEFAULT IN ACCORDANCE WITH THE TERMS OF THIS AGREEMENT, COUNTY'S RIGHTS UNDER SUBPARAGRAPHS 10.1 AND 10.2, TOGETHER WITH THE OTHER RIGHTS EXPRESSLY PROVIDED FOR IN THIS AGREEMENT, SHALL CONSTITUTE COUNTY'S SOLE AND EXCLUSIVE REMEDY TO ENFORCE CONTRACTOR'S OBLIGATIONS WITH RESPECT TO

THE WARRANTIES SET FORTH IN SUBPARAGRAPH 10.1.

10.3 Further Warranties and Covenants

CONTRACTOR further represents, warrants, covenants and agrees that throughout the term of this Agreement:

A. CONTRACTOR shall strictly comply with the descriptions and representations (including, but not limited to, Deliverable documentation, performance capabilities, accuracy, completeness, characteristics, Specifications, configurations and standards set forth in Exhibit A (Statement of Work).

B. All tasks, subtasks, Deliverables, goods, services, and other work shall be performed in a timely and professional manner by qualified personnel.

C. All tasks, subtasks, Deliverables, goods, services, and other work shall be completed in accordance with this Agreement and Deliverable documentation.

D. All Documentation provided by CONTRACTOR to COUNTY under this Agreement shall be legible, accurate, complete and of a consistently high quality.

E. CONTRACTOR shall not cause any unplanned interruption of the operations of, or accessibility to the System or any System Component through any device, method or means including, without limitation, the use of any Virus, "lockup," "time bomb," or "key lock," "worm," device or program, or disabling code, which has the potential or capability of compromising the security of any of COUNTY's Confidential Information or of causing any unplanned interruption of the operations of, or accessibility of the System or any System Component to COUNTY or any User or which could alter, destroy, or inhibit the use of the System, any System Component, or the data contained therein (collectively referred to for purposes of this Subparagraph 10.3.E as "Disabling Device(s)"), which could block access to or prevent the use of the System or any System Component by COUNTY or Users. CONTRACTOR represents, warrants and agrees that it has not purposely placed, nor is it aware of, any Disabling Device on any System Component provided to COUNTY under this Agreement, nor shall CONTRACTOR knowingly permit any subsequently delivered System Component to contain any Disabling Device.

F. CONTRACTOR shall prevent Viruses from being incorporated or

introduced into any of the System Software prior to delivery thereof to COUNTY, and shall utilize its best efforts to prevent any Viruses being incorporated or introduced in the process of CONTRACTOR's loading of System Software, or being introduced in the process of CONTRACTOR's performance of maintenance and support services, Remote Hosting Services, Upgrades Implementation Services and Application Management Services..

G. CONTRACTOR shall support the Application Software, Interfaces and the Third Party Software identified on Attachment B (Schedule of JHIS Software) to Exhibit A (Statement of Work).

H. COUNTY shall be entitled to use the System and all System Components without interruption of System use, subject only to COUNTY's obligation to make the required payments under this Agreement. CONTRACTOR represents and warrants that this Agreement is neither subject nor subordinate to any right or Claim of any third party, including, without limitation, CONTRACTOR's creditors. Further, CONTRACTOR represents and warrants that during the term of this Agreement, it shall not subordinate this Agreement or any of its rights hereunder to any third party without the prior written consent of COUNTY, and without providing in such subordination instrument for non-disturbance of COUNTY's use of the System and System Components in accordance with this Agreement.

I. CONTRACTOR is duly authorized to grant to COUNTY all rights, including, but not limited to, the License, granted by this Agreement with respect to all System Software and no consent of any other person or entity is required by CONTRACTOR to grant such rights other than consents that have been obtained and are in effect.

J. Neither the performance of this Agreement by CONTRACTOR, nor the License to, and use by, COUNTY and its Users of the Application Software and Interfaces in accordance with this Agreement will in any way violate any non-disclosure agreement, nor constitute any infringement or other violation of any United States patent, copyright, trade secret, trademark, service mark, or other intellectual property rights of any third party.

K. Except as expressly provided in this Subparagraph 10.3.K, CONTRACTOR owns all of the Application Software, external systems Interfaces which are not proprietary to COUNTY, medical devices Interfaces and other CONTRACTOR Work Product, and all proprietary rights therein, and that none of such Application Software, external systems Interfaces which are not proprietary to COUNTY, medical devices

Interfaces or other CONTRACTOR Work Product is owned by or licensed from any other person or entity. Solely for purposes of this Subparagraph 10.3.K, and without limiting any representation or warranty made by CONTRACTOR with respect to any System Component, or any other term or condition of this Agreement applicable thereto, COUNTY acknowledges that there may be software embedded in the Application Software that is owned by third parties.

L. The Baseline Software portions of Application Software are based on and fully incorporate all software products described in Attachment B (Schedule of JHIS Software) and Attachment C (Related CONTRACTOR Software Product Descriptions) to Exhibit A (Statement of Work), and the License includes, without limitation, such CONTRACTOR software products at no additional cost to COUNTY.

10.4 Continuous Product Support

If CONTRACTOR assigns this Agreement, is acquired, becomes otherwise controlled by another individual or entity, or sells, assigns, or transfers more than fifty percent (50%) of its interest in the System Software (collectively referred to as a "Successor Event") (see Paragraph 12 (Assignment and Delegation)) and subsequent to the Successor Event, the System Software is not supported to at least the same level that CONTRACTOR supported the System Software, as determined by COUNTY's Project Director (because, for example, CONTRACTOR's assignee chooses to support other products with similar functions) COUNTY, at its sole option, may elect to transfer the License, without cost or penalty, to another similar product ("Replacement Product") within CONTRACTOR's assignee's or successor's product offering. The assignee or successor, by taking benefit (including, without limitation, acceptance of any payment under this Agreement) shall be deemed to have ratified this Agreement. All terms and conditions of this Agreement shall continue in full force and effect for the Replacement Product. In addition, the following terms and conditions shall apply if COUNTY elects to transfer the License to a Replacement Product:

A. Any prepaid maintenance, support, Upgrades Implementation, Application Management, P2Sentinel Security and/or Remote Hosting Services for System Software shall transfer in full force and effect for the balance of the Replacement Product's maintenance, support, hosting, operation, implementation and/or management services term (or equivalent service) at no additional cost. If the prepaid moneys are greater than the Replacement's Product's maintenance, support, hosting, operation, implementation and/or management services fee for the same term, the credit balance shall be applied to future maintenance, support, hosting, operation, implementation and/or management services fees or returned

to COUNTY, at its option;

B. Any and all modules offered separately, and needed to match the original System Software's level of functionality, as determined by COUNTY's Project Director shall be supplied by CONTRACTOR's assignee or successor without additional cost or penalty, and shall not affect the calculation of any maintenance, support, hosting, operation, implementation and/or management services fees;

C. COUNTY shall receive reasonable training for Users, for purposes of learning the Replacement Product. Training shall be provided at no cost to COUNTY or Users;

D. All License terms and conditions shall remain as granted herein with no additional fees imposed on COUNTY; and

E. The definition of System Software shall then mean the Replacement Product.

10.5 Third Party Software

10.5.1 The System Software identified on Attachment B (Schedule of JHIS Software) to Exhibit A (Statement of Work) as "Third Party Software" and any third party tools identified in Exhibit A (Statement of Work) (collectively, "Third Party Software"), is owned by third parties. Subject to the remainder of this Subparagraph 10.5.1, CONTRACTOR hereby represents and warrants that none of the System Software other than the Third Party Software is owned by third parties. Solely for purposes of this Subparagraph 10.5.1, and without limiting any representation or warranty made by CONTRACTOR with respect to any System Component, or any other term or condition of this Agreement applicable thereto, COUNTY acknowledges that there may be software embedded in the Application Software that is owned by third parties.

10.5.2 COUNTY acknowledges that License granted hereunder to certain Third Party Software is subject to pass-through provisions of the applicable third party manufacturer. CONTRACTOR represents and warrants that accurate and complete copies of all such pass-through provisions are set forth in Attachment B (Schedule of JHIS Software) to Exhibit A (Statement of Work). All warranties and indemnities that accompany such Third Party Software, other than warranties and indemnities that are expressly set forth in this Agreement, are provided by the applicable third party manufacturer and are among the pass-through provisions set forth in Attachment B (Schedule of JHIS Software) to Exhibit A

(Statement of Work). CONTRACTOR hereby assigns to COUNTY to the fullest extent permitted by law or by agreement such warranties and indemnities, and CONTRACTOR shall otherwise ensure that the benefits of such warranties and indemnities shall fully extend to and be enjoyed by COUNTY.

10.5.3 Without limiting CONTRACTOR's obligations under Exhibit D (Service Level Agreement) with respect to any item of Third Party Software, for each Deficiency occurring during any warranty period identified in Attachment B (Schedule of JHIS Software) to Exhibit A (Statement of Work) with respect to such item of Third Party Software, CONTRACTOR shall, at no additional cost to COUNTY, act as the primary point of contact with the applicable third party manufacturer and shall coordinate all resolution activities, in each case, from initiation through resolution of any exercise of rights by COUNTY under the applicable third party warranty.

10.5.4 CONTRACTOR represents and warrants that it has not modified and shall not modify, nor does CONTRACTOR have any need to modify, Third Party Software in order for the System to perform in accordance with the Specifications and otherwise with this Agreement. CONTRACTOR represents and warrants that it does not have any license or other right to modify Third Party Software and that Third Party Software shall be provided to COUNTY in the same unmodified form as received by CONTRACTOR from the applicable third party. CONTRACTOR represents and warrants that Third Party Software shall, together with the remainder of the System Software, fully satisfy all requirements of the Agreement without the need for any modification of Third Party Software by CONTRACTOR or otherwise.

10.5.5 In the event it nonetheless becomes necessary to modify Third Party Software to satisfy any of the requirements of this Agreement, CONTRACTOR shall promptly, at no additional cost to COUNTY, either: (1) obtain a license from the appropriate third party which shall enable CONTRACTOR to modify such Third Party Software, and CONTRACTOR shall provide all necessary modifications or (2) to the extent that CONTRACTOR is unable to obtain such a license, provide an upgrade or alternative solution, which is functionally equivalent, in COUNTY's Project Director's reasonable determination, in lieu of modifying such Third Party Software. If COUNTY exercises its option to terminate this Agreement for convenience pursuant to Paragraph 32 (Termination for Convenience), the obligations of CONTRACTOR as set forth in this Subparagraph 10.5 shall be null and void. Nothing herein shall require CONTRACTOR to pay for a new release, version, or

revision of Third Party Software, which is not otherwise provided under Exhibit D (Service Level Agreement).

10.6 Disclaimer of Other Warranties

THE WARRANTIES SET FORTH IN THIS AGREEMENT ARE IN LIEU OF, AND CONTRACTOR HEREBY DISCLAIMS, ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, REGARDING THE PRODUCTS AND SERVICES PROVIDED HEREUNDER, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE AND FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.

11. OWNERSHIP OF THE SYSTEM AND LICENSE

11.1 Ownership

A. The external systems Interfaces which are proprietary to COUNTY, as set forth in Attachment D (JHIS Interfaces) to Exhibit A (Statement of Work), including but not limited to all copyrights and all other proprietary rights pertaining thereto, and the object code and the source code thereof, shall be and remain the property of COUNTY. Title to all such new Interfaces and all proprietary rights therein shall automatically transfer to COUNTY, upon COUNTY's written approval of Deliverable 2.4.7 (Production Use of Phase 1 System at all COUNTY Facilities) for Phase 1, Deliverable 3.9 (Production Use of the Phase 2 System at all COUNTY Facilities) for Phase 2, Deliverable 4.9 (Production Use of the Phase 3 System at all COUNTY Facilities) for Phase 3, or of all work under the Change Notice or Amendment, in each case covering the particular Interface. To the extent CONTRACTOR modifies any of the Application Software to interface with any external systems Interfaces which are propriety to COUNTY, CONTRACTOR shall own any such modifications of the Application Software, but all other rights in and to such external systems Interfaces shall be owned by COUNTY.

B. The Application Software, the external systems Interfaces which are not proprietary to COUNTY, as set forth in Attachment D (JHIS Interfaces) to Exhibit A (Statement of Work), all medical devices Interfaces, and all other CONTRACTOR Work Product are and shall remain the property of CONTRACTOR, and all such Application Software, external systems Interfaces which are not proprietary to COUNTY, medical devices Interfaces and other CONTRACTOR Work Product are subject to the License.

C. The Third Party Software is and shall remain the property of the applicable third party manufacturer, and such Third Party Software is subject to the License.

11.2 License

A. CONTRACTOR hereby grants to COUNTY, effective as of the Effective Date, a perpetual (in the case of the Third Party Software only, to the extent specified in the pass through provisions set forth in Attachment B Schedule of JHIS Software to the Exhibit A Statement of Work) nonexclusive license, for all of COUNTY's business purposes, unrestricted except as expressly restricted in this Agreement, non-transferable except as provided in this Agreement:

(i) To use the System Software, Development Software, software components of external systems Interfaces which are not proprietary to COUNTY as set forth in Attachment D (JHIS Interfaces) and software components of medical devices Interfaces, including,, the Third Party Software, on computers, servers, local area networks and wide area networks, for an number of Users as specified Exhibit D, SLA and Attachment B Schedule of JHIS Software , except that the number of Users of the following software only shall be limited as follows: (a) for the Application Software, the license permits use by three thousand (3,000) named Users in support of operations at COUNTY Facilities with COUNTY having the right to change the named Users at any time:

(ii) Recitals 6-12 of PEMRS Agreement No. 77285 are incorporated specifically into this Subparagraph 11.2 by this reference. COUNTY transferred use under JHIS Agreement No. 71710, Amendment Number Three, dated as of March 18, 2008 (together with the Exhibits, Schedules, Attachments and Annexes thereto, "Amendment No. 3"), eight hundred (800) of the User Licenses under PEMRS Agreement No. 77285 reducing the number of User Licenses permitted for use under JHIS Agreement 71710 and this Agreement from 3000 User Licenses to 2200 User Licenses.

(iii) To modify the Application Software and Interfaces after such time as one of the conditions described in Subparagraph 11.3.C (Source Code Release Conditions) has occurred which would permit COUNTY to use the Source Code as provided in this Subparagraph 11.2 and Subparagraph 11.3 (Source Code); and:

(iv) To use and modify as specified in the Exhibit A (Statement of Work) the Documentation (herein collectively referred to as the "License"). This

includes, but is not limited to, use by any and all COUNTY Facilities.

B. For all System Software, Development Software, software components of external system Interfaces which are not proprietary to COUNTY as set forth in Attachment D (JHIS Interfaces) and software components of medical devices Interfaces, CONTRACTOR shall provide to COUNTY the ability to access or download all associated Documentation, including, but not limited to, system and user manuals. .

C. CONTRACTOR shall provide to COUNTY all associated Documentation, including, but not limited to, system and user manuals, in accordance with Subparagraph 4.6 (Delivery of Work).

D. With respect to the Application Software, COUNTY further agrees to use reasonable efforts to do the following:

(i) To the extent reasonably practicable, to notify CONTRACTOR prior to complying if COUNTY determines that the law or an order of a court or other governmental agency requires a non-permitted disclosure or use of the Application Software;

(ii) To maintain records of the number and location of all copies of the Application Software;

(iii) To reproduce (and refrain from removing or destroying) copyright and proprietary rights notices which are placed within or on the Application Software;

(iv) To erase or otherwise destroy, prior to disposing of media, all portions of the Application Software contained on such media; and

(v) To notify CONTRACTOR promptly in writing upon learning of any unauthorized disclosure or use of the Application Software and to provide reasonable cooperation to CONTRACTOR to cure any such unauthorized disclosure or use.

E. If CONTRACTOR discontinues an item of Application Software, but replaces such item of Application Software with a substitute successor product at any time that Exhibit D (Service Level Agreement) has not expired or been terminated by COUNTY, and if, with the consent of COUNTY in its sole discretion (which is required only if CONTRACTOR is then obligated to provide maintenance and support under the terms of this Agreement), CONTRACTOR ceases to provide maintenance and/or support (as defined in Exhibit D (Service Level Agreement)) for such

Application Software during the term of this Agreement, then (i) if during a period of five (5) years following Final System Acceptance for Phase 1, Phase 2, and Phase 3, COUNTY shall be entitled to such successor product at no additional license fees, and COUNTY's license to such successor product shall be the same as COUNTY's license for such Application Software, and (ii) if during a period of five (5) to ten (10) years after Final System Acceptance of the Phase 1, 2, and 3, COUNTY shall be entitled to such successor product at a discount of fifty percent (50%) of the then current license fees for such successor product, and COUNTY's license to such successor product shall be the same as COUNTY's license for such Application Software.

11.3 Source Code

A. Escrow Agreement. CONTRACTOR has named at its own expense COUNTY as a beneficiary under the source code escrow agreement attached hereto as Exhibit O (Source Code Escrow Agreement) (in this Subparagraph 11.3.A, "Escrow Agreement") between CONTRACTOR and Data Securities International, Inc. (in this Subparagraph 11.3.A, "Escrow Agent"). The Sheriff's Department has authority to execute on behalf of COUNTY any forms required by the Escrow Agent in order for COUNTY to appear as a beneficiary under such Escrow Agreement. In the event that the Escrow Agreement expires or terminates, or CONTRACTOR otherwise desires to change the escrow agent, CONTRACTOR shall obtain at its own expense, a replacement source code escrow agreement with another source code escrow company, on substantially the same terms with respect to COUNTY as the Escrow Agreement. Such replacement source code escrow agreement and source code escrow company shall thereafter constitute the "Escrow Agreement" and "Escrow Agent," respectively, for all purposes under this Paragraph 11.3. Subject to this Subparagraph 11.3.A., CONTRACTOR shall maintain the Escrow Agreement in full force and effect throughout the term of this Agreement.

B. Source Code Escrow. Promptly following CONTRACTOR's delivery to COUNTY of the corresponding object code, CONTRACTOR shall deposit with the Escrow Agent, the source code for all Application Software, Interfaces, Updates and Upgrades. The source code for the Application Software, Interfaces, Updates and Upgrades are referred to collectively herein as the "Source Code." CONTRACTOR shall ensure at all times during the term of this Agreement that the version of the Source Code on deposit with the Escrow Agent is accurate and complete. The parties acknowledge that as a result of the passage of time alone, the deposited Source Code may be susceptible to loss of quality (in this Subparagraph 11.3, "Natural Degeneration"). For the purpose of reducing the risk of

Natural Degeneration, CONTRACTOR shall deliver to the Escrow Agent a new copy of all deposited Source Code at least annually upon written request of COUNTY's Project Director. In the event the Source Code or any part of it is destroyed or corrupted, CONTRACTOR shall provide a replacement copy of the Source Code.

C. Source Code Release Conditions. Upon the occurrence of an event identified below (collectively referred to as "Release Conditions"), COUNTY shall have the right to immediately begin using the Source Code as provided in Subparagraph 11.4.E (License of Source Code), at no charge to COUNTY.

(i) Bankruptcy. In the event CONTRACTOR shall: (1) make an assignment for the benefit of creditors, or petition or apply to any tribunal for the appointment of a custodian, receiver, or trustee for all or a substantial part of its assets; (2) commence any proceeding under any CONTRACTOR bankruptcy, reorganization, arrangement, readjustment of debt, dissolution, or liquidation law or statute of any jurisdiction whether now or hereafter in effect; (3) have any such petition or application filed or any such proceeding commenced against it in which an order for relief is entered or an adjudication or appointment is made, and which remains undismissed for a period of sixty (60) days or more; (4) take any corporate action indicating its consent to, approval of, or acquiescence in any such petition, application, proceeding, or order for relief or the appointment of a custodian, receiver, or trustee for all or a substantial part of its assets; or (5) permit any such custodianship, receivership, or trusteeship to continue undischarged for a period of sixty (60) days or more causing CONTRACTOR or any third party, including, without limitation, a trustee in bankruptcy, to be empowered under state or federal law to reject this Agreement or any agreement supplementary hereto.

(ii) Rejection of Agreement. In the event of a rejection of this Agreement or any agreement supplementary hereto in bankruptcy:

a. COUNTY shall be permitted to retain and use any copies of the Application Software and Interfaces, and the Source Code thereto, in its possession, the License granted hereunder being perpetual and not subject to termination (except as set forth elsewhere herein);

b. COUNTY may elect to retain its rights under this Agreement or any agreement supplementary hereto as provided in

section 365(n) of the United States Bankruptcy Code. Upon written request of COUNTY to, as applicable, CONTRACTOR or the bankruptcy trustee or receiver, CONTRACTOR or such bankruptcy trustee or receiver shall not interfere with the rights of COUNTY as licensee or sublicensor as provided in this Agreement or in any agreement supplementary hereto to obtain the Source Code(s) from the bankruptcy trustee and shall, if requested, cause a copy or replacement copy of such Source Code(s) to be available to COUNTY so that COUNTY can use same as provided in this Agreement;

c. COUNTY may elect to retain its rights under this Agreement or any agreement supplementary hereto as provided in section 365(n) of the United States Bankruptcy Code without prejudice to any of its rights of setoff with respect to this Agreement under the United States Bankruptcy Code or applicable non-bankruptcy law; or

d. COUNTY may retain its rights under this Agreement, or any agreement supplementary hereto as provided in section 365(n) of the United States Bankruptcy Code without prejudice to any of its rights under section 503(b) of the United States Bankruptcy Code.

(iii) Additional Release Conditions.

a. CONTRACTOR ceases to support any Application Software module without making arrangements for continued support by a qualified person or organization; or

b. CONTRACTOR ceases to do business without a successor.

In the event of a claim to the Source Code under this Subparagraph 11.3.C(iii), then COUNTY shall provide CONTRACTOR with a written notice outlining the facts upon which COUNTY bases its claim that a Release Condition has occurred. CONTRACTOR may contest COUNTY's right to use the Source Code pursuant to the procedures set forth in Paragraph 46 (Dispute Resolution Procedure), other than judicial proceedings as provided in Subparagraph 46.8. If the dispute resolution procedures result in disagreement between CONTRACTOR's Executive Vice President, Client Organization, and the Sheriff as to whether a basis exists for any claim by COUNTY to the Source Code, and the Sheriff

continues to believe that such a basis does exist, then the Sheriff may, in such person's sole discretion, give notice of such belief to CONTRACTOR, in which event Sheriff's Department may, at any time on or after a date that is seven (7) days after the giving of such notice, utilize any or all of the Source Code in the manner set forth in subparts E and F below of this Subparagraph 11.3.

D. COUNTY's Right to Verify Source Code. Regardless of whether one of the Release Conditions occurs, COUNTY shall have the right to verify the relevance, completeness, currency, accuracy, and functionality of the Source Code by, among other things, compiling the Source Code and performing test runs for comparison with the Application Software and Interfaces capabilities.

E. License of Source Code. Upon the occurrence of a Release Condition (or any other release conditions which may be specified under this Agreement), COUNTY is licensed to use the Source Code to perform support and maintenance for COUNTY's own internal business purposes, alter or modify the Source Code, and/or obtain the benefits sought under this Agreement subject to the limitations of Subparagraph 11.3.F (Possession and Use of Source Code). Nothing herein relieves CONTRACTOR of its obligation to provide maintenance and support as provided in this Agreement.

F. Possession and Use of Source Code. Subject to the provisions of Subparagraph 11.3.E (License of Source Code), Source Code obtained by COUNTY under the provisions of this Agreement shall remain subject to every license restriction, proprietary rights protection, and other COUNTY obligation specified in this Agreement provided, however, COUNTY may make such Source Code available to third parties as needed to assist COUNTY in making authorized use of the Application Software and/or Interfaces and provided such third party has first entered into a written agreement containing restrictions at least as protective of the Source Code as this Agreement. COUNTY may use Source Code for the sole purpose of supporting its use of the Application Software and Interfaces as expressly permitted under this Agreement or to obtain the benefits sought under this Agreement. In no event shall COUNTY be permitted to grant access to the Source Code to a competitor of CONTRACTOR. Likewise, COUNTY shall not be permitted to sell or transfer its rights in the Source Code to any other party. When Source Code is not in use, COUNTY agrees to keep such Source Code in a locked, secure place. When Source Code resides in a central processing unit, COUNTY shall limit access to its authorized employees and consultants who have a need to know in order to support the Application Software and/or Interfaces.

COUNTY will use reasonable efforts to assure that all use it makes of the Source Code shall conform to every Food and Drug Administration and other governmental regulatory requirement.

12. ASSIGNMENT AND DELEGATION

CONTRACTOR shall not assign its rights or delegate its duties under this Agreement, or both, whether in whole or in part, without the consent of COUNTY in its sole discretion, and any attempted assignment or delegation without such consent shall be null and void. Any payments by COUNTY to any delegatee or assignee on any claim under this Agreement, in consequence of any such consent, shall reduce dollar for dollar any claims which CONTRACTOR may have against COUNTY and shall be subject to set-off, recoupment, or other reduction for any claims which COUNTY may have against CONTRACTOR, whether under this Agreement or otherwise.

13. WARRANTY AGAINST CONTINGENT FEES

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

13.2 For breach of the warranty in Subparagraph 13.1, COUNTY shall have the right to terminate this Agreement and, in its sole discretion, deduct from the Agreement price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

14. TERMINATION FOR GRATUITIES

COUNTY may, by written notice to CONTRACTOR, terminate the right of CONTRACTOR to proceed under this Agreement upon one (1) calendar day's notice, if it is found that gratuities in the form of entertainment, gifts, or otherwise were offered or given by CONTRACTOR, or any agent or representative of CONTRACTOR, to any officer, employee, or agent of COUNTY with a view toward securing a contract or securing favorable treatment with respect to the awarding or amending, or the making of any determinations with respect to the performing, of such contract. In the event of such termination, COUNTY shall be entitled to pursue the same remedies against CONTRACTOR as it could pursue in the event of default by CONTRACTOR.

15. INDEPENDENT CONTRACTOR STATUS

15.1 This Agreement is by and between CONTRACTOR and COUNTY and is not intended, and shall not be construed, to create the relationship of agent, servant, employee, partnership, joint venture, or association, as between CONTRACTOR and COUNTY. The employees and agents of one party shall not be, or be construed to be, the employees or agents of the other party for any purpose whatsoever.

15.2 CONTRACTOR shall be solely liable and responsible for providing to, or on behalf of, all persons performing work pursuant to this Agreement all compensation and benefits. COUNTY shall have no liability or responsibility for the payment of any salaries, wages, unemployment benefits, disability benefits, Federal, State, or local taxes, or other compensation, benefits, or taxes for any personnel provided by or on behalf of CONTRACTOR.

15.3 CONTRACTOR understands and agrees that all persons performing work pursuant to this Agreement are, for purposes of workers' compensation liability, the sole employees of CONTRACTOR and not employees of COUNTY. CONTRACTOR shall be solely liable and responsible for furnishing any and all workers' compensation benefits to any person as a result of any injuries arising from or connected with any work performed by or on behalf of CONTRACTOR pursuant to this Agreement.

15.4 For each CONTRACTOR employee who (a) may come onsite to any COUNTY Facility or (b) are named in or are otherwise dedicated to this Agreement and each Subcontractor employee meeting the aforementioned criteria, CONTRACTOR represents and warrants that no later than the date on which each affected employee first performs work under this Agreement, CONTRACTOR shall have obtained from each such employee, a certified document in the form attached as Exhibit M (Sexual Harassment/Discrimination/Retaliation Prohibited Form).

16. SUBCONTRACTING

16.1 COUNTY has relied, in entering into this Agreement, on the reputation of and on obtaining the personal performance of CONTRACTOR itself. Consequently, no performance of this Agreement, or any portion thereof, shall be subcontracted by CONTRACTOR without the prior written consent of COUNTY as provided in this Paragraph 16, which consent shall not be unreasonably withheld, conditioned or delayed. Any attempt by CONTRACTOR to subcontract any performance, obligation, or responsibility under this Agreement, without the prior written consent of COUNTY, shall be null and void and shall constitute a material breach of this Agreement, upon

which COUNTY may immediately terminate this Agreement. Notwithstanding the foregoing, COUNTY's prior written consent shall not be required prior to subcontracting with any third party manufacturer of any Third Party Software for purposes of providing maintenance and support under Exhibit D (Service Level Agreement), provided that (a) such third party manufacturers are not required to come onsite to any COUNTY Facility or access any inmate records for purposes of providing such maintenance and support, (b) no staff of such third party manufacturers are named in or otherwise dedicated to this Agreement, and (c) CONTRACTOR invoices COUNTY directly for any and all services provided by such third party manufacturers (collectively "Permitted Subcontractors").

16.2 If CONTRACTOR desires to subcontract any portion of its performance, obligations, or responsibilities under this Agreement other than as specifically set forth in Subparagraph 16.1 with respect to Permitted Subcontractors, CONTRACTOR shall make a written request to COUNTY for written approval to enter into the particular subcontract. CONTRACTOR's request to COUNTY shall include:

A. The reason(s) for the particular subcontract.

B. A detailed description of the work to be performed by the proposed Subcontractor.

C. Identification of the proposed Subcontractor and an explanation of why and how the proposed Subcontractor was selected.

D. A draft copy of the proposed subcontract which shall contain, at a minimum, the provisions set forth in Exhibit I (Required Subcontract Provisions). The provisions of Exhibit I (Required Subcontract Provisions) may be changed only with the prior written approval of the Sheriff's Department.

E. Any other information and/or certifications requested by COUNTY.

COUNTY will review CONTRACTOR's request to subcontract and determine, in its sole discretion, whether or not to consent to such request on a case-by-case basis.

16.3 For every Subcontractor, irrespective of whether COUNTY's prior written consent is required hereunder, CONTRACTOR shall provide evidence of insurance with respect to such Subcontractor satisfying the requirements set forth in Subparagraph 17.4.6 (Subcontractor Insurance Coverage

Requirements) prior to such Subcontractor performing work under this Agreement.

16.4 CONTRACTOR shall indemnify, defend, and hold harmless COUNTY, its districts administered by COUNTY, and its elected and appointed officers, employees, and agents, from and against any and all Claims, liabilities, damages, costs, and expenses, including, but not limited to, reasonable defense costs and legal, accounting or other expert consulting or professional fees in any way arising from or related to CONTRACTOR's use of any Subcontractor, including, without limitation, any officers, employees, or agents of any Subcontractor.

16.5 Notwithstanding any COUNTY consent to any subcontracting, including but not limited to with respect to Permitted Subcontractors, CONTRACTOR shall remain responsible for any and all performance required of it under this Agreement, including, but not limited to, the obligation to properly supervise, coordinate, and perform, all work required hereunder, and no subcontract shall bind or purport to bind COUNTY. Further, COUNTY consent to any subcontracting, including but not limited to with respect to Permitted Subcontractors, shall not be construed to limit in any way CONTRACTOR's performance, obligations, or responsibilities, to COUNTY, nor shall such approval limit in any way any of COUNTY's rights or remedies contained in this Agreement. Additionally, COUNTY consent to any subcontracting, including but not limited to with respect to Permitted Subcontractors, shall not be construed in any way to constitute the determination of the allowableness or appropriateness of any cost or payment under this Agreement.

16.6 In the event that COUNTY consents to any subcontracting, including but not limited to with respect to Permitted Subcontractors, such consent shall be subject to COUNTY's right to give prior and continuing approval of any and all Subcontractor key personnel providing on-site services under such subcontract. CONTRACTOR shall assure that any Subcontractor key personnel not approved in writing by COUNTY shall be immediately removed from the provision of any services under the particular subcontract or that other action is taken as requested by COUNTY. Further, in the event that COUNTY consents to any subcontracting, such consent shall be subject to COUNTY's right to terminate, in whole or in part, any subcontract at any time upon written notice to CONTRACTOR when such Subcontractor is deemed by COUNTY to be in material breach of its subcontract or this Agreement. COUNTY shall not be liable or responsible in any way to CONTRACTOR, to any Subcontractor, or to any officers, employees, or agents of CONTRACTOR or any Subcontractor, for any third party Claims, damages, liabilities, losses, costs, or expenses, including, but not limited to, defense costs and legal, accounting and other expert, consulting or professional fees,

in any way arising from or related to COUNTY's exercise of such rights.

16.7 In the event that COUNTY consents to any subcontracting other than with respect to Permitted Subcontractors, the Subcontractor, on behalf of itself, its successors and administrators, shall assume and be bound by and shall be deemed to have assumed and agreed to be bound by each and all of the provisions of this Agreement and any Amendment hereto, provided that COUNTY's Project Director shall have the right to waive the requirement that a particular Subcontractor assume and be bound by specified provisions of this Agreement and any Amendment hereto.

16.8 In the event that COUNTY consents to any subcontracting, such consent shall apply to each particular subcontract only and shall not be, or be construed to be, a waiver of this Paragraph 16 or a blanket consent to any further subcontracting.

16.9 The Sheriff's Department is hereby authorized to act for and on behalf of COUNTY pursuant to this Paragraph 16, including, but not limited to, consenting to any subcontracting.

16.10 CONTRACTOR shall be solely liable and responsible for any and all payments and other compensation to all Subcontractors and their officers, employees, and agents. COUNTY shall have no liability or responsibility whatsoever for any payment or other compensation for any Subcontractors or their officers, employees, and agents.

16.11 Other than with respect to Permitted Subcontractors, CONTRACTOR shall deliver to COUNTY's Project Director a fully executed copy of each subcontract entered into by CONTRACTOR pursuant to this Paragraph 16, on or immediately after the effective date of the subcontract but in no event later than the date any work is performed under the subcontract.

16.12 CONTRACTOR shall inform each of its Subcontractors, and shall require each such Subcontractor to so inform such Subcontractor's officers, employees and agents, of the confidentiality, security and non-disclosure provisions of this Agreement. Further, CONTRACTOR shall require its Subcontractors, and shall require each Subcontractor to require such Subcontractor's officers, employees and agents, to be bound in writing by confidentiality, security and non-disclosure provisions at least as protective of the COUNTY as the confidentiality, security and non-disclosure provisions of this Agreement. The indemnification obligations set forth in Subparagraph 16.4 shall include, but shall not be limited to, any and all loss, damage, liability, and expense arising from any breach by a Subcontractor or any of its officers employees or agents of the confidentiality, security and non-

disclosure provisions of this Agreement.

17. INDEMNIFICATION, INSURANCE, AND PERFORMANCE BOND

17.1 Indemnification

17.1.1 CONTRACTOR shall indemnify, defend, and hold harmless COUNTY, its districts administered by COUNTY, and its elected and appointed officers, employees, and agents (hereafter for purposes of this Paragraph 17 "COUNTY") from and against any and all Claims, damages, liabilities, losses, costs, and expenses, including, but not limited to, reasonable defense costs and legal, accounting and other expert, consulting or professional fees, including, but not limited, to bodily injury, death, personal injury, or property damage arising from CONTRACTOR, CONTRACTOR's agents', employees' or Subcontractors' acts or omissions in the performance of services or provision of products hereunder, including, without limitation, any workers' compensation suits, liability, or expense, arising from or connected with services performed by any person on behalf of CONTRACTOR, CONTRACTOR's agents, employees or Subcontractors pursuant to this Agreement and/or failure of CONTRACTOR, CONTRACTOR's agents, employees, Subcontractors or any Tasks/Deliverables provided hereunder to comply with the terms and conditions of this Agreement. Any legal defense pursuant to CONTRACTOR's indemnification obligations under this Subparagraph 17.1 shall be conducted by CONTRACTOR and performed by counsel selected by CONTRACTOR and approved by COUNTY (which approval shall not be unreasonably withheld) in writing. Notwithstanding the preceding sentence, COUNTY shall have the right to participate in any such defense at its sole cost and expense, except that in the event CONTRACTOR fails to provide COUNTY with a full and adequate defense, as required by law or this Agreement, COUNTY shall be entitled to reimbursement for all such costs and expenses.

17.1.2 COUNTY acknowledges that CONTRACTOR is not a professional healthcare provider, but is rather providing information processing services and related goods to COUNTY in connection with the COUNTY's provision of professional healthcare services.

17.1.3 In the event CONTRACTOR incurs costs in defending any Claim asserted by an inmate of the COUNTY's correctional facilities or by any person or entity on behalf of or concerning such an inmate, in

COUNTY's care at a COUNTY Facility, and such Claim results in a final, non-appealable judgment from a court of competent jurisdiction in which (a) COUNTY is found liable to such person as a result of having used the System in caring for such inmate in a manner not in accordance with the Documentation or as a result of failing to adhere to applicable standards of clinical practice in inmate health care facilities in caring for such an inmate, and (b) CONTRACTOR is found not to be liable to such person, COUNTY shall reimburse CONTRACTOR for reasonable attorneys' fees and costs incurred by CONTRACTOR in defending such Claim, provided, however, that the foregoing reimbursement obligation shall not apply to any Claim, damages, liabilities, losses, costs and/or expenses for which CONTRACTOR is obligated to indemnify COUNTY pursuant to this Agreement.

17.2 Insurance

Without limiting CONTRACTOR's indemnification of COUNTY, CONTRACTOR shall provide and maintain at its own expense, during the entire term of this Agreement, the following programs of insurance covering its operations hereunder. Such insurance shall be provided by insurer(s) satisfactory to COUNTY's Risk Manager, and evidence of such programs satisfactory to COUNTY shall be delivered to COUNTY's Project Director on or before the Effective Date. Such evidence shall specifically identify this Agreement and shall contain express conditions that COUNTY is to be given written notice by registered mail at least thirty (30) days in advance of any termination of any program of insurance, and, with respect to any modification of any program of insurance, at least thirty (30) days in advance or immediately following CONTRACTOR's first receipt of notice of modification in the event CONTRACTOR receives less than thirty (30) days advance notice of such modification.

17.2.1 Liability Insurance

Such insurance shall consist of:

A. Comprehensive General Liability insurance endorsed for Premises-Operations, Products/Completed Operations, Contractual, Broad Form Property Damage, and Personal Injury with a combined single limit of not less than Two Million Dollars ($2,000,000) per occurrence and Three Million Dollars ($3,000,000) in the aggregate. If the above insurance is written on a Claims Made Form, such insurance shall be endorsed to provide an extended reporting period of not less than five (5) years following the expiration or termination of this Agreement.

B. Comprehensive Auto Liability insurance endorsed for all owned, non-owned, and hired vehicles with a combined single limit of not less than One Million Dollars ($1,000,000) per occurrence.

C. Professional liability insurance covering liability arising from any error, omission, negligent, wrongful act, or any act related to the Agreement of the CONTRACTOR, its officers or employees with limits of not less than Four Million Dollars ($4,000,000) per occurrence and Eight Million Dollars ($8,000,000) aggregate. Such insurance shall be maintained for not less than three (3) years upon termination or cancellation of the Agreement, or the policy shall provide an extended three year reporting period commencing upon termination or cancellation of the Agreement.

17.2.2 Workers' Compensation Insurance

A program of workers' compensation insurance in an amount and form to meet all applicable requirements of the California Labor Code including, without limitation, employer's liability with a One Million Dollar ($1,000,000) limit, covering all persons performing work on behalf of CONTRACTOR and all risks to such persons under this Agreement.

17.3 Performance Bond

17.3.1 CONTRACTOR shall furnish to COUNTY within ten (10) days after CONTRACTOR's execution of this Agreement, and in all events prior to the Effective Date, a performance bond in an amount of at least Five Million Dollars ($5,000,000) during the period of three years from the Effective Date and at least Two Million Dollars ($2,000,000) during the period commencing on the third anniversary of the Effective Date and continuing through the remainder of the term of this Agreement. Such performance bond shall be in form and substance satisfactory to COUNTY's Risk Manager. Such bond shall be maintained by CONTRACTOR in full force and effect until released by COUNTY's Risk Manager upon COUNTY's Project Director's determination that CONTRACTOR shall have fully performed all of its obligations under this Agreement. Any modification, extension, or termination of this Agreement shall in no way release CONTRACTOR or any of its sureties from any of their obligations under such performance bond. Such bond shall contain a waiver of notice of any Change Notices and Amendments to this Agreement.

17.3.2 No payments shall be due CONTRACTOR until the performance bond is

in place and approved in writing by COUNTY (through its Project Director or otherwise). The bond shall be made payable to COUNTY and shall be issued by a corporate surety licensed to do business in the State of California and reasonably satisfactory to COUNTY. The Agreement number and dates of performance shall be specified in the performance bond.

17.3.3 Each performance bond shall secure CONTRACTOR's performance, including, without limitation, performing CONTRACTOR's services in accordance with Exhibit A (Statement of Work) and providing Deliverables, and shall secure any damages, costs or expenses, resulting from CONTRACTOR's default in performance hereunder.

17.3.4 In the event of termination under Paragraph 31 (Termination for Default), the performance bond shall become payable to COUNTY for any outstanding damage assessments made by COUNTY against CONTRACTOR. An amount up to the full amount of the performance bond may also be applied to CONTRACTOR's liability for any administrative costs and/or excess costs incurred by COUNTY in obtaining similar software and services to replace those terminated as a result of CONTRACTOR's default. In addition, upon such a termination, COUNTY may seek any other remedies permitted under this Agreement or under applicable law.

17.3.5 At its sole option, COUNTY may accept certificates of deposit, cash deposits, United States government securities, or irrevocable letters of credit in lieu of commercial bonds to meet this provision. Such alternate forms of surety shall be made payable to the County of Los Angeles and shall be deposited with the COUNTY as instructed by COUNTY's Project Director in writing. COUNTY shall have no responsibility to CONTRACTOR to pay any such deposit, and any loss by reason of the failure of any institution issuing such collateral shall be solely the responsibility of CONTRACTOR.

17.3.6 Prior to acceptance of CONTRACTOR's performance bond, CONTRACTOR shall submit to COUNTY the form of the proposed performance bond or alternative security for approval by COUNTY (through its Project Director or otherwise), as applicable as determined by COUNTY. Both the initial expense and the annual premiums on the bond shall be paid by CONTRACTOR.

17.4 General Insurance Requirements

17.4.1 Reporting:

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

17.4.2 Additional Insured Status and Scope of Coverage:

The County of Los Angeles shall be provided additional insured status under CONTRACTOR's General Liability policy with respect to liability arising out of CONTRACTOR's ongoing and completed operations performed on behalf of the COUNTY. The additional insured status shall apply with respect to liability and defense of suits arising out of the CONTRACTOR's acts or omissions, whether such liability is attributable to the CONTRACTOR or to the COUNTY. The full policy limits and scope of protection also shall apply to the COUNTY as an additional insured, even if they exceed the insurance specifications herein. Use of an automatic additional insured endorsement form is acceptable providing it satisfies the insurance provisions herein.

17.4.3 Insurer Financial Ratings:

Coverage shall be placed with insurers acceptable to the COUNTY with A.M. Best ratings of not less than A:VII unless otherwise approved by COUNTY's Risk Manager.

17.4.4 CONTRACTOR's Insurance Shall Be Primary:

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

17.4.5 Waivers of Subrogation:

To the fullest extent permitted by law, CONTRACTOR hereby waives its rights and its insurer(s)' rights of recovery against COUNTY under all the

insurance policies specified herein for any loss arising from or relating to this Agreement. CONTRACTOR shall provide the COUNTY with a certificate of insurance for all policies evidencing the waiver of subrogation requirement has been met.

17.4.6 Subcontractor Insurance Coverage Requirements:

CONTRACTOR shall include all Subcontractors as insureds under CONTRACTOR's own policies, or shall provide COUNTY with each Subcontractor's separate evidence of insurance coverage. CONTRACTOR shall obtain COUNTY's prior review and approval of any Subcontractor request for modification of the insurance provisions set forth in Exhibit I (Required Subcontract Provisions).

17.4.7 Deductibles and Self-Insured Retentions (SIRs):

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

17.4.8 Application of Excess Liability Coverage:

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

17.4.9 Separation of Insureds:

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

18. RECORDS AND AUDITS

18.1 CONTRACTOR shall maintain accurate and complete financial and billing records of its activities and operations relating to this Agreement in accordance with generally accepted accounting principles. CONTRACTOR shall also maintain accurate and complete time reporting, employment and other records relating to its performance of this Agreement.

18.2 During the term of this Agreement and for a period of four (4) years thereafter, CONTRACTOR agrees that the Secretary of the Department of Health and Human Services (in this Subparagraph 18.2, the "Secretary") and the Comptroller General of the United States, or the designee or duly authorized

representative of either of them, will have access to all books and records of CONTRACTOR pertaining to the subject matter of this Agreement and the provision of services under it, in accordance with the criteria presently or hereafter developed by the Department of Health and Human Services as provided in Section 952 of the Omnibus Reconciliation Act of 1980 (in this Subparagraph 18.2, the "Act"). Upon request of the Secretary, the Comptroller General, or the designee or authorized representative of either of them, CONTRACTOR will (at reasonable times and places during normal business hours) make available this Agreement, and all books, documents and records of CONTRACTOR that are necessary to verify the nature and extent of the costs of the services provided by CONTRACTOR furnished in connection with this Agreement. Notwithstanding the foregoing provisions, the access to the books, records and documents of CONTRACTOR and any related organization provided for herein will be discontinued and become null and void upon a finding by a court or quasi-judicial body of competent jurisdiction that this Agreement is outside the scope of the regulatory or statutory definition of those contracts and agreements included within the purview of Section 952 of the Act or the rules and regulations promulgated thereunder.

18.3 CONTRACTOR agrees that COUNTY, or its authorized representatives, upon reasonable notice and during business hours, shall have access to and the right to examine, audit, excerpt, copy or transcribe any financial, billing, time reporting, employment and other records relating to CONTRACTOR's performance of this Agreement provided such access rights do not constitute an unlawful invasion of the privacy rights of any CONTRACTOR employee and would not in the reasonable opinion of CONTRACTOR subject CONTRACTOR to legal liability. All records required to be maintained under this Paragraph 18 shall be kept and maintained by CONTRACTOR and shall be made available to COUNTY during the term of this Agreement and for a period of five (5) years thereafter unless COUNTY's written permission is given to dispose of any such material prior to such time. Notwithstanding the foregoing, with respect to employment records that are not needed to support any financial or billing records, such records shall be kept and maintained by CONTRACTOR for a minimum of two (2) years following termination of employment. CONTRACTOR shall notify COUNTY's Project Director in writing of any changes to CONTRACTOR's records retention policy following the Effective Date that impact such employment records. All records required to be maintained under this Paragraph 18 shall be maintained by CONTRACTOR at a location in Los Angeles or San Diego Counties, provided that if any such records is located outside Los Angeles or San Diego Counties, then, at CONTRACTOR's expense (including but not limited to travel, per diem, copying, shipping and other costs), COUNTY may travel to CONTRACTOR's location to examine, audit, excerpt, copy or transcribe such

records.

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

19. OTHER PROPRIETARY CONSIDERATIONS

19.1 CONTRACTOR and COUNTY agree that all external systems Interfaces which are proprietary to COUNTY, as set forth in Attachment D (JHIS Interfaces) to Exhibit A (Statement of Work), and all materials, plans, reports, acceptance test criteria, acceptance test plans, Project Control Document, departmental procedures and processes, deliverables, data, and information (excluding the Application Software, external systems Interfaces which are not proprietary to COUNTY, as set forth in Attachment D (JHIS Interfaces) to Exhibit A (Statement of Work), medical devices Interfaces, other CONTRACTOR Work Product and Third Party Software) developed under this Agreement for delivery to COUNTY and all copyrights, patent rights, trade secret rights and other proprietary rights therein (collectively "COUNTY Materials") shall be the sole property of COUNTY, and CONTRACTOR hereby assigns and transfers to COUNTY all CONTRACTOR's right, title, and interest in and to all such COUNTY Materials developed under this Agreement, provided that notwithstanding such COUNTY ownership, CONTRACTOR may retain possession of all working papers prepared by CONTRACTOR, provided that such working papers are maintained in accordance with Paragraph 18 (Records and Audits).

19.2 Upon request of COUNTY, CONTRACTOR shall execute all documents requested by COUNTY and shall perform all other acts requested by COUNTY to assign and transfer to, and vest in, COUNTY all CONTRACTOR's right, title, and interest in and to the COUNTY Materials, including, but not limited to, all copyrights, patents, and trade secret rights. COUNTY shall have the right to register all copyrights and patents in the name of the County of Los Angeles. Further, COUNTY shall have the right to assign, license, or otherwise transfer any and all COUNTY's right, title, and interest, including, but not limited to, copyrights and patents, in and to the COUNTY Materials.

19.3 As requested in writing by COUNTY's Project Director and subject to Subparagraph 19.1, CONTRACTOR shall affix the following notice to COUNTY Materials developed by CONTRACTOR under this Agreement: "©Copyright 2009 (or such other date of first publication), County of Los Angeles. All Rights Reserved". CONTRACTOR shall affix such notice as directed by COUNTY.

19.4 All CONTRACTOR Work Product that CONTRACTOR desires to use hereunder must be specifically identified by CONTRACTOR to COUNTY's Project Director as proprietary or confidential, and shall be plainly and prominently marked by CONTRACTOR as "PROPRIETARY" or "CONFIDENTIAL". CONTRACTOR hereby grants to COUNTY a license to use all CONTRACTOR Work Product not expressly referenced in the License granted under Subparagraph 11.3 (License) on the same terms as such License.

20. PATENT, COPYRIGHT AND TRADE SECRET INDEMNIFICATION

20.1 CONTRACTOR shall indemnify, defend, and hold harmless COUNTY, its districts administered by COUNTY, and its elected and appointed officers, employees, and agents from and against any and all third party Claims, damages, liabilities, losses, costs, and expenses, including, but not limited to, reasonable defense costs and legal, accounting and other expert, consulting or professional fees, as such are incurred, for or by reason of any actual or alleged infringement of any United States patent or copyright, or other rights of any third party, or any actual or alleged trade secret disclosure or misappropriation, arising from or related to the System Software or the operation and utilization of CONTRACTOR's work under this Agreement (in this Paragraph 20, collectively "Infringement Claim(s)"). CONTRACTOR shall have no obligation to COUNTY under this Paragraph 20 if any Infringement Claim is caused by use by COUNTY of the System Software other than in accordance with the Specifications and other applicable Documentation, as initially determined by COUNTY's Project Director but subject to Paragraph 46 (Dispute Resolution Procedure). Any legal defense pursuant to CONTRACTOR's indemnification obligations under this Paragraph 20 shall be conducted by CONTRACTOR and performed by counsel selected by CONTRACTOR and approved by COUNTY (which approval shall not be unreasonably withheld) in writing. Notwithstanding the preceding sentence, COUNTY shall have the right to participate in any such defense at its sole cost and expense, except that in the event CONTRACTOR fails to provide COUNTY with a full and adequate defense, as required by law and this Agreement, COUNTY shall be entitled to reimbursement for all such costs and expenses.

20.2 Without limiting the foregoing, in the event COUNTY's Project Director becomes aware that ongoing use of the System Software or any part thereof, is the subject of any Infringement Claim that might preclude or impair COUNTY's use of the System Software or any part thereof (e.g. injunctive relief), or that COUNTY's continued use of the System Software or any part thereof may subject COUNTY to punitive damages or statutory penalties or other costs or expenses, COUNTY shall give written notice to CONTRACTOR of such fact(s). Upon notice of such facts, CONTRACTOR shall, at no cost to COUNTY, either (1) procure the right, by license or otherwise, for COUNTY to continue to use the affected components of System Software, or part(s) thereof, to the same extent of the License under this Agreement, or (2) to the extent CONTRACTOR is unable to procure such right, replace or modify the affected components of System Software with another system or components of equivalent quality and performance capabilities, in COUNTY's determination, to become non-infringing, non-misappropriating and/or non-disclosing. If CONTRACTOR fails to complete the remedial acts set forth above within ninety (90) days of the date of the written notice from COUNTY (or such longer period as may be agreed to in writing in accordance with this Agreement), COUNTY shall have the right to take such remedial acts it determines to be reasonable to mitigate any impairment of its use of affected components of System Software or damages or other costs or expenses (in this Paragraph 20, "COUNTY's Remedial Acts"). CONTRACTOR shall indemnify COUNTY for all amounts paid and all direct and indirect costs associated with COUNTY's Remedial Acts. Failure by CONTRACTOR to pay such amounts and costs within ten (10) days of invoice by COUNTY shall, in addition to, and cumulative to all other remedies entitle COUNTY to immediately withhold payments due to CONTRACTOR under this Agreement up to the total of the amounts and costs paid in connection with COUNTY's Remedial Acts.

20.3 UNLESS AND UNTIL COUNTY TERMINATES THIS AGREEMENT FOR DEFAULT IN ACCORDANCE WITH THE TERMS OF THIS AGREEMENT, COUNTY'S RIGHTS UNDER THIS PARAGRAPH 20, TOGETHER WITH THE OTHER RIGHTS EXPRESSLY PROVIDED FOR IN THIS AGREEMENT, SHALL CONSTITUTE COUNTY'S SOLE AND EXCLUSIVE REMEDY TO ENFORCE CONTRACTOR'S INDEMNIFICATION OBLIGATION SET FORTH IN THIS PARAGRAPH 20.

21. COMPLIANCE WITH APPLICABLE LAW

21.1 CONTRACTOR's activities hereunder, including, without limitation, the Tasks, subtasks, Deliverables, goods, services and other work from time to time delivered to COUNTY hereunder, shall comply with all applicable Federal, State, and local laws, rules, regulations, ordinances and codes, and all

provisions required thereby to be included in this Agreement are incorporated herein by this reference thereto. CONTRACTOR shall have up to fifteen (15) days (or such other time period as mutually agreed to by the parties in accordance with the terms of this Agreement) to correct any noncompliance with COUNTY rules, regulations, ordinances and codes following written notice from COUNTY including written copies of such applicable rules, regulations, ordinances and/or codes.

21.2 CONTRACTOR shall indemnify, defend, and hold harmless COUNTY, its districts administered by COUNTY, and its elected and appointed officers, employees, and agents from and against any and all third party Claims, damages, liabilities, losses, costs, and expenses, including, but not limited to, reasonable defense costs and legal, accounting and other expert, consulting or professional fees, arising from or related to any violation on the part of CONTRACTOR, its employees, agents, or Subcontractors of any such laws, rules, regulations, ordinances or codes. Any legal defense pursuant to CONTRACTOR's indemnification obligations under this Subparagraph 21.2 shall be conducted by CONTRACTOR and performed by counsel selected by CONTRACTOR and approved by COUNTY (which approval shall not be unreasonably withheld) in writing. Notwithstanding the preceding sentence, COUNTY shall have the right to participate in any such defense at its sole cost and expense, except that in the event CONTRACTOR fails to provide COUNTY with a full and adequate defense, as required by law or this Agreement, COUNTY shall be entitled to reimbursement for all such costs and expenses.

22. FAIR LABOR STANDARDS

CONTRACTOR shall comply with all applicable provisions of the Federal Fair Labor Standards Act, and shall indemnify, defend, and hold harmless COUNTY, its districts administered by COUNTY, and its elected and appointed officers, employees, and agents from any and all liability arising from third party Claims, including, but not limited to, wages, overtime pay, liquidated damages, penalties, court costs, and attorneys' fees arising under any wage and hour law, including, but not limited to, the Federal Fair Labor Standards Act, for work performed by CONTRACTOR's employees.

23. NONDISCRIMINATION AND AFFIRMATIVE ACTION

23.1 CONTRACTOR certifies and agrees that all persons employed by it, its affiliates, subsidiaries, or holding companies are and will be treated equally without regard to or because of race, color, religion, ancestry, national origin, sex, age, or physical or mental handicap, in compliance with all applicable

Federal and State anti-discrimination laws and regulations.

23.2 CONTRACTOR shall certify to, and comply with, the provisions of Exhibit F (CONTRACTOR's EEO Certification).

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

23.4 CONTRACTOR certifies and agrees that it will deal with its Subcontractors, bidders, or vendors without regard to or because of race, color, religion, ancestry, national origin, sex, age, or physical or mental handicap.

23.5 CONTRACTOR certifies and agrees that it, its affiliates, subsidiaries or holding companies, shall comply with all applicable Federal and State laws and regulations, including, but not limited to:

i. Title VII, Civil Rights Act of 1964;

ii. Section 504, Rehabilitation Act of 1973;

iii. Age Discrimination Act of 1975;

iv. Title IX, Education Amendments of 1973, as applicable; and

v. Title 43, Part 17, Code of Federal Regulations, Subparts A & B; and that no person shall, on the grounds of race, color, religion, ancestry, national origin, sex, age, or physical or mental handicap, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under this Agreement, or under any project, program, or activity supported by this Agreement.

23.6 COUNTY encourages the participation of minority business enterprises (in this Subparagraph 23.6 "MBE") and women's business enterprises (in this Subparagraph 23.6 "WBE") in the performance of this Agreement. COUNTY strongly urges the participation of MBE/WBEs in this Agreement; however, the final selection shall be without regard to race, color or creed. CONTRACTOR shall take affirmative steps to assure that MBE/WBEs are utilized by CONTRACTOR when possible as sources of supplies, hardware,

software, services and other work under this Agreement. The final selection shall be based on the business' ability to provide the best work and value for COUNTY.

23.7 If COUNTY finds that any of the provisions of this Paragraph 23 have been violated, such violation shall, at the election of COUNTY, constitute a material breach of this Agreement upon which COUNTY may immediately terminate this Agreement. While COUNTY reserves the right to determine independently that the anti-discrimination provisions of this Agreement have been violated, in addition, a determination by the California Fair Employment Practices Commission or the Federal Equal Employment Opportunity Commission that CONTRACTOR has violated State or Federal anti-discrimination laws or regulations shall entitle COUNTY to find that CONTRACTOR has violated the anti-discrimination provisions of this Agreement.

23.8 The parties agree that in the event CONTRACTOR violates the anti-discrimination provisions of this Agreement, COUNTY shall, at its option, be entitled to the sum of Five Hundred Dollars ($500) for each such violation pursuant to California Civil Code Section 1671 as liquidated damages in lieu of terminating this Agreement.

24. EMPLOYMENT ELIGIBILITY VERIFICATION

24.1 CONTRACTOR warrants that it fully complies with all Federal and State statutes and regulations regarding the employment of aliens and others and that all its employees performing work under this Agreement meet the citizenship or alien status requirements set forth in Federal and State statutes and regulations. CONTRACTOR shall obtain, from all employees performing work hereunder, all verification and other documentation of employment eligibility status required by Federal statutes and regulations as they currently exist and as they may be hereafter amended.

24.2 CONTRACTOR shall retain all such documentation for the period prescribed by law. CONTRACTOR shall indemnify, defend, and hold harmless COUNTY, its districts administered by COUNTY, and its elected and appointed officers, employees, and agents from and against any and all third party Claims, damages, liabilities, losses, costs, and expenses, including, but not limited to, reasonable defense costs and legal, accounting and other expert, consulting or professional fees, arising out of or in connection with any employer sanctions and any other liability which may be assessed against CONTRACTOR or COUNTY in connection with any alleged violation of any Federal or State statutes or regulations pertaining to the eligibility for employment of any employees performing work hereunder. Any legal

defense pursuant to CONTRACTOR's indemnification obligations under this Paragraph 24 shall be conducted by CONTRACTOR and performed by counsel selected by CONTRACTOR and approved by COUNTY (which approval shall not be unreasonably withheld) in writing. Notwithstanding the preceding sentence, COUNTY shall have the right to participate in any such defense at its sole cost and expense, except that in the event CONTRACTOR fails to provide COUNTY with a full and adequate defense, as required by law or this Agreement, COUNTY shall be entitled to reimbursement for all such costs and expenses.

25. CAPTIONS AND PARAGRAPH HEADINGS

Captions and paragraph headings used in this Agreement are for convenience only and are not a part of this Agreement and shall not be used in construing this Agreement.

26. WAIVER

A waiver by either party of any breach of any provision of this Agreement shall not constitute a waiver of any other breach or of such provision. Failure of a party to enforce at any time, or from time to time, any provision of this Agreement shall not be construed as a waiver thereof. The rights and remedies set forth in this Agreement shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Agreement.

27. GOVERNING LAW AND JURISDICTION

This Agreement shall be governed by, and construed in accordance with, the laws of the State of California applicable to agreements made and to be performed within that State. Without limiting the foregoing, CONTRACTOR and COUNTY intend that this Agreement shall be subject to the provisions of the Uniform Commercial Code as enacted in California, and the parties hereto shall retain all of their rights and remedies thereunder. CONTRACTOR agrees and consents to the exclusive jurisdiction of the courts of the State of California (except with respect to Claims that are subject to exclusive federal subject matter jurisdiction, as to which CONTRACTOR agrees and consents to the exclusive jurisdiction of the Federal District Court of the Central District of California) for all purposes regarding this Agreement and further agrees and consents that venue of any action brought hereunder shall be exclusively in the County of Los Angeles, California.

28. SEVERABILITY

If any provision of this Agreement is adjudged void or invalid for any reason

whatsoever, but would be valid if part of the wording thereof were deleted or changed, then such provision shall apply with such modifications as may be necessary to make it valid and effective. In the event that one or more of the provisions of this Agreement is found to be invalid, illegal or unenforceable in any respect, such provision shall be deemed deleted here from and the validity, legality, and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

29. HIRING OF EMPLOYEES

CONTRACTOR and COUNTY agree that, during the term of this Agreement and for a period of one (1) year thereafter, except with the prior written consent of the other party, neither party shall in any way intentionally induce or persuade any Project Director, Project Manager or other employee, within the meaning of Subparagraph 3.4 (Approval of CONTRACTOR's Staff) of one party to become an employee or agent of the other party, provided that the foregoing provision will not prohibit a general non-targeted solicitation of employment in the ordinary course of business or prevent either party from employing any employee who contacts such party at his or her own initiative without any direct or indirect solicitation by or encouragement from such party. Notwithstanding the foregoing, COUNTY shall be entitled to make offers of employment to employees of CONTRACTOR necessary or desirable to perform work described in this Agreement, in the event that: (1) COUNTY has the right to terminate this Agreement pursuant to Paragraph 30 (Termination for Insolvency), (2) this Agreement is terminated by COUNTY due to CONTRACTOR's default pursuant to Paragraph 31 (Termination for Default), (3) CONTRACTOR and COUNTY have followed the dispute resolution procedure set forth in Paragraph 46 (Dispute Resolution Procedure), and have otherwise exhausted other administrative remedies, if any, as determined by COUNTY, or (4) CONTRACTOR either announces the withdrawal of support of, or otherwise no longer provides services COUNTY deems essential to, the ongoing support of the System Software.

30. TERMINATION FOR INSOLVENCY

30.1 COUNTY may terminate this Agreement immediately at any time following the occurrence of any of the following:

A. Insolvency of CONTRACTOR. CONTRACTOR shall be deemed to be insolvent if it has ceased to pay or has admitted in writing its inability to pay its debts for at least sixty (60) days in the ordinary course of business or cannot pay its debts as they become due, whether or not a petition has been filed under the United States Bankruptcy Code and whether or not CONTRACTOR is insolvent within the meaning of the United States Bankruptcy Code, provided that CONTRACTOR shall not be deemed

insolvent if it has ceased in the normal course of business to pay its debts which are disputed in good faith and which are not related to this Agreement as determined by COUNTY.

B. The filing of a voluntary or involuntary petition (which involuntary petition is not dismissed within sixty (60) days) regarding CONTRACTOR under the United States Bankruptcy Code.

C. The appointment of a receiver or trustee for CONTRACTOR.

D. The execution by CONTRACTOR of a general assignment for the benefit of creditors.

30.2 The rights and remedies of COUNTY provided in this Paragraph 30 shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Agreement.

30.3 CONTRACTOR agrees that if CONTRACTOR as a debtor-in-possession, or if a trustee in bankruptcy, rejects this Agreement, COUNTY may elect to retain its rights under this Agreement, as provided under Section 365(n) of the United States Bankruptcy Code (11 United States Code, Section 365(n)). Upon written request of COUNTY to CONTRACTOR or the trustee in bankruptcy, as applicable, CONTRACTOR or such trustee shall allow COUNTY to exercise all of its rights and benefits under this Agreement including, without limitation, such Section 365(n) (including, without limitation, the right to continued use of all source and object code versions of the Application Software, external systems Interfaces which are not proprietary to COUNTY as set forth in Attachment D (JHIS Interfaces) to Exhibit A (Statement of Work) and medical devices Interfaces, and related Documentation), and shall not interfere with the rights and benefits of COUNTY as provided therein. The foregoing shall survive the termination or expiration of this Agreement for any reason whatsoever.

31. TERMINATION FOR DEFAULT

31.1 COUNTY may, by written notice to CONTRACTOR, terminate the whole or any part of this Agreement in any one of the following circumstances:

A. If CONTRACTOR fails to perform or provide any Task, subtask, Deliverable, goods, service, or other work (i) within the times specified in this Agreement, including the applicable notice and/or cure periods, if any (if no cure period is specified in the Agreement, CONTRACTOR shall have fifteen (15) days (or such longer period as may be agreed to in writing in accordance with this Agreement) to cure prior to termination

under this Subparagraph 31.1.A), or (ii) any authorized extensions thereof (provided that nothing in this Subparagraph 31.1.A shall in any way limit or modify any rights of COUNTY or obligations of CONTRACTOR relating to timely performance by CONTRACTOR as otherwise set forth in this Agreement); or

B. If CONTRACTOR (i) fails to perform or comply with (a) any of the provisions of this Agreement with respect to which an express right of termination applies, or (b) any of the other material provisions of this Agreement, or (ii) otherwise materially breaches this Agreement and, in any of these circumstances, does not cure such failure within the times specified in this Agreement, if any (if no cure period is specified in the Agreement, CONTRACTOR shall have fifteen (15) days (or such longer period as may be agreed to in writing in accordance with this Agreement) after receipt of written notice from COUNTY specifying such failure),

provided that the above cure periods shall in no way apply to the calculation of the credits to COUNTY described in Subparagraph 7.2 (Credits to COUNTY). If, pursuant to the preceding sentence, COUNTY has terminated this Agreement without providing a cure period, and subsequently a final determination is made that the default was capable of being cured, then the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to Paragraph 32 (Termination for Convenience).

31.2 For purposes of Subparagraph 31.1, "material provision" includes, but is not limited to, any provision of this Agreement which if CONTRACTOR fails to perform or comply with such provision, could (a) prevent (i) completion of any work under and in accordance with this Agreement, (ii) use of the System in accordance with this Agreement, (iii) performance in accordance with this Agreement, (iv) Compatibility, or (v) support of the System in accordance with this Agreement, (b) compromise the confidentiality or security of COUNTY's Confidential Information, and (c) increase the financial or other risk to COUNTY under this Agreement.

31.3 In the event that COUNTY terminates this Agreement in whole or in part as provided in Paragraph 30 (Termination for Insolvency) or this Paragraph 31, then:

A. COUNTY shall have the right, for COUNTY's business purposes and for the purposes of all Users, and to the extent necessary to continue operations, to continued use of all object code versions of the Application Software, external systems Interfaces which are not proprietary to COUNTY as set forth in Attachment D (JHIS Interfaces) to Exhibit A (Statement of Work) and medical devices Interfaces and related

Documentation pursuant to the License provisions of this Agreement, for the remainder of the term of the License, and COUNTY shall have the right to allow its employees, contractors and all Users to utilize all such object code versions and related Documentation; and

B. COUNTY shall have the rights set forth in Subparagraphs 11.2 (License) and 11.3 (Source Code) to access and use the Source Code as set forth therein, after such time as one of the Release Conditions has occurred; and

C. COUNTY shall have the right to procure, subject to the provisions of clauses (i), (ii) and (iii) of this Subparagraph 31.3.C, upon such terms and in such a manner as COUNTY may deem appropriate, goods, services, and other work, similar to those so terminated, and CONTRACTOR shall be liable to COUNTY for and shall promptly pay to COUNTY any and all excess costs incurred by COUNTY, as determined by COUNTY, subject to Paragraph 46 (Dispute Resolution Procedure), to procure and furnish such similar goods, services, and other work, provided that (i) COUNTY shall use reasonable efforts to make use of the source and object code versions of the Application Software, Interfaces and related Documentation to mitigate CONTRACTOR's liability for excess costs hereunder; (ii) nothing contained herein shall limit any duty COUNTY may otherwise have as a matter of law to use reasonable efforts to mitigate damages; and (iii) CONTRACTOR's total liability pursuant to this Subparagraph 31.3.C for excess costs incurred by COUNTY to procure and furnish such similar goods, services and other work shall not exceed the "Maximum Excess Costs Cap" as defined in this Subparagraph 31.3.C. The Maximum Excess Costs Cap shall mean Twenty-Nine Million Dollars ($29,000,000), less the following amounts: (a) any portion of the Contract Sum which has not been paid to CONTRACTOR by COUNTY; and (b) any portion of the Contract Sum which has been paid to CONTRACTOR by COUNTY but has been repaid or reimbursed to COUNTY pursuant to Subparagraph 8.3.F or Subparagraph 9.4 (Failed Testing). Nothing contained in this Subparagraph 31.3.C shall limit any of COUNTY's other rights or remedies, including, without limitation, COUNTY's right to recover damages other than or in addition to excess costs to procure and furnish similar goods, services and other work, which other or additional damages potentially recoverable by COUNTY may include, without limitation, incidental and consequential damages associated with the cost of procurement of similar goods, services and other work; and

D. CONTRACTOR and COUNTY shall continue the performance of this Agreement to the extent not terminated under the provisions of Paragraph

30 (Termination for Insolvency) and/or this Paragraph 31; and

E. CONTRACTOR understands and agrees that the Sheriff's Department has obligations that they cannot satisfy without use of the System or an equivalent system, and that a failure to satisfy such obligations could result in irreparable damage to COUNTY and the people it serves. Therefore, CONTRACTOR agrees that in the event of any termination of this Agreement, as a result of the breach hereof by either party, or for any other reason, CONTRACTOR shall fully cooperate with COUNTY in the transition of COUNTY to a new system, toward the end that there be no interruption of COUNTY's day to day operations due to the unavailability of the System during such transaction. Such cooperation shall include, but not be limited to, converting existing files to ASCII format, converting data, providing parallel services until COUNTY's system transition is completed, and providing on-site technical support at CONTRACTOR's then current rates. COUNTY may seek specific performance of the preceding two sentences, and CONTRACTOR agrees not to raise the defense that damages are an adequate remedy. The parties shall discuss in good faith the issue of additional fees, if any, to CONTRACTOR for transition services other than those specified above, and CONTRACTOR reserves all legal rights to seek such fees for such services as to which it might be entitled, if any, depending on all of the facts and circumstances of such termination.

31.4 Except with respect to defaults of any Subcontractor(s), CONTRACTOR shall not be liable for any such excess costs, if its failure to perform this Agreement arises out of fires, floods, epidemics, quarantine restrictions, other Acts of God, strikes or freight embargoes, but in every such case the failure to perform must be totally beyond the control and without any fault or negligence of CONTRACTOR. If the failure to perform is caused by the default of a Subcontractor, and if such default arises out of causes beyond the control of both CONTRACTOR and Subcontractor, and without any fault or negligence of either of them, CONTRACTOR shall not be liable for any such excess costs for failure to perform, unless the goods or services to be furnished by the Subcontractor were obtainable from other sources in sufficient time to permit CONTRACTOR to meet the required performance schedule. CONTRACTOR agrees to use all reasonable commercial efforts to obtain such goods or services from other sources. As used in this Subparagraph 31.4, the terms "Subcontractor" and "Subcontractors" mean Subcontractor(s) at any tier.

31.5 If, after COUNTY has given notice of termination under the provisions of this Paragraph 31, it is determined by COUNTY that CONTRACTOR was not in default under the provisions of this Paragraph 31, or that the default was

excusable under the provisions of this Paragraph 31, the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to Paragraph 32 (Termination for Convenience).

31.6 The rights and remedies of COUNTY provided in this Paragraph 31 shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Agreement.

31.7 CONTRACTOR may, by written notice to COUNTY, terminate this Agreement if COUNTY fails to timely pay in accordance with this Agreement any undisputed amounts owed to CONTRACTOR under a properly prepared invoice, and COUNTY does not cure such failure to pay within one hundred and eighty (180) days following receipt of such written notice.

32. TERMINATION FOR CONVENIENCE

32.1 This Agreement may be terminated, in whole or in part, from time to time, when such action is deemed by COUNTY to be in its best interest. Termination of work hereunder shall be effected by delivery to CONTRACTOR of a notice of termination specifying the extent to which performance of work is terminated and the date upon which such termination becomes effective. The date upon which such termination becomes effective shall be no less than thirty (30) days after the notice is sent, provided that in the event COUNTY has purported to terminate this Agreement for default by notice pursuant to Paragraph 31 (Termination for Default) and it has later been determined that CONTRACTOR was not in default, no additional notice shall be required upon such determination.

32.2 After receipt of a notice of termination, and except as otherwise directed by COUNTY, CONTRACTOR shall:

A. Stop work under this Agreement on the date and to the extent specified in such notice;

B. Transfer title and deliver to COUNTY all other completed work and work in process, including external systems Interfaces which are proprietary to COUNTY, as set forth in Attachment D (JHIS Interfaces) to Exhibit A (Statement of Work), and all proprietary rights therein, but not including System Software; and

C. Complete performance of such part of the work as shall not have been terminated by such notice.

32.3 Except as provided in Subparagraph 32.4, nothing in this Paragraph 32 shall

be deemed to prejudice any right of CONTRACTOR to make a claim against COUNTY in accordance with applicable law and regular COUNTY procedures for payment for work performed through the effective date of COUNTY's termination of this Agreement for convenience, including but not limited to Deliverables that have been completed by CONTRACTOR and approved by COUNTY in accordance with this Agreement.

32.4 In addition to, and without limiting, any of COUNTY's other rights set forth in this Paragraph 32, COUNTY shall have the right, for a period of thirty (30) days after receipt of the Project Control Document, to terminate this Agreement on notice to CONTRACTOR if in the opinion of COUNTY in its sole judgment the Project Control Document is not satisfactory or carrying out the Project Control Document is not in the best interest of COUNTY. If COUNTY so terminates based on its determination that the Project Control Document is not satisfactory (e.g., based on a determination that the Project Control Document does not conform to the requirements of this Agreement, is not of sufficient quality, or is incomplete or otherwise defective), then upon any such termination (i) CONTRACTOR shall not be entitled to the sums being withheld pursuant to Subparagraph 8.3 (Payments), (ii) CONTRACTOR shall be required to repay to COUNTY all amounts, if any, paid by COUNTY to CONTRACTOR hereunder, and (iii) except as provided in this Agreement neither party shall have any further obligation to the other under this Agreement. If COUNTY in its sole judgment approves Deliverable 1.1 (Project Control Document (PCD)) pursuant to Exhibit A (Statement of Work) but elects pursuant to this Subparagraph 32.4 to terminate this Agreement based on its determination that carrying out the Project Control Document is not in the best interest of COUNTY, then upon any such termination (i) CONTRACTOR shall be entitled to payment in the amount of the Maximum Fixed Price for Deliverable 1.1 (Project Control Document) shown on Exhibit B (Schedule of Payments), after COUNTY has approved such Deliverable in writing, (ii) CONTRACTOR shall not be entitled to the sums, if any, being withheld pursuant to Subparagraph 8.3 (Payments), and (iii) except as provided in this Agreement, neither party shall have any further obligation to the other under this Agreement.

33. COUNTY AUDIT SETTLEMENTS

If, at any time during or after the term of this Agreement, representatives of COUNTY conduct an audit of CONTRACTOR regarding the work performed under this Agreement, and if such audit finds that COUNTY's dollar liability for any such work is less than payments made by COUNTY to CONTRACTOR, then the difference, together with COUNTY's reasonable costs of audit, shall be either repaid by CONTRACTOR to COUNTY by cash payment upon demand or, at the sole option of the Sheriff's Department, deducted from any amounts due to

CONTRACTOR from COUNTY, whether under this Agreement or otherwise. If such audit finds that COUNTY's dollar liability for such work is more than the payments made by COUNTY to CONTRACTOR, then the difference shall be paid to CONTRACTOR by COUNTY, but in no event shall COUNTY's payments to CONTRACTOR exceed the Contract Sum identified in Paragraph 7 (Contract Sum).

34. NOTICE OF DELAYS

In the event CONTRACTOR determines at any time that failure, delay or inadequacy of performance of any of COUNTY's obligations hereunder may prevent or tend to prevent CONTRACTOR from completing any of CONTRACTOR's obligations in a timely manner or may cause or tend to cause CONTRACTOR to incur additional or unanticipated costs or expenses, CONTRACTOR shall promptly following such determination (and without limiting CONTRACTOR's obligation of prompt notification, in any event within fifteen (15) days following such determination), notify COUNTY's Project Director in writing, which notice shall specify in reasonable detail: (1) any alleged failure, delay or inadequacy of performance by COUNTY and (2) to the best knowledge of CONTRACTOR after due inquiry and analysis, the estimated impact of such alleged failure, delay or inadequacy on the performance of CONTRACTOR's obligations, including, but not limited to, any estimated delay and any estimated amount of additional or unanticipated costs or expenses that may be incurred. In the event that CONTRACTOR fails to fulfill any of its obligations in a timely manner as a direct result of a failure, delay or inadequacy of performance of any of COUNTY's obligations after timely written notice to COUNTY by CONTRACTOR of such failure, delay or inadequacy of performance, then the date for CONTRACTOR's completion of such obligation may be appropriately extended, as determined in the sole discretion of COUNTY's Project Director pursuant to Subparagraph 6.4. CONTRACTOR shall take all reasonable actions to mitigate or reduce any delays. In the event CONTRACTOR fails to notify COUNTY in writing of any alleged failure, delay or inadequacy of performance in a timely manner as set forth in this Paragraph 34, CONTRACTOR shall not be entitled to rely upon such alleged failure, delay or inadequacy of performance for any purpose whatsoever, including, but not limited to, as a purported justification for either: (1) claiming that CONTRACTOR is entitled to receive any additional payments from COUNTY hereunder or (2) failing to fulfill any of CONTRACTOR's obligations in a timely manner. This Paragraph 34 shall not be interpreted or construed as expanding in any manner or to any extent the financial obligations of COUNTY under this Agreement.

35. CONFLICT OF INTEREST

35.1 No COUNTY employee whose position with COUNTY enables such

employee to influence the award of this Agreement or any competing agreement, and no spouse or economic dependent of such employee, shall be employed in any capacity by CONTRACTOR or have any other direct or indirect financial interest in this Agreement. No officer or employee of CONTRACTOR, who may financially benefit from the performance of work hereunder, shall in any way participate in COUNTY's approval, or ongoing evaluation, of such work, or in any way attempt to unlawfully influence COUNTY's approval or ongoing evaluation of such work.

35.2 CONTRACTOR shall comply with all conflict of interest laws, ordinances and regulations now in effect or hereafter to be enacted during the term of this Agreement. CONTRACTOR warrants that it is not now aware of any facts which do or could create a conflict of interest. If either COUNTY or CONTRACTOR hereafter becomes aware of any facts which might reasonably be expected to create a conflict of interest, it shall immediately make full written disclosure of such facts to the other. Full written disclosure shall include, but is not limited to, identification of all persons implicated and a complete description of all relevant circumstances.

36. MOST FAVORED PUBLIC ENTITY

Should CONTRACTOR, at any time during the term of this Agreement, provide the same goods or services under similar quantity and delivery conditions (in each case as reasonably determined by COUNTY's Project Director) to the State of California or any county, municipality or district of the State at prices below those set forth in this Agreement, then such lower prices shall immediately be extended to COUNTY on a prospective basis, subject to the same delivery conditions of the entity receiving such lower prices. COUNTY shall have the right to utilize a COUNTY auditor to verify CONTRACTOR's compliance with this Paragraph 36 by review of CONTRACTOR's books and records.

37. DAMAGE TO COUNTY FACILITIES, BUILDINGS OR GROUNDS

37.1 CONTRACTOR shall repair, or cause to be repaired, at its own cost, any and all damage to COUNTY Facilities, buildings or grounds caused by CONTRACTOR or employees or agents of CONTRACTOR. Such repairs shall be made immediately after CONTRACTOR has become aware of such damage, but in no event later than thirty (30) days after the occurrence.

37.2 If CONTRACTOR fails to make timely repairs, COUNTY may make any necessary repairs. All costs incurred by COUNTY, as reasonably determined by COUNTY, for such repairs shall be repaid by CONTRACTOR by cash payment upon demand, or without limitation of all COUNTY's other rights and remedies provided by law or under this Agreement, COUNTY may deduct

such costs from any amounts due to CONTRACTOR from COUNTY under this Agreement.

38. AUTHORIZATION WARRANTY

CONTRACTOR and COUNTY hereby represents and warrants that the person executing this Agreement on behalf of such party is an authorized agent of such party having actual authority to bind such party to each and every term, condition, and obligation of this Agreement and that all requirements of such party have been fulfilled to provide such person actual authority.

39. NOTICES

All notices or demands required or permitted to be given or made under this Agreement, unless otherwise specified, shall be in writing and shall be addressed to the parties at the addresses indicated on the applicable of Exhibits K (COUNTY's Administration) or L (CONTRACTOR's Administration), and delivered: (1) by hand with signed receipt, (2) by first-class registered or certified mail, postage prepaid, or (3) by facsimile or electronic mail transmission followed within twenty-four (24) hours by a confirmation copy mailed by first-class registered or certified mail, postage prepaid. Notices shall be deemed given at the time of signed receipt in the case of hand delivery, three (3) days after deposit in the United States mail as set forth above, or on the date of facsimile or electronic mail transmission if followed by timely confirmation mailing. Addresses may be changed by either party giving ten (10) days prior written notice thereof to the other party.

The Sheriff, or designee, shall have the authority to issue all notices or demands which are required or permitted by COUNTY under this Agreement.

40. DELIVERY AND RISK OF LOSS

CONTRACTOR shall bear the full risk of loss due to total or partial destruction of all System Software until such items are delivered to and accepted by COUNTY.

41. ACCESS TO COUNTY FACILITIES

41.1 General

CONTRACTOR, its employees and agents, will be granted access to COUNTY Facilities, subject to CONTRACTOR's prior notification to COUNTY's Project Director and full compliance with COUNTY's standard administrative and security requirements, for the purpose of executing CONTRACTOR's obligations hereunder. Access to COUNTY Facilities shall

be restricted to normal COUNTY business hours, 6:30 a.m. to 6:30 p.m. Pacific Time, Monday through Friday, COUNTY observed holidays excepted. Access to COUNTY Facilities outside normal business hours must be approved in writing in advance by COUNTY's Project Director, which approval will not be unreasonably withheld. CONTRACTOR shall have no tenancy, or any other property or other rights in COUNTY Facilities. While present at COUNTY Facilities, CONTRACTOR's personnel shall be accompanied by COUNTY personnel at all times, unless otherwise specified in writing prior to such event by COUNTY's Project Director.

41.2 Security Search of CONTRACTOR's Staff

Weapons, drugs, alcohol, tobacco products and other contraband are not permitted at COUNTY Facilities and all persons entering are subject to search. CONTRACTOR's staff shall be subject to all COUNTY Facility rules, regulations, policies and procedures while present at a COUNTY Facility, including but not limited to criminal background checks pursuant to Subparagraph 3.6 (Background Check of CONTRACTOR's Staff). COUNTY's Project Director and/or COUNTY's Technical or Administrative Project Manager will provide written copies to CONTRACTOR and such staff on the applicable policies and procedures prior to CONTRACTOR or such staff entering a COUNTY Facility. As requested by any of the Sheriff's Department staff, CONTRACTOR's staff shall submit to a search of his person and/or property at any time while entering, leaving, or working at a COUNTY Facility. Any breach of security by CONTRACTOR or any CONTRACTOR staff may result in the denial of further access to COUNTY Facilities and may be grounds for criminal prosecution.

42. COUNTY FACILITY WORK SPACE

In order for CONTRACTOR to perform services hereunder and only for the performance of such services, COUNTY will, subject to COUNTY's standard administrative and security requirements, provide CONTRACTOR with work space and equipment at COUNTY Facilities on a nonexclusive use basis for a maximum number of CONTRACTOR staff personnel as mutually agreed in writing by COUNTY's Project Director and CONTRACTOR's Project Director. COUNTY will also provide CONTRACTOR with reasonable telephone service in such work space for use only for purposes of this Agreement.

43. SYSTEM USE

Prior to Final System Acceptance, COUNTY shall have the right to use, in a Production Use mode, System Components which have been previously approved by COUNTY in accordance with this Agreement. Such Production Use

shall not restrict CONTRACTOR's performance under this Agreement and shall not be deemed Final System Acceptance.

44. LICENSES, PERMITS, REGISTRATIONS, ACCREDITATIONS AND CERTIFICATES

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

45. PHYSICAL ALTERATIONS

Except as otherwise provided herein, CONTRACTOR shall not in any way physically alter or improve any COUNTY Facility without the prior written approval of the Sheriff's Department in such person's sole discretion.

46. DISPUTE RESOLUTION PROCEDURE

46.1 CONTRACTOR and COUNTY agree to act promptly and diligently to mutually resolve any disputes which may arise with respect to this Agreement. All such disputes shall be subject to the provisions of this Paragraph 46.

46.2 CONTRACTOR and COUNTY agree that, the existence and details of a dispute notwithstanding, both parties shall continue without delay their performance hereunder, except for any performance which COUNTY, in its sole discretion, determines should be delayed as a result of such dispute. COUNTY shall continue to pay sums not in dispute, during any such period of continued performance.

If CONTRACTOR fails to continue without delay its performance hereunder which COUNTY, in its sole discretion, determines should not be delayed as a result of such dispute, then any additional costs which may be incurred by CONTRACTOR or COUNTY as a result of CONTRACTOR's failure to continue to so perform shall be borne by CONTRACTOR, and CONTRACTOR shall make no claim whatsoever against COUNTY for such

costs. CONTRACTOR shall promptly reimburse COUNTY for such COUNTY costs, as determined by COUNTY, or COUNTY may deduct all such additional costs from any amounts due to CONTRACTOR from COUNTY, whether under this Agreement or otherwise.

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

46.3 In the event of any dispute between the parties with respect to this Agreement, CONTRACTOR and COUNTY shall submit the matter to their respective Project Managers for the purpose of endeavoring to resolve such dispute.

46.4 In the event that the Project Managers are unable to resolve the dispute within a reasonable time not to exceed five (5) days from the date of submission of the dispute to them, then the matter shall be immediately submitted to the parties' respective Project Directors for further consideration and discussion to attempt to resolve the dispute.

46.5 In the event that the Project Directors are unable to resolve the dispute within a reasonable time not to exceed five (5) days from the date of submission of the dispute to them, then the matter shall immediately be submitted to CONTRACTOR's Executive Vice President, Client Organization, and the Sheriff, in consultation with the COUNTY's Chief Information Office, for further consideration and discussion to attempt to resolve the dispute.

46.6 In the event that CONTRACTOR's Executive Vice President, Client Organization, and the Sheriff, in consultation with the COUNTY's Chief Information Office, are unable to resolve the dispute within a reasonable time not to exceed ten (10) days from the date of submission of the dispute to them, then each party may assert its other rights and remedies provided under this Agreement and/or its rights and remedies as provided by law.

46.7 All disputes utilizing this dispute resolution procedure shall be documented in writing by each party and shall state the specifics of each alleged dispute and all actions taken. The parties shall act in good faith to resolve all disputes. At all levels described in this Paragraph 46, the efforts to resolve a dispute shall be undertaken by conference between the parties' respective representatives,

either orally, by face-to-face meeting or by telephone, or in writing by exchange of correspondence.

46.8 Notwithstanding any other provision of this Agreement, COUNTY's right to terminate this Agreement pursuant to Paragraph 30 (Termination for Insolvency), Paragraph 31 (Termination for Default), Paragraph 32 (Termination for Convenience), or any other termination provision hereunder, and either party's right to seek injunctive relief to enforce the provisions of Paragraphs 19 (Other Proprietary Considerations) and 52 (Confidentiality, Security and Non-Disclosure), shall not be subject to this Dispute Resolution Procedure. The preceding sentence is intended only as a clarification of a party's rights, and shall not be deemed to impair any claims that such party may have against the other or either party's rights to assert such claims after any such termination or such injunctive relief has been obtained.

47. NO THIRD PARTY BENEFICIARIES

Notwithstanding any other provision of this Agreement, CONTRACTOR and COUNTY do not in any way intend that any person or entity shall acquire any rights as a third party beneficiary of this Agreement, except that this provision shall not be construed to diminish CONTRACTOR's indemnification obligations hereunder.

48. RESTRICTIONS ON LOBBYING

CONTRACTOR and each COUNTY lobbyist or COUNTY lobbying firm as defined in Los Angeles County Code Section 2.160.010, retained by CONTRACTOR, shall fully comply with COUNTY Lobbyist Ordinance, Los Angeles County Code Chapter 2.160. Failure on the part of CONTRACTOR or any COUNTY lobbyist or COUNTY lobbying firm retained by CONTRACTOR to fully comply with COUNTY Lobbyist Ordinance shall constitute a material breach of this Agreement upon which COUNTY may immediately terminate or suspend this Agreement.

49. CONTRACTOR PERFORMANCE DURING CIVIL UNREST OR DISASTER

CONTRACTOR recognizes that COUNTY provides services essential to the residents of the communities it serves, and that these services are of particular importance at the time of a riot, insurrection, civil unrest, natural disaster or similar event. Notwithstanding any other provision of this Agreement, full performance by CONTRACTOR during any riot, insurrection, civil unrest, natural disaster or similar event is not excused if such performance remains physically possible without related danger to CONTRACTOR's or its Subcontractors' employees and suppliers. During any such event in which the health or safety of

any of CONTRACTOR's staff members would be endangered by performing their services on-site, such staff members may perform any or all of their services remotely.

50. ARM'S LENGTH NEGOTIATIONS

This Agreement is the product of arm's length negotiation between CONTRACTOR and COUNTY. Each party has had the opportunity to receive advice from independent counsel of its own choosing. This Agreement is to be interpreted fairly as between the parties, and not strictly construed as against either party.

51. SURVIVAL

The following provisions of this Agreement shall survive its expiration or termination for any reason: Subparagraphs 4.2, 8.2 through 8.5, 10.2, 10.4, 10.5, 10.6, 12, 16, 16.4, 17.1, 17.2.1, 17.3.3 and 21.2, and Paragraphs 1, 11, 15, 18, 19, 20, 22, 24, 26, 27, 28, 29, 30, 31, 32, 33, 39, 46, 47, 52, 53, 57, 65 and 71 and this Paragraph 51.

52. CONFIDENTIALITY, SECURITY AND NON-DISCLOSURE

52.1 Subject in all respects to Subparagraphs 19.4, 52.9 and 52.10, each party shall maintain the confidentiality of the other party's Confidential Information in accordance with all applicable Federal, State and local laws, regulations, ordinances, guidelines and directives relating to confidentiality. With respect to CONTRACTOR, the "Confidential Information" consists of the proprietary aspects of the Application Software, the external systems Interfaces which are not proprietary to COUNTY, as set forth in Attachment D (JHIS Interfaces) to Exhibit A (Statement of Work), the medical devices Interfaces and the other CONTRACTOR Work Product. With respect to COUNTY, the "Confidential Information" consists of the COUNTY Materials, COUNTY billings, COUNTY records, inmate records and information, inmate patient records and information and other COUNTY records and information. With respect to CONTRACTOR and COUNTY, "Confidential Information" shall not include information which (i) is lawfully in the public domain at the time of disclosure through no act or omission of the other party or (ii) is disclosed with the prior written approval of the party to which such information pertains.

52.2 With respect to COUNTY's Confidential Information, CONTRACTOR shall: (1) not use any such information for any purpose whatsoever other than carrying out the express terms of this Agreement; (2) promptly transmit to COUNTY all requests for disclosure of any such information; (3) not disclose, except as otherwise specifically permitted by this Agreement, any such

information to any person or organization other than COUNTY without COUNTY's prior written authorization that the information is releasable; and (4) at the expiration or termination of this Agreement, return all such information to COUNTY or maintain such information according to the written procedures sent to CONTRACTOR by In the event CONTRACTOR receives any court or administrative agency order, service of process, or request by any person or entity (other than CONTRACTOR's professionals) for disclosure of any such details, CONTRACTOR shall immediately notify COUNTY's Project Director. Thereafter, CONTRACTOR shall comply with such order, process or request only to the extent required by applicable law. Notwithstanding the preceding sentence, to the extent permitted by law, CONTRACTOR shall delay such compliance and cooperate with COUNTY to obtain relief from such obligations to disclose until COUNTY shall have been given a reasonable opportunity to obtain such relief.

52.3 In recognizing CONTRACTOR's need to identify its services and related clients to sustain itself, COUNTY shall not inhibit CONTRACTOR from publishing its role under this Agreement within the following conditions:

A. CONTRACTOR shall develop all publicity material in a professional manner.

B. During the term of this Agreement, CONTRACTOR shall not publish or disseminate any commercial advertisements, press releases, feature articles, or other materials using the name of COUNTY without the prior written consent of COUNTY's Project Director. COUNTY shall not unreasonably withhold written consent, and approval by COUNTY may be assumed in the event no adverse comments are received in writing within two (2) weeks after submittal.

C. CONTRACTOR may, without the prior written consent of COUNTY, indicate in its proposals and sales materials that it has been awarded this Agreement with the County of Los Angeles, provided that the requirements of Subparagraph 52.3.A shall apply.

52.4 CONTRACTOR hereby acknowledges the right of privacy of all persons as to whom there exists any inmate records and information, and inmate patient records and information. CONTRACTOR shall protect, secure and keep confidential all inmate records and information, and inmate patient records and information in compliance with all federal, State and local laws, rules, regulations, ordinances, guidelines and directives, relating to confidentiality and information security (including any breach of the security of the System, such as any unauthorized acquisition of inmate records and information, and inmate patient records and information that compromises the security,

confidentiality or integrity of personal information), including California Civil Code Section 1798.82. Further, CONTRACTOR shall take all reasonable actions necessary or advisable to protect all inmate records and information, and inmate patient records and information in its possession, custody or control from loss or damage by any cause, including fire, theft or other catastrophe. In addition, if requested by COUNTY's Project Director, CONTRACTOR shall provide notification to all persons whose unencrypted personal information was, or is reasonably believed to have been, acquired by any unauthorized person, and the content, method and timing of such notification shall be subject to the prior approval of COUNTY's Project Director.

52.5 By State law (California Welfare and Institutions Code Sections 827 and 828 an California Penal Code Sections 1203.5, 1203.9 and 11140 through 11144), inmate records and Sheriff's Department case information which is in CONTRACTOR's care and possession is confidential and no information related to anyone except those authorized employees of the Sheriff's Department and law enforcement agencies.

A. CONTRACTOR shall give each of its employees who either will have access inmate records or may come onsite to any COUNTY Facility during the course of performing work under this Agreement copies of all cited code sections, and a Confidentiality of CORI form in the form attached hereto as Exhibit N (Confidentiality of CORI), regarding confidentiality of the information in inmate records. CONTRACTOR shall retain an original executed Confidentiality of CORI form for each such employee and shall forward copies of each such Confidentiality of CORI form to COUNTY's Project Managers within five Working Days of the start of such employee having access to COUNTY records under this Agreement.

B. CONTRACTOR shall inform all of its officers, employees, agents and subcontractors of the above provisions and that any knowing and intentional violation of such State law is a misdemeanor.

52.6 CONTRACTOR shall protect the security of and keep confidential all COUNTY's Confidential Information. Further, CONTRACTOR shall use whatever security measures are reasonably necessary to protect all such materials from loss or damage by any cause, including, but not limited to, fire and theft.

52.7 CONTRACTOR shall not reproduce, distribute, or disclose to any person or entity any information identifying, characterizing, or relating to any risk, threat, vulnerability, weakness, or problem regarding data security in COUNTY's computer systems, or to any safeguard, countermeasure, or contingency

plan, policy or procedure for data security contemplated or implemented by COUNTY, without COUNTY's prior written consent.

52.8 CONTRACTOR shall inform all of its officers, employees and agents providing services hereunder of the confidentiality, security and non-disclosure provisions of this Agreement. Further, shall require such officers, employees and agents to be bound in writing by confidentiality, security and non-disclosure provisions at least as protective of the COUNTY as the confidentiality, security and non-disclosure provisions of this Agreement. CONTRACTOR shall indemnify and hold harmless COUNTY, its districts administered by COUNTY, and its elected and appointed officers, employees, and agents, from and against any and all third party Claims, losses, damages, liability, and expense, including, but not limited to, reasonable defense costs and legal, accounting and other expert, consulting or professional fees, arising from any disclosure of such records and information by CONTRACTOR, its officers, employees, or agents, except for any disclosure authorized by this Paragraph 52.

52.9 Except as expressly permitted in this Agreement, COUNTY agrees not to reproduce, distribute, or disclose to non-COUNTY entities (other than outside counsel or consultants subject to non-disclosure agreements), CONTRACTOR's Confidential Information without the prior written permission of CONTRACTOR or as required by law or pursuant to Paragraph 46 (Dispute Resolution Procedure). COUNTY additionally agrees (a) to use any CONTRACTOR's Confidential Information only as permitted under the terms of this Agreement and (b) to provide the notification described in Subparagraph 11.3.C(i) with respect to all of CONTRACTOR's Confidential Information. Subject in all respects to Subparagraphs 19.4 and 52.10 and this Subparagraph 52.9, COUNTY (a) shall protect the security of and keep confidential all CONTRACTOR's Confidential Information and (b) shall use whatever security measures are reasonably necessary to protect all such information from loss or damage by any cause, including, but not limited to, fire and theft.

52.10 Notwithstanding any other provision of this Agreement, COUNTY shall not be obligated in any way under this Agreement for:

A. Any CONTRACTOR's Confidential Information not plainly and prominently marked with restrictive legends required pursuant to Subparagraph 19.4; and

B. Any disclosure of any of CONTRACTOR's Confidential Information which COUNTY is required to make under the California Public Records Act or otherwise by law.

53. TERMINATION FOR IMPROPER CONSIDERATION

COUNTY may, by written notice to CONTRACTOR, immediately terminate the right of CONTRACTOR to proceed under this Agreement if it is found that consideration, in any form, was offered or given by CONTRACTOR, either directly or through an intermediary, to any COUNTY officer, employee or agent with the intent of securing this Agreement or securing favorable treatment with respect to the award, amendment or extension of this Agreement or the making of any determinations with respect to CONTRACTOR's performance pursuant to this Agreement. In the event of such termination, COUNTY shall be entitled to pursue the same remedies against CONTRACTOR as it could pursue in the event of default of CONTRACTOR.

CONTRACTOR shall immediately report any attempt by a COUNTY officer or employee to solicit such improper consideration. The report shall be made either to COUNTY manager charged with the supervision of the employee or to COUNTY Auditor-Controller's Employee Fraud Hotline at (213) 974-0914 or (800) 544-6861.

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

54. TIME IS OF THE ESSENCE

Time is of the essence of this Agreement.

55. BUDGET REDUCTIONS

In the event that the COUNTY's Board of Supervisors adopts, in any fiscal year, a COUNTY Budget which provides for reductions in the salaries and benefits paid to the majority of COUNTY employees and imposes similar reductions with respect to COUNTY contracts, COUNTY reserves the right to reduce its payment obligation under this Agreement correspondingly for that fiscal year and any subsequent fiscal year during the term of this Agreement (including any extensions), and the services to be provided by CONTRACTOR under this Agreement shall also be reduced correspondingly, which reduction shall be accomplished in accordance with Paragraph 6.0 (Change Notices and Amendments). The COUNTY's notice to CONTRACTOR regarding said reduction in payment obligation shall be provided within thirty (30) calendar days of the Board's approval of such actions. CONTRACTOR shall continue to provide all of the services set forth in this Agreement as reduced in accordance with Paragraph 6.0 (Changes Notices and Amendments).

56. COUNTY'S QUALITY ASSURANCE PLAN

COUNTY or its agent will evaluate CONTRACTOR's performance under this Agreement on not less than an annual basis. Such evaluation will include assessing CONTRACTOR's compliance with the terms and performance standards of this Agreement. CONTRACTOR deficiencies which COUNTY determines are severe or continuing and that may place performance of the Agreement in jeopardy if not corrected will be reported to COUNTY's Board of Supervisors. The report will include improvement / corrective action measures taken by COUNTY and CONTRACTOR. If improvement does not occur consistent with the corrective action measures, COUNTY may terminate this Agreement or impose other penalties as specified in this Agreement.

57. LIMITATION OF LIABILITY

EXCEPT AS EXPRESSLY SET FORTH IN PARAGRAPH 31 (TERMINATION FOR DEFAULT), IN NO CASE SHALL CONTRACTOR BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES BASED UPON BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT TORT, OR ANY OTHER LEGAL THEORY, SUCH EXCLUDED DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF SAVINGS OR REVENUE. CONTRACTOR's maximum liability to COUNTY for damages under this Agreement shall be limited to the sum of Twenty Two Million Five Hundred Thousand Dollars ($22,500,000).

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

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

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

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

Failure of CONTRACTOR to maintain compliance with the requirements set forth in Paragraph 58 (CONTRACTOR's Warranty of Adherence to COUNTY's Child Support Compliance Program) shall constitute a default by CONTRACTOR under this Agreement. Without limiting the rights and remedies available to COUNTY under any other provision of this Agreement, failure to cure such default within ninety (90) days of notice by the Los Angeles County District Attorney shall be grounds upon which COUNTY's Board of Supervisors may terminate this Agreement pursuant to Paragraph 31 (Termination for Default).

60. CONTRACTOR'S ACKNOWLEDGMENT OF COUNTY'S COMMITMENT TO CHILD SUPPORT ENFORCEMENT

CONTRACTOR acknowledges that COUNTY places a high priority on the enforcement of child support laws and the apprehension of child support evaders. CONTRACTOR understands that it is COUNTY's policy to encourage all COUNTY contractors to voluntarily post COUNTY's "L.A's Most Wanted: Delinquent Parents" poster in a prominent position at CONTRACTOR's place of business. COUNTY's District Attorney will supply CONTRACTOR with the poster to be used.

61. COMPLIANCE WITH THE COUNTY'S JURY SERVICE PROGRAM

61.1 Jury Service Program

This Agreement is subject to the provisions of the COUNTY's ordinance entitled Contractor Employee Jury Service (for purposes of this Paragraph 61 "Jury Service Program") as codified in Sections 2.203.010 through 2.203.090 of the Los Angeles County Code.

61.2 Written Employee Jury Service Policy

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

that CONTRACTOR deduct from the Employee's regular pay the fees received for jury service.

B. For purposes of this Subparagraph, "Contractor" means a person, partnership, corporation or other entity which has a contract with the COUNTY or a subcontract with a COUNTY Contractor and has received or will receive an aggregate sum of $50,000 or more in any 12-month period under one or more COUNTY contracts or subcontracts. "Employee" means any California resident who is a full time employee of CONTRACTOR. "Full-time" means 40 hours or more worked per week, or a lesser number of hours if: (1) the lesser number is a recognized industry standard as determined by the COUNTY; or (2) CONTRACTOR has a long-standing practice that defines the lesser number of hours as full-time. Full-time employees providing short-term, temporary services of 90 days or less within a 12-month period are not considered full-time for purposes of the Jury Service Program. If CONTRACTOR uses any subcontractor to perform services for the COUNTY under the Agreement, the subcontractor shall also be subject to the provisions of this Subparagraph. The provisions of this Subparagraph shall be inserted into any such subcontract agreement and a copy of the Jury Service Program shall be attached to the agreement.

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

D. CONTRACTOR's violation of this Subparagraph of the Agreement may constitute a material breach of the Agreement. In the event of such material breach, COUNTY may, in its sole discretion, terminate the Agreement and/or bar CONTRACTOR from the award of future COUNTY contracts for a period of time consistent with the seriousness of the breach.

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

Should CONTRACTOR require personnel in addition to those employed by CONTRACTOR on the effective date of this Agreement to perform the services set forth herein, CONTRACTOR shall give consideration for such employment openings to qualified, permanent COUNTY employees who are targeted for layoff or qualified, former COUNTY employees who are on a re-employment list during the life of this Agreement. For this purpose, consideration shall mean that CONTRACTOR will interview qualified candidates that apply through CONTRACTOR's standard process. Prior to consideration being given by CONTRACTOR, COUNTY will refer such COUNTY employees by job category to CONTRACTOR. The above obligations do not apply to positions filled by: (1) third parties who have subcontracted with CONTRACTOR to perform the services; or (2) CONTRACTOR's current employees.

63. CONSIDERATION OF HIRING GAIN/GROW PROGRAM PARTICIPANTS

Should CONTRACTOR require personnel in addition to those employed by CONTRACTOR on the effective date of this Agreement to perform the services set forth herein, CONTRACTOR shall give consideration for any such employment openings to participants in the COUNTY's Department of Public Social Services Greater Avenues for Independence (GAIN) Program or General Relief Opportunity for Work (GROW) Program who meet CONTRACTOR's minimum qualifications for the open position. For this purpose, consideration shall mean that CONTRACTOR will interview qualified candidates. Prior to consideration being given by CONTRACTOR, COUNTY will refer GAIN/GROW participants by job category to CONTRACTOR. The above obligations do not apply to positions filled by: (1) third parties who have subcontracted with CONTRACTOR to perform the services; or (2) CONTRACTOR's current employees.

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

64. CERTAIN CONTRACTOR NOTIFICATIONS

64.1 CONTRACTOR shall maintain a system of record keeping that will allow CONTRACTOR to determine when it has incurred seventy-five percent (75%) of the Contract Sum. Upon occurrence of this event, CONTRACTOR shall send written notification to COUNTY's Project Director.

64.2 CONTRACTOR shall notify the Sheriff's Department when this Agreement is within six (6) months from the expiration of the term as provided for in

Paragraph 5 (Term). Upon occurrence of this event, Contractor shall send written notification to COUNTY's Project Director.

65. NO PAYMENT FOR SERVICES PROVIDED FOLLOWING EXPIRATION/ TERMINATION OF AGREEMENT

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

66. CONTRACTOR'S RESPONSIBILITY AND DEBARMENT

66.1 Responsible Contractor

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

66.2 Chapter 2.202 of the County Code

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

66.3 Non-responsible Contractor

COUNTY may debar CONTRACTOR if COUNTY's Board of Supervisors finds, in its discretion, that CONTRACTOR has done any of the following: (i) violated a term of a contract with COUNTY or a nonprofit corporation created by COUNTY; (ii) committed an act or omission which negatively reflects on CONTRACTOR's quality, fitness or capacity to perform a contract with COUNTY, any other public

entity, or a nonprofit corporation created by COUNTY, or engaged in a pattern or practice which negatively reflects on same; (iii) committed an act or offense which indicates a lack of business integrity or business honesty or (iv) made or submitted a false claim against COUNTY or any other public entity.

66.4 Contractor Hearing Board

If there is evidence that CONTRACTOR may be subject to debarment, COUNTY's Project Director will notify CONTRACTOR in writing of the evidence which is the basis for the proposed debarment and will advise CONTRACTOR of the scheduled date for a debarment hearing before the Contractor Hearing Board.

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

After consideration of any objections, or if no objections are submitted, a record of the hearing, the proposed decision and any other recommendation of the Contractor Hearing Board shall be presented to COUNTY's Board of Supervisors. COUNTY's Board of Supervisors shall have the right at its sole discretion to modify, deny or adopt the proposed decision and recommendation of the Contractor Hearing Board.

66.5 Review of Debarment Decision

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

The Contractor Hearing Board will consider a request for review of a debarment

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

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

66.6 Subcontractors of Contractor

These terms shall also apply to Subcontractors of CONTRACTOR.

67. NOTICE TO EMPLOYEES REGARDING THE FEDERAL EARNED INCOME CREDIT

CONTRACTOR shall notify its employees residing or working in the State of California, and shall require each subcontractor performing work under this Agreement to notify its employees residing or working in the State of California, that they may be eligible for the Federal Earned Income Credit under the federal income tax laws. Such notice shall be provided in accordance with the requirements set forth in Internal Revenue Service Notice No. 1015.

68. RECYCLED BOND PAPER

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

69. SAFELY SURRENDERED BABY LAW

69.1 CONTRACTOR acknowledges that COUNTY places a high priority on the implementation of the Safely Surrendered Baby Law. CONTRACTOR understands that it is COUNTY's policy to encourage all COUNTY contractors

to voluntarily post the COUNTY's "Safely Surrendered Baby Law" poster in a prominent position at CONTRACTOR's place of business. CONTRACTOR will also encourage its subcontractors, if any, to post this poster in a prominent position in the subcontractor's place of business. COUNTY's Department of Children and Family Services will supply the CONTRACTOR with the poster to be used. Information on how to receive the poster can be found on the Internet at www.babysafela.org.

69.2 CONTRACTOR shall notify and provide to its employees residing in or working in the State of California, and shall require each subcontractor performing work under this Agreement to notify and provide to its employees residing in or working in the State of California, information regarding the Safely Surrendered Baby Law, its implementation in Los Angeles County, and where and how to safely surrender a baby. The fact sheet is available on the Internet at www.babysafela.org for printing purposes.

70. COST OF LIVING ADJUSTMENT

Commencing upon expiration of the Initial Term (as defined in Paragraph 5 (Term)), the hourly rates for other professional services, as set forth in Attachment F (Other Professional Services Fee Schedule) of Exhibit A (Statement of Work), may be adjusted annually based on the increase or decrease in the U.S. Department of Labor, Bureau of Labor Statistics' Consumer Price Index for the Los Angeles – Riverside – Orange County Area for the most recently published percentage change for the twelve (12) month period preceding each anniversary date of the Initial Term, which shall be the effective date for any such adjustment. However, any increase shall not exceed the general annual percentage salary change granted to COUNTY employees as determined by COUNTY's Chief Executive Office as of the prior July 1. Furthermore, should fiscal circumstances ultimately prevent COUNTY's Board of Supervisors from approving any increase in COUNTY employee salaries, CONTRACTOR acknowledges that there shall be no corresponding adjustment to the hourly rates for other professional services.

71. CONTRACTOR'S OBLIGATIONS AS A "BUSINESS ASSOCIATE" UNDER HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT OF 1996 (HIPAA) AND THE HEALTH INFORMATION TECHNOLOGY FOR ECONOMIC AND CLINICAL HEALTH ACT (HITECH)

COUNTY is subject to the Administrative Simplification requirements of the Health Insurance Portability and Accountability Act of 1996 (HIPAA). Under this Agreement, CONTRACTOR provides services to COUNTY and CONTRACTOR receives, has access to, and/or creates Protected Health Information as defined in Exhibit J (CONTRACTOR'S Obligations As a "Business Associate" Under

Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the Health Information Technology for Economic and Clinical Health Act (HITECH)) in order to provide those services. COUNTY and CONTRACTOR therefore agree to the terms of Exhibit J (CONTRACTOR'S Obligations As a "Business Associate" Under Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the Health Information Technology for Economic and Clinical Health Act (HITECH)).

72. COUNTY'S DEFAULTED PROPERTY TAX PROGRAM

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

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

72.3 Failure of CONTRACTOR to maintain compliance with the requirements set forth in this Paragraph 72 shall constitute default under this Agreement. Without limiting the rights and remedies available to COUNTY under any other provision of this Agreement, failure of CONTRACTOR to cure such default within 10 days of notice shall be grounds upon which COUNTY may terminate this Agreement and/or pursue debarment of CONTRACTOR, pursuant to Los Angeles County Code Chapter 2.206.

/
/

AGREEMENT BY AND BETWEEN COUNTY OF LOS ANGELES AND CERNER CORPORATION FOR A JAIL HEALTH INFORMATION SYSTEM FOR THE LOS ANGELES COUNTY SHERIFF'S DEPARTMENT

IN WITNESS WHEREOF, the Board of Supervisors of the County of Los Angeles has caused this Agreement to be subscribed by its Chairman and the seal of such Board to be hereto affixed and attested by the Executive Officer, and CONTRACTOR has caused this Agreement to be subscribed on its behalf by its duly authorized officer, as of the date first set forth above.

COUNTY OF LOS ANGELES

By _____
Chairman, Board of Supervisors

I hereby certify that pursuant to Section 25103 of the Government Code, delivery of this document has been made.

SACHI A. HAMAI
Executive Officer
Clerk of the Board of Supervisors

By _____
Deputy

ATTEST:
SACHI HAMAI
Executive Officer-Clerk
Board of Supervisors

By _____
DEPUTY

CONTRACTOR
Cerner Corporation

By _____
Name: Marc Naughton
Title: Exec. V. Pres. Chief Financial Officer

77871

APPROVED AS TO FORM:
JOHN F. KRATTLI
County Counsel

By _____
José Silva
Principal Deputy County Counsel

ADOPTED
BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES

36 NOV 20 2012

SACHI A. HAMAI
EXECUTIVE OFFICER

EXHIBIT A

STATEMENT OF WORK

JAIL HEALTH INFORMATION SYSTEM (JHIS)

September 2012

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ATTACHMENTS to Exhibit A (Statement of Work)

ATTACHMENT A JHIS TECHNICAL AND OPERATIONAL REQUIREMENTS
ATTACHMENT B SCHEDULE OF JHIS SOFTWARE
ATTACHMENT C RELATED CONTRACTOR SOFTWARE PRODUCT DESCRIPTION
ATTACHMENT D JHIS INTERFACES
ATTACHMENT E JHIS TRAINING
ATTACHMENT F OTHER PROFESSIONAL SERVICES FEE SCHEDULE
ATTACHMENT G COUNTY FACILITIES

INTRODUCTION: SCOPE OF WORK

This Exhibit A (together with all Attachments hereto, "Statement of Work") is attached to, and defines the scope of work to be performed under, that certain Agreement dated _____, 2012 (together with all Exhibits and Attachments, the "Agreement"), by and between County of Los Angeles (COUNTY) and Cerner Corporation (CONTRACTOR) for the Jail Health Information System (as further defined in the body of the Agreement, "JHIS" or "System") for COUNTY's Sheriff's Department (Sheriff's Department).

Capitalized terms used in this Statement of Work without definition have the meanings given to such terms in the body of the Agreement.

As used herein, the following capitalized terms shall have the following meanings:

"Application Server" shall mean the hardware on which JHIS Application Software modules are running.

"Concurrent Logon" shall mean a User session accessing the System by any means of access. "Peak Concurrent Logons" shall mean the highest number of Concurrent Logons measured on any day throughout each month.

"Database Server" shall mean the hardware on which the JHIS database resides and the Oracle software is running.

"Domain" shall mean a specific computing environment for JHIS, including, without limitation, hardware such as the Application Servers, Database Servers and other servers, storage devices, and networks, software operating on said hardware, and a function or purpose for which they are used. "Domain" refers to the Production Domain and all Non-Production Domains.

"Production Domain" shall mean the Domain containing actual patient, provider, and services data and used for the purpose of providing patient care.

"Non-Production Domains" shall consist of the Build Domain, the Certification Domain, the Temporary or Mock Domain, and the Training Domain.

"Build Domain" shall mean the Domain containing a reference-data-only copy of the Production Domain used primarily for implementing, certifying and testing significant changes prior to applying the changes to the Production Domain. The Build Domain is created at the beginning of a major implementation project such as creation of the Phase 1 System or adding a new Application Software module, and is deleted upon COUNTY acceptance of the implementation project.

"Certification Domain" shall mean the Domain containing a reference-data-only copy of the Production Domain used primarily for certifying and testing changes prior to applying changes to the Production Domain. The Certification Domain shall be refreshed from a copy of the Production Domain after an Upgrade. The Certification Domain is used for User training when a separate Training Domain is not available.

"Temporary Domain" and "Mock Domain" shall mean the Domain containing a full copy (reference and activity data) of the Production Domain used for testing Up-

grades before applying such Upgrades to the Production Domain. The Temporary Domain is sized to accommodate the number of Testing Users and will be deleted upon COUNTY acceptance of the Upgrade.

"Training Domain" shall mean the Domain containing a reference-data-only copy of the appropriate source Domain (e.g., Build Domain) for purposes of training Users in support of a new implementation or Upgrade.

"Prototype" and "Prototyping" shall mean the process of developing a sample build of the Phase 2 System Application Software modules or the Phase 3 System Application Software modules to validate the Design Documentation for each Phase 2 System Application Software module (Deliverable 3.3.1) and Design Documentation for each Phase 3 System Application Software module (Deliverable 4.3.1).

"Tailor", "Tailoring" or "Tailored" shall mean the tailoring of the Baseline Software necessary for the System to operate in accordance with the Specifications and the Agreement. "Tailoring" shall include, without limitation, using Bedrock, Cerner Command Language (CCL), and/or other tools and techniques provided by CONTRACTOR to tailor the Baseline Software. It is understood and agreed that Tailoring other than as described in this Statement of Work with respect to the System requires a Change Notice or an Amendment under Paragraph 6 (Change Notices and Amendments) of the body of the Agreement.

The scope of work incorporates all of the Tasks, Deliverables, and services necessary for the COUNTY to receive the benefits of upgrading and enhancing JHIS in accordance with the Specifications and the provisions of the Agreement. CONTRACTOR shall provide the Cerner Millennium Software Applications listed below, together with associated content and training (referred to in the Agreement as "Application Software"), and shall implement the Remote Hosting, Upgrades, Enhancements, and Application Management Services. CONTRACTOR shall setup, configure, install, Tailor, and prepare for use all components of each Domain. CONTRACTOR shall design, configure, integrate, install, Tailor and test Application Software modules and components in each Phase of System as indicated below.

A) Phase 1 System Tasks and Application Software Modules:
   1. Initial Cutover to Remote Hosting Services
   2. System Migration to Upgraded Technical Environment
   3. Application Software Upgrades to Phase 1 System
   4. Application Software Enhancements including
      a. Ambulatory Content Code (CMT/CPT) Updates
      b. RadNet Ultrasound Implementation
      c. Cerner ProVision Document Imaging (CPDI) Enhancements
   5. Application Management Services (AMS) Implementation
   6. P2Sentinel Clinical Enterprise Implementation
   7. 724Access Downtime Viewer Implementation

B) Phase 2 Application Software Modules and Interfaces
   1. St. John Sepsis Agent (Application Service Provider)
   2. PowerChart Enhanced View and PowerNotes (PowerChart)

3. Extended CPDI and eSignature (CAMM)
4. PowerChart ECG (Cerner Cardiovascular)
5. Pyxis Medstation Interface with ADT (Open Port Interfaces)
6. Inpatient Pharmacy Med Orders/Outpatient Pharmacy (PharmNet)
7. Point of Care Medication Administration
8. Advanced Care Documentation (CareNet)
9. Billing, Accounts Receivable, Eligibility Verification, Address Validation, and all Patient Accounting Interfaces (Patient Accounting)
10. Chart Search (Application Service Provider)
11. PowerChart Maternity (Womens Health).

C) Phase 3 Application Software Modules and Interfaces
1. Lighthouse Falls and Pressure Ulcer Prevention
2. Lighthouse Delirium
3. Lighthouse Restraints
4. Lighthouse Emergent Stroke and TIA Management with eSubmission
5. Lighthouse Sepsis
6. Lighthouse Glycemic Control
7. Lighthouse Anticoagulation Management
8. Lighthouse Activity Intolerance and Impaired Mobility
9. PowerInsight Explorer

D) Optional Application Software Modules and Interfaces
1. Supply Chain for Pharmacy with eCAPS and Cardinal Interfaces
2. Radiology Mammography
3. CareAware Infusion Management
4. CareAware iAware Platform
5. CareAware iBus
6. CareAware AlertLink & VitalsLink
7. MPages Development Kit
8. Digital Dictation
9. Temporary Bedside Device Storage (iBus)
10. iAccess – Single Sign On.

Phase 1 System Tasks including cutover to Remote Hosting Services, Upgrades, Enhancements, and new Application Software modules shall be implemented under TASK 2 of this Statement of Work. Phase 2 System Application Software modules shall be implemented under TASK 3 of this Statement of Work. Phase 3 System Application Software modules shall be implemented under TASK 4 of this Statement of Work. As elected by COUNTY in accordance with the Agreement, each Optional Application Software module and Interface shall be implemented through a Change Notice under TASK 3 or TASK 4 of this Statement of Work, if elected by COUNTY in accordance with the Agreement. An Application Software Upgrade shall be performed under TASK 5 after successful implementation and Production Use of Phase 2 System. An additional Application Software Upgrade shall be performed under TASK 6 after successful implementation and Production Use of Phase 3 System.

CONTRACTOR shall deliver and install all tools and software to be used by COUNTY in performance of this Statement of Work as required including but not limited to Bedrock, MethodM, and access to the Lights-on network, Open House, Windows Terminal Server Toolkit, UCern, and as applicable other reference and model databases.

CONTRACTOR shall provide all the Baseline Software and related services to accomplish all of the requirements set forth in this Statement of Work. CONTRACTOR shall perform all Tasks and Subtasks, and provide all Deliverables as described herein.

Also defined herein are those Tasks and Subtasks that involve participation of both CONTRACTOR and COUNTY. COUNTY will provide logistical support and infrastructure for CONTRACTOR and COUNTY work and events required by this Statement of Work when scheduled to take place in Los Angeles County. COUNTY also will provide a team of participants to support the Tailoring and software build processes scheduled to take place in Los Angeles County or at CONTRACTOR's premises in Kansas City, MO. Unless otherwise specified as an obligation of COUNTY, CONTRACTOR shall perform all Tasks and Subtasks and provide all Deliverables as defined herein. COUNTY expects CONTRACTOR to perform each and every Task and Subtask in this Statement of Work, and deliver each and every Deliverable. The order of the Deliverables and the relevant responsibilities of CONTRACTOR and COUNTY in performing the work, as well as the integration of these contractual Tasks and Deliverables with CONTRACTOR's MethodM, shall be fully specified in Deliverable 1.1 (Project Control Document).

CONTRACTOR shall deliver all Documentation and other Deliverables to COUNTY in accordance with Subparagraph 4.6 (Delivery of Work) of the body of the Agreement. CONTRACTOR shall use the following software for delivery of all Documentation Deliverables:

1. MethodM for project management and control.
2. MethodM Online for web based collaboration and reporting.
3. Microsoft Office for word processing, spreadsheets and other documents.
4. Microsoft Visio for diagrams and schemas.
5. Microsoft Project for Project Management, Work Plans and Schedule Reporting.
6. Windows media player for delivery of video content.
7. Adobe Acrobat for System Documentation that CONTRACTOR considers unalterable by COUNTY.

CONTRACTOR's Project Manager and COUNTY's Technical Project Manager will collaborate to choose from available versions of such software from time to time, including conversions if necessary to ensure compatible versions are used within COUNTY's and/or CONTRACTOR's organizations.

CONTRACTOR shall develop and maintain a secure MethodM Online site on Cerner.com as the repository of Documentation and related Deliverables. The MethodM Online site shall provide a section for final and accepted documents that may not be

altered or removed. The MethodM Online site shall also provide sections that are accessible to authorized COUNTY and CONTRACTOR staff for the purpose of collaborating on Deliverable correction and revision, and of exchanging relevant information. The JHIS MethodM Online site shall be distinct and separated from sites maintained by the CONTRACTOR for other clients, including but not limited to other COUNTY departments.

CONTRACTOR shall provide Documentation Deliverables to COUNTY via posting on the project MethodM Online site and noticed to the COUNTY's Project Director and COUNTY's Project Managers by email. CONTRACTOR shall provide training materials electronically using a standard method such as Webinar or Web or electronic delivery.

CONTRACTOR shall conduct status reporting and project management meetings with COUNTY's project staff in accordance with schedules and agendas established collaboratively by COUNTY's Project Managers and CONTRACTOR's Project Manager. These meetings shall be conducted in a communications format agreed upon by COUNTY's and CONTRACTOR's Project Managers and shall be documented in a manner suitable for inclusion by reference in the Deliverable 1.2 (Project Status Reports).

TASK 1: PROJECT PLANNING AND MANAGEMENT

CONTRACTOR shall develop a Project Control Document (hereafter "PCD") that shall include, without limitation, a detailed work plan, work breakdown structure, milestone chart, Gantt chart, communication plan, the CONTRACTOR's project organization and staffing. COUNTY will provide input to CONTRACTOR in the development of the project planning and management documentation. CONTRACTOR shall develop and maintain a critical path analysis for the project. COUNTY will provide workspace, logistical support and related infrastructure for work and events required by this TASK 1 when conducted in Los Angeles County.

Subtask 1.1: Prepare Project Control Document (PCD)

CONTRACTOR shall review, document, clarify and refine all project goals and the assignment of goals to project resources. CONTRACTOR shall present such goals to the JHIS Project Leadership Team (hereafter "PLT"). This process shall ensure that all involved parties have clearly understood and agreed upon all project goals and COUNTY responsibilities for governance and participation in the project effort. In collaboration with the PLT, CONTRACTOR shall develop a PCD that addresses, without limitation, the following:

1. The shared vision for CONTRACTOR / COUNTY relationship and the strategic goals of the implementation effort.
2. The project scope, phasing, and objectives.
3. The expected roles and responsibilities of CONTRACTOR and COUNTY project organizations and a communication strategy for sharing the context and vision of the project to the project team members at large.
4. The composition of the project team and how the project team shall communicate with and collaborate with components of project governance consisting of the PLT and various workgroups.
5. The composition of expected COUNTY's support resources and their interaction with CONTRACTOR's support resources.
6. The schedule of events to be held both at COUNTY Facilities and at CONTRACTOR's facilities in Kansas City, MO, for the purposes of joint design, Tailoring, development, and build of JHIS, all Prototypes, and expectations for COUNTY participation in those events.
7. The project organization and the roles and responsibilities of the project team members.
8. The Application Software module build strategy.
9. The technology strategy, including Domains and hosting strategy.
10. The project communication plan.
11. The training strategy for COUNTY's staff, trainers and Users, based on COUNTY's requirements and CONTRACTOR's project and training approach.
12. The security strategy and requirements, including physical, administrative and technical elements and the divisions of security roles and responsibilities between CONTRACTOR and COUNTY.
13. The detailed project plan including, without limitation, start and end dates for all Tasks and Subtasks specified in this Statement of Work, the work breakdown structure, Task dependencies, and assignments by Task and Subtask within the MethodM framework, and Remote Hosting Services milestones.
14. The testing strategy for all levels of testing.

CONTRACTOR, with COUNTY input, shall develop this PCD consistent with this Statement of Work. CONTRACTOR shall specifically address each Task and Subtask to be performed, the order in which CONTRACTOR shall perform the Tasks and Subtasks and the order in which CONTRACTOR shall produce the Deliverables specified in this Statement of Work in accordance with the Agreement within the MethodM framework. For each Task and Subtask, CONTRACTOR in conjunction with COUNTY shall define and describe in detail the recommended involvement of COUNTY's staff that is necessary for successful completion of such Task or Subtask. CONTRACTOR and COUNTY Project Management shall formally present the PCD to the PLT.

Deliverable 1.1: Project Control Document (PCD)

The Project Control Document shall document the components listed in Items 1 – 14 of Subtask 1.1 described above together with any other items identified for inclusion

by agreement of COUNTY's Project Director and CONTRACTOR's Project Director. Upon approval by COUNTY in accordance with Subparagraph 2.4 of the body of the Agreement, the Project Control Document shall automatically supplement Exhibit C (Project Schedule).

Subtask 1.2: Perform Project Administration

CONTRACTOR shall manage project activities and its resources and track project status. This Subtask shall include, without limitation, reporting the results of MethodM events with COUNTY participants as designated in the PCD, and managing and tracking all progress and issues against the PCD. It shall also include, without limitation, the management of project and software change control processes. CONTRACTOR shall report project status on a regular basis. CONTRACTOR shall include, without limitation, updates to the PCD in the project status reporting. CONTRACTOR shall participate in regular project status meetings, including, without limitation, meetings of PLT and its various workgroups that shall take place no less frequently than monthly.

CONTRACTOR shall manage the communication process which shall include, without limitation, monthly project status reports. These monthly project status reports shall include, as a minimum, identification and comparison of the project plan to the project status, including without limitation any updates in the critical path or projected delivery schedules.

As part of project management, CONTRACTOR shall ensure that COUNTY realizes the maximum benefit from the System provided by CONTRACTOR through a proactive and independent review of the project's progress and quality in conjunction with the post-implementation review processes defined in Tasks 2, 3, and 4. Through this on-going quality assurance process, CONTRACTOR shall assess COUNTY's satisfaction and report any project risks or problems identified as part of the quality assurance process, as well as when relevant risk mitigation, risk emergence, and recommended COUNTY and CONTRACTOR risk mitigation actions. The project status reports prepared by CONTRACTOR shall be used to document the results of this ongoing quality assurance process.

CONTRACTOR shall update the applicable sections of the PCD monthly as part of the project status reports (Deliverable 1.2 Project Status Reports).

Deliverable 1.2: Project Status Reports

CONTRACTOR shall prepare and present to the PLT a project status report to report project progress, plans, and outstanding issues, no less frequently than monthly.

The project status report shall include, without limitation, the following:

1. Project Progress and Plans, with actual status of schedule and budget
2. Updates to the PCD and critical path analysis
3. Issue Tracking and Change Control Process
4. Project Schedule
5. Project Gateway assessments, Technical and Conversion Readiness Assessments
6. Project risks identified through the quality assurance process.

Subtask 1.3: Prepare System Operations Plan

CONTRACTOR shall develop a written JHIS System Operations Plan for the System consisting of provision of the Remote Hosting Services, as well as procedures for scheduling for Scheduled Downtime (as defined in Exhibit D) and requesting the COUNTY's Project Director approval therefore. CONTRACTOR shall develop this plan consistent with Attachment A of this Statement of Work and Exhibit D (Service Level Agreement) of the Agreement. This planning shall define, without limitation, the following:

1. Users' service expectations.
2. System support plan.
3. System Availability plan, including Scheduled Downtime Plan.
4. Revision management plan.
5. Change control plan.
6. System backup/restore plan.
7. System security plan.
8. System performance monitoring plan.

Deliverable 1.3: System Operations Plan

This Documentation defines the System operations plan and approach to support Production Use of the System by CONTRACTOR and COUNTY resulting from Subtask 2.1.

Subtask 1.4: Prepare Business Continuity Plan

CONTRACTOR shall develop a written JHIS Business Continuity Plan for the System consisting of provision of the Remote Hosting Services. This plan shall define, without limitation, the following:

1. Facility Management (Operation and management of CONTRACTOR's high availability concurrently maintainable and fault tolerant physical facilities in Kansas City, MO).
2. Network Management (Operation and management of CONTRACTOR's Local Area and Wide Area Networks (LAN/WAN)) up to and including the dual points of demarcation at COUNTY Facilities.
3. System Management (Operation and management of the data processing systems and equipment required for System operation).
4. Database Management (Administration of the data base management system).
5. Interface Management (Monitoring and managing the Cerner side of the medical device and external systems Interfaces).
6. The Support Personnel (Roles and Responsibilities).
7. System Maintenance, Monitoring, Backup and Restore Procedures.
8. Guidelines and procedures for Awareness, Communication, Training, Exercising, and Auditing.

Deliverable 1.4: Business Continuity Plan

The Business Continuity Plan shall document the results of the work performed in Subtask 1.4.

TASK 2: PHASE 1 REMOTE HOSTING SERVICES CUTOVER, SYSTEM UPGRADES, AND SYSTEM ENHANCEMENTS

Under this Phase 1 Task, CONTRACTOR shall initially cutover and implement JHIS Application Software for Production Use to Remote Hosting Services on a like-to-like basis using the JHIS Application Software in Production Use on the Effective Date of this Agreement (referred to as "Initial Application Software"). The Picture Archiving and Communication System (PACS) Application Software, a component of CAMM as defined in Attachment B to this SOW, is the only Initial Application Software module that will not be migrated to Remote Hosting Services as part of Subtask 2.1. Remote Hosting Services shall be implemented with an interface to PACS which will continue to reside at COUNTY Facilities until Phase 1 System Upgrade has been implemented. All of the preparatory and readiness tasks for cutover to Remote Hosting Services were completed under Amendment Number Six to Agreement Number 71710.

Upon stabilizing the Remote Hosting Services and optimizing performance, CONTRACTOR shall then migrate the Initial Application Software to an upgraded Technical Environment for Production Use on new System Hardware and System Software. The next stage of Phase 1 will upgrade all Initial Application Software to Millennium 2012 Application Software or to the most recent generally available code level. As part of this Upgrade, CONTRACTOR shall procure and configure the Hardware required for upgrading the Picture Archiving and Communication System (PACS) Application Software in conjunction with the Upgrade of all other Initial Application Software. At the end of Phase 1, the Phase 1 version of the Application Software will be in full Production Use.

In Phase 1, CONTRACTOR shall also implement enhancements to the Initial Application Software prior to the Upgrade to Phase 1 Application Software consisting of (a) Ambulatory Content Code (CMT/CPT) Updates, (b) RadNet Ultrasound Implementation, and (c) Cerner ProVision Document Imaging (CPDI) Enhancements. During Phase 1, Application Management Services (AMS) shall be set-up and implemented. Additionally, P2Sentinel Clinical Enterprise and 724Access Downtime Viewer shall be implemented in conjunction with the Phase 1 Application Software Upgrade. Upon completion of this Task, the Phase 1 System consisting of the Initial Application Software with Enhancements as specified in Subtask 2.5, P2Sentinel Clinical Enterprise as specified in Subtask 2.7, and 724Access Downtime Viewer as specified in Subtask 2.8 shall be in full Production Use at all COUNTY Facilities.

Subtask 2.1: Perform System Cutover to Remote Hosting Services

Under this subtask, CONTRACTOR shall cutover and implement JHIS Initial Application Software for Production Use to Remote Hosting Services with the exception of PACS Application Software module. CONTRACTOR shall host JHIS at its high-availability, concurrently maintainable and fault tolerant Cerner Technology Center ("CTC") as described in Exhibit D, Service Level Agreement. Cutover to Remote

Hosting Services shall be conducted in accordance with the transition tasks as documented in the Remote Hosting Services System Cutover Plan (Deliverable 5.1 of Amendment Number Six to Agreement Number 71710). All JHIS Application Software and Interfaces shall be migrated to Remote Hosting Services with the exception of Picture Archiving and Communication System (PACS) Application Software.

As specified in the Remote Hosting Services System Cutover Plan (Deliverable 5.1 of Amendment Number Six to Agreement Number 71710), cutover activities to Remote Hosting Services shall include, but are not be limited to, the following:

(a) Graceful shutdown of JHIS System at COUNTY Facilities,
(b) Execute final transactions in Remote Hosting environment,
(c) Switch COUNTY users desktop links,
(d) Switch Interfaces,
(e) Run Interfaces to catch up,
(f) Turn System over to COUNTY Users.

Deliverable 2.1: Production Use of System with Remote Hosting Services

CONTRACTOR shall deliver the fully operational JHIS System with Remote Hosting Services in Production Use at all COUNTY Facilities.

Subtask 2.2: Conduct Post-Cutover Activities

CONTRACTOR shall resolve all post-cutover issues identified by COUNTY and CONTRACTOR. CONTRACTOR shall monitor Remote Hosting Services System performance and optimize System consistent with the performance requirements documented in Exhibit D, Service Level Agreement, and Attachment A (JHIS Technical and Operational Requirements) to this Statement of Work. CONTRACTOR shall archive COUNTY's production System in use prior to cutover to Remote Hosting Services.

Deliverable 2.2: Optimized Production System

CONTRACTOR shall deliver an optimized Remote Hosting Services System at the CTC consistent with the performance requirements documented in Exhibit D, Service Level Agreement and Attachment A (JHIS Technical and Operational Requirements) to this Statement of Work.

Subtask 2.3: Perform System Technical Upgrades and Migration

Upon completion of Subtask 2.2, CONTRACTOR shall install and configure an upgraded JHIS technical environment at the CTC including all required CTC equipment, operating software, database software, and other software, regardless by whom produced or supplied. Once the upgraded JHIS technical environment has been prepared, CONTRACTOR shall test the existing production version of the Ap-

plication Software in the new technical environment. Upon completion of regression testing by CONTRACTOR and acceptance by COUNTY's Technical Project Manager, the production database shall be migrated to the new technical environment. Production Use of the Application Software shall commence in the upgraded technical environment at the CTC.

Deliverable 2.3: System Migrated to Upgraded Technical Environment

CONTRACTOR shall migrate JHIS to an upgraded technical environment at CTC. Production Use of JHIS in the upgraded technical environment shall commence upon completion of this subtask and acceptance by COUNTY's Technical Project Manager.

Subtask 2.4: Upgrade Application Software

CONTRACTOR shall provide professional services and Remote Hosting Services infrastructure necessary to upgrade System to Millennium 2012 Applications Software or to the most recent generally available code level. Upgrade implementation services include, without limitation, acquisition, creation, implementation and support of the necessary Domains at the CTC, installation, configuration and Tailoring of each Application Software module, and all reports associated with such module, and recommended changes, if any, to the Specified Hardware and Operating Software. CONTRACTOR performs initial Integration Testing and COUNTY performs User Acceptance testing. Upon implementation of the Upgrade, the resulting System shall automatically be subject to all provisions of this Agreement.

Subtask 2.4.1: Prepare System Cutover and Conversion Plan for Phase 1 System Upgrade

CONTRACTOR shall develop a System Cutover and Conversion Plan for the Phase 1 System Upgrade that identifies the steps required to perform the System cutover and conversion process and how the COUNTY and CONTRACTOR resources will be deployed during the cutover. The cutover and conversion plan shall address the following:

(a) determines and documents initial package requirements, including but not limited to the database build requirements and the identification and resolution of potential issues with Tailoring of the System, implementation of user-defined components, and issues with installed code.

(b) documents the testing plan in accordance with Subparagraph 9.2 (CONTRACTOR and COUNTY Testing) of the Agreement. CONTRACTOR shall coordinate testing as provided in the PCD including, but not limited to, definition

of testing requirements, identification of appropriate testers, and engagement of appropriate resources to complete the build and testing.

(c) identifies, documents and mitigates Phase 1 Upgrade project risks and identifies and secures project resources.

(d) ensures that CONTRACTOR provided Tailoring, previously implemented Upgrades and Updates, Cerner Command Language (CCL) scripts and custom reports, are identified, modified, and repackaged as necessary to ensure that the Upgraded System will operate in accordance with the Agreement.

(e) ensures that appropriate CONTRACTOR resources are scheduled for Upgrade and post Upgrade support.

Deliverable 2.4.1: System Cutover and Conversion Plan for Phase 1 System Upgrade

CONTRACTOR shall deliver the System Cutover and Conversion Plan for the Phase 1 System that identifies the steps required to perform the System cutover and conversion process and how the COUNTY and CONTRACTOR resources will be deployed during the cutover. CONTRACTOR shall incorporate in the Deliverable all of the results of Subtask 2.4.1.

Subtask 2.4.2: Order, Install, and Configure PACS Hardware for Phase 1 Application Software Upgrade

CONTRACTOR shall order the PACS hardware servers, storage, and workstations, if COUNTY has procured those workstations from CONTRACTOR, required to support the Phase 1 Upgrade of the PACS Applications Software module. If the workstations are not procured through Cerner then County will be responsible to procure, warehouse and make available all of the requisite hardware components that comprise the required workstations. CONTRACTOR shall install and configure at CTC and COUNTY Facilities the required servers, storage, and workstations in accordance with Specifications for PACS/CAMM Upgrade Services as specified in Section IIIA(3), ImageAware Fitness Services, of Exhibit D, Service level Agreement. Upon completion of this task, the PACS Hardware required for testing as part of the Phase 1 Application Software Upgrade shall be ready for testing.

Deliverable 2.4.2: Installed and Configured PACS Hardware for Phase 1 System Upgrade

PACS Hardware required for Phase 1 System Upgrade shall be installed and configured at CTC and COUNTY Facilities.

Subtask 2.4.3: Convert and Unit Test Application Software to Phase 1 System

CONTRACTOR shall acquire, install, implement, configure and enable the Domain(s) and related resources such as the Lights On network®, MethodM®, Bedrock®, and software necessary to complete, test, and validate the Phase 1 System Upgrades to be implemented in accordance with the provisions of Deliverable 2.4.1: System Cutover and Conversion Plan for Phase 1 System Upgrade.

CONTRACTOR shall ensure that no updates to the System are implemented affecting the Production Domain during the Phase 1 System Upgrade project. CONTRACTOR shall configure Interfaces for Non-Production Domains in accordance with the provisions of Deliverable 2.4.1: System Cutover and Conversion Plan for Phase 1 System Upgrade.

CONTRACTOR shall further validate Non-Production Domains that will be upgraded in order to ensure that such Domains are true copies of the Production Domain prior to performing Upgrade activities. CONTRACTOR shall upgrade (a) Non-Production Domains per Domain strategy and the Approved Upgrade Plan, including but not limited to loading Front-end System code warehouse and configuring the Multum, remote report distribution ("RRD"), and charting servers and (b) Front-End System devices in the Production Domain.

COUNTY will provide example test scripts and COUNTY shall develop test plans and scripts for testing of each existing Phase 1 Application Software module and Interface. CONTRACTOR will provide test scripts with COUNTY's input and participation for the new Phase 1 Application Software modules. Based upon these test plans and scripts, CONTRACTOR shall conduct initial Unit Testing of each Phase 1 Application Software module and Interface. Following initial testing, COUNTY will conduct Unit testing of each Phase 1 Application Software Module.

Deliverable 2.4.3: Unit Tested Phase 1 System

CONTRACTOR shall certify, in writing, that CONTRACTOR has successfully converted and tested Phase 1 Application Software modules and Interfaces in accordance with the provisions of Deliverable 2.4.1 (System Cutover and Conversion Plan for Phase 1 System Upgrade).

Subtask 2.4.4: Conduct Full System Testing of Phase 1 System

CONTRACTOR shall perform CONTRACTOR tests in accordance with the provisions of Subparagraph 9.2 of the Agreement (CONTRACTOR Testing) and Deliverable 2.4.1 (System Cutover and Conversion Plan for Phase 1 System Upgrade). Upon completion of this Subtask, the Phase 1 System shall be ready for User Acceptance Testing.

Deliverable 2.4.4: Successful System Tests for Phase 1 System

CONTRACTOR shall certify, in writing, that CONTRACTOR has successfully completed full system testing of the Phase 1 Application Software modules and Interfaces in accordance with the provisions of Deliverable 2.4.1 (System Cutover and Conversion Plan for Phase 1 System Upgrade).

Subtask 2.4.5: Conduct User Acceptance Testing of Phase 1 System

Following successful performance of all CONTRACTOR testing of the Phase 1 System as described in this Statement of Work, CONTRACTOR shall actively support COUNTY in the conduct of User Acceptance Testing of the Phase 1 System Upgrade as described in Subparagraph 9.3 (User Acceptance Tests) of the body of the Agreement, including without limitation providing all consultation and assistance requested by COUNTY.

Consistent with the provisions of Exhibit D (Service Level Agreement) CONTRACTOR shall create and provision a Certification Domain for User Acceptance Testing.

COUNTY will perform User Acceptance Testing of the Phase 1 System as described in Subparagraph 9.3 (User Acceptance Tests) of the body of the Agreement based upon test scripts prepared by COUNTY in its sole discretion. COUNTY will conduct User Acceptance Testing of the Phase 1 System. Scripts shall generally consist of all defined input and expected output results for each function and Interface transaction.

COUNTY will document test results consisting of all Deficiencies discovered during testing. COUNTY will identify, track, and report Deficiencies detected during User Acceptance Testing in discrepancy reports.

CONTRACTOR shall correct all Deficiencies in the Phase 1 System identified by COUNTY and as otherwise set forth in Subparagraph 9.4 (Failed Testing) of the body of the Agreement. In addition to taking corrective action, CONTRACTOR shall provide required support to COUNTY acceptance testers in the operation of the Phase 1 System. Following corrective action by CONTRACTOR, COUNTY will continue testing the System in the Mock Domain in the same state until the Phase 1 System has been successfully User Acceptance Tested and is ready for transition to Production Use, as determined in accordance with Subparagraph 2.4 (Approval of Work) and Subparagraph 9.4 (Failed Testing) of the body of the Agreement.

Deliverable 2.4.5: Successfully Conducted User Acceptance Testing for Phase 1 System

COUNTY will conduct, with active support from CONTRACTOR, User Acceptance Tests of the Phase 1 System. CONTRACTOR's support to COUNTY in the conduct of User Acceptance Testing shall include, without limitation, providing test scripts used in System Testing, successfully performing all required corrective action to resolve Deficiencies in the Phase 1 System identified by COUNTY in discrepancy reports prepared during testing, and assisting COUNTY acceptance testers in the operation of the Phase 1 System, each Phase 1 System Application Software module, Interfaces, and clinical and business processes

Subtask 2.4.6: Develop and Deliver User Training of Phase 1 System

CONTRACTOR shall deliver training classes and training materials to COUNTY system analysts and subject matter experts, as designated by COUNTY's Project Director, for the new Phase 1 Applications Software features.. CONTRACTOR shall present the training classes and materials adequate in duration to cover all functionality and expected clinical and business process changes. CONTRACTOR shall conduct all training on-site and remotely in the Training Domain. The training materials and classes shall give COUNTY trainers sufficient instruction in the use of the Phase 1 System in the Medical Services Bureau environment in order for them to create additional end user training materials as needed and to prepare them to train Users in the use of the Phase 1 System as Tailored to support the clinical and business processes. CONTRACTOR shall deliver training classes and training materials consistent with Attachment E (JHIS Training) of this Statement of Work.

Deliverable 2.4.6: Training Materials and Trained COUNTY Trainers for Phase 1 System

CONTRACTOR shall develop and deliver the training sessions and materials as described in Subtask 2.4.6 (Develop and Deliver Training Classes and Training Materials for the Phase 1 System) and shall certify in writing that all such training has been successful.

Subtask 2.4.7: Implement the Phase 1 System at all COUNTY Facilities

CONTRACTOR shall implement the Phase 1 System for Production Use at all COUNTY Facilities. CONTRACTOR shall make the Phase 1 System fully operational and in Production Use at all COUNTY Facilities. CONTRACTOR shall provide as-needed support for COUNTY conversion to Production Use at all COUNTY Facilities, as well as CONTRACTOR staff resources assigned to cutover support at each COUNTY Facility and adequate support staffing at the CTC for the cutover period or as specified in the PCD, and adequate support staffing at the CTC.

Deliverable 2.4.7: Production Use of the Phase 1 System at all COUNTY Facilities

CONTRACTOR shall deliver the fully operational Phase 1 System in Production Use at all COUNTY Facilities.

Subtask 2.4.8: Conduct Post-Implementation System Review for Phase 1 System

Following implementation of Production Use of the Phase 1 System at all COUNTY Facilities, CONTRACTOR shall collect and evaluate operational results to assess the success and shortcomings of the System implementation efforts. CONTRACTOR shall submit the Post-Implementation Review Report to the COUNTY Project Director to give COUNTY feedback on the implementation process of the Phase 1 System. This report shall evaluate the Phase 1 System cutover, conversion, and implementation process and shall provide feedback on the following: (a) User and organizational satisfaction; (b) identification of necessary process workflow enhancement concerns/potential; (c) CONTRACTOR recommended workflow practice effectiveness and adoption; (d) System performance concerns; and (e) short and long term planning goals.

Deliverable 2.4.8: Post-Implementation Review of Phase 1 System

CONTRACTOR shall deliver a Post-Implementation Review Report that contains the results of the work performed in Subtask 2.4.8.

Subtask 2.4.9: Maintain Production Use of Phase 1 System for Thirty (30) Days with No Deficiencies at all COUNTY Facilities

The Phase 1 System shall be maintained in Production Use at all COUNTY Facilities with no material Deficiencies, as set forth in Subparagraph 9.1 (General) of the body of the Agreement, for thirty (30) consecutive days subsequent to COUNTY's written approval of Deliverable 2.4.7 (Production Use of Phase 1 System at All COUNTY Facilities) and as specified in Exhibit D (Service Level Agreement).

Deliverable 2.4.9: Production Use of Phase 1 System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities

The Phase 1 System shall operate in Production Use at all COUNTY Facilities with no material Deficiencies, as set forth in Subparagraph 9.1 (General) of the body of the Agreement, for thirty (30) consecutive days subsequent to COUNTY's written approval of Deliverable 2.4.7 (Production Use of Phase 1 System at all COUNTY Facilities).

Subtask 2.5: Perform Phase 1 Application Software Enhancements

CONTRACTOR shall enhance the Initial Applications Software as defined in this Subtask subsequent to the completion of Subtask 2.1 (Perform System Cutover to Remote Hosting Services). These Enhancements shall be performed in conjunction with Subtask 2.4 (Upgrade Application Software) and implemented as part of the Phase 1 System. Enhancements include the implementation of Ambulatory Content Code Updates, implementation of the RadNet Ultrasound module, and CPDI Enhancements.

Subtask 2.5.1: Implement Ambulatory Content Code Updates

CONTRACTOR shall initially update the System with the then current Ambulatory Content codes for Production Use with the Initial Applications Software in the Remote Hosting Services environment. CONTRACTOR shall also implement a batch process to maintain current Ambulatory Content codes for JHIS Production Use with monthly Updates.

Deliverable 2.5.1: Production Use of Automated Ambulatory Code Updates

CONTRACTOR shall deliver then current Ambulatory Content codes for JHIS Production Use and maintain current codes through monthly updates to the System.

Subtask 2.5.2: Implement RadNet Ultrasound Module

CONTRACTOR shall install and configure the RadNet Ultrasound Application Software module for Production Use. CONTRACTOR shall instruct COUNTY Users in the use of the Ultrasound Application Software module.

Deliverable 2.5.2: Production Use of RadNet Ultrasound Module

The RadNet Ultrasound Application Software module shall be in Production Use at all COUNTY Facilities.

Subtask 2.5.3: Implement CPDI Enhancements

CONTRACTOR shall convert and upload all existing CPDI data at COUNTY and an additional maximum of 15 million external historical document images to the CPDI

Application Software module of JHIS Phase 1 System. These document images will be fully integrated and accessible through the JHIS Phase 1 System by COUNTY Users upon completion of this Subtask. COUNTY, through COUNTY's third-party document imaging vendor, shall provide CONTRACTOR with CPDI import files based upon import file specifications provided by CONTRACTOR.

CONTRACTOR shall:

(a) Provide CPDI import file specifications to COUNTY and COUNTY's third-party document imaging vendor,

(b) Develop software to perform the conversion and uploading of the import files,

(c) Verify that the CPDI Application Software module is ready to accept the upload of the import files,

(d) Test, in conjunction with COUNTY, the CPDI import file software in the Build Domain,

(e) Upon successful completion of testing, perform the upload processes using CPDI import files provided by COUNTY,

(f) Identify and correct any Deficiencies during the execution of the upload processes,

(g) Validate that all uploaded document images have been successfully integrated with the CPDI Application Software module and available for full Production Use,

(h) Provide COUNTY training in accessing the historical document images.

CONTRACTOR shall support COUNTY in full deployment of original document scanning into CPDI by providing 200 hours of technical assistance on-site at COUNTY Facilities in support of the following:

(a) Configure additional scanning workstations at COUNTY Facilities,

(b) Install CPDI Application Software on scanning workstations,

(c) Test and validate CPDI Application Software on scanning workstations,

(d) Assist COUNTY with batch scanning setup for sample documents provided by COUNTY,

(e) Assist COUNTY in establishing operational procedures for Production Use of the scanning workstations.

Deliverable 2.5.3: Production Use of CPDI Enhancements

CONTRACTOR shall convert and upload all existing CPDI data at COUNTY and an additional maximum of 15 million external historical document images to the CPDI Application Software module of JHIS Phase 1 System for Production Use. Further,

CONTRACTOR shall deliver 200 hours of technical assistance to COUNTY in the installation, configuration, and operation of scanning workstations at COUNTY Facilities.

Subtask 2.6: Plan and Implement Application Management Services (AMS)

In this Subtask, CONTRACTOR shall prepare an operational plan for AMS. Subsequently, CONTRACTOR shall set up and implement all systems, tools, devices and procedures required to deliver AMS in accordance with the AMS Operational Plan and the provisions of Section IV of Exhibit D (Service Level Agreement) of this Agreement.

Subtask 2.6.1: Prepare Application Management Services (AMS) Operational Plan

CONTRACTOR shall develop a written JHIS Application Management Services Operational Plan. This plan shall define, without limitation, the following:

1. Service Package Management
2. Configuration/Setup Description
3. Monitoring Tasks
4. Maintenance Activities
5. Advanced Tier Support
6. Operations Management
7. Report Management
8. Content Management
9. Application Monitoring
10. Problem Management
11. User Account Management

Deliverable 2.6.1: Application Management Services Operational Plan

The Application Management Services Operational Plan shall document the results of the work performed in Subtask 2.6.1.

Subtask 2.6.2: Set up and Configure Application Management Services (AMS)

CONTRACTOR shall set up and implement all systems, tools, devices and procedures required to deliver Application Management Services (AMS) in accordance with the provisions of Section IV of Exhibit D (Service Level Agreement) of this Agreement and Deliverable 2.6.1 (Application Management Services Operational Plan). In connection with this Subtask, CONTRACTOR shall perform the following

tasks and any other tasks established as necessary collaboratively by the COUNTY's Project Director and the CONTRACTOR's Project Director.

1. Develop and implement the initial processes and setup the tools required for AMS including but not limited to the tools and processes identified in Exhibit D (Service Level Agreement).
2. Document standard operating procedure and service request backlog management processes.
3. Setup and install tools in CTCs needed to support CONTRACTOR's monitoring and maintenance of the System.
4. Produce and deliver a playbook that describes and documents, without limitation:
   a. The operations monitoring tasks that CONTRACTOR shall perform
   b. Processes for notification and tracking of issues
   c. Corrective and preventive activities required to maintain and continue to maintain the System in operation in accordance with the Specifications and this Agreement.
5. Review and modify as needed the maintenance and monitoring tools installed and delivered in accordance with this Statement of Work, including, but not limited to Bedrock, Lights on, and Olympus.
6. Assign and deploy staffing necessary to carry out CONTRACTOR's obligations in connection with Application Management Services as specified in the applicable provisions of Exhibit D (Service Level Agreement) of the Agreement and otherwise in accordance with the Agreement.

Deliverable 2.6.2: Set up and Configured Application Management Services (AMS)

CONTRACTOR shall certify to COUNTY in writing that the specified Application Management Services have been initialized and implemented.

Subtask 2.7: Set up and Configure P2Sentinel Clinical Enterprise

CONTRACTOR shall configure and setup the initial infrastructure required for the P2Sentinel Clinical Enterprise including all activities necessary to ensure that the P2Sentinel Clinical Enterprise will be ready and operate in accordance with the Agreement as of the initiation of work on Subtask 2.4.7: Implement the Phase 1 System at all COUNTY Facilities. CONTRACTOR shall provide COUNTY with documentation and instructions in the use of P2Sentinel Clinical Enterprise in support of security administration functions.

Deliverable 2.7: Set up and Configured P2Sentinel Clinical Enterprise

CONTRACTOR shall certify to COUNTY in writing that the specified P2Sentinel Clinical Enterprise have been initialized and implemented. CONTRACTOR shall deliver

to COUNTY documentation and instructions in the use of P2Sentinel Clinical Enterprise.

Subtask 2.8: Develop and Implement 724Access Downtime Viewer Application Software Module

In this Subtask, CONTRACTOR shall develop and implement the 724Access Downtime Viewer Application Software module for use during production outages. This Subtask consists of all the planning, installing, configuring, testing, and training activities required for implementation of the 724Access Downtime Viewer Application Software at COUNTY Facilities. Upon completion of this Subtask, the 724Access Downtime Viewer Application Software will be in Production Use on ten (10) COUNTY-supplied workstations distributed across five (5) COUNTY Facilities. CONTRACTOR shall install the application on three (3) CONTRACTOR-supplied mid-tier servers consisting of two (2) production servers and one (1) test server operating at COUNTY Facilities as part of Remote Hosting Services. CONTRACTOR shall provide all Third-party Software licensing required as specified in Attachment B (Schedule of JHIS Software).

Subtask 2.8.1: Plan and Document COUNTY's Technical Configuration for Use of 724Access Downtime Viewer Application Software Module

CONTRACTOR shall conduct all preparatory and planning tasks in support of the implementation of the 724Access Downtime Viewer Application Software including, but not limited to, the following:

(a) Provide COUNTY a checklist identifying the configuration and installation Specifications for Hardware and Operating Software required for COUNTY-supplied workstations and COUNTY site preparation and connectivity requirements for installation of CONTRACTOR-supplied mid-tier servers at COUNTY Facilities,

(b) Conduct a checklist review session with COUNTY,

(c) Acquire all CONTRACTOR-supplied Hardware and Third-Party software licenses required for implementation,

(d) Create a project plan identifying all the specific tasks required by CONTRACTOR and COUNTY for implementation of 724Access Downtime Viewer Application Software.

COUNTY will collaborate with CONTRACTOR on this Subtask and will provide all necessary information, requested by CONTRACTOR, to support development of the CONTRACTOR's Specification for 724Access.

COUNTY will provide the Specified Hardware and Operating Software (as provided for in this Subtask 2.8.1) for the COUNTY's Use of the 724Access Downtime Viewer Application Software.

Deliverable 2.8.1: Documented Technical Configuration and Plan for Use of the 724Access Downtime Viewer Application Software Module

CONTRACTOR shall document the CONTRACTOR's and COUNTY's technical environment required for 724Access as applicable for the then-current System at all COUNTY Facilities. CONTRACTOR shall deliver to COUNTY a project plan for implementation of 724Access Downtime Viewer Application Software.

Subtask 2.8.2: Install, Configure, and Test 724Access Downtime Viewer Application Software Module

CONTRACTOR shall install, configure, and test, in accordance with Subparagraph 9.2 (CONTRACTOR Tests) of the body of the Agreement, all hardware and software required for the 724Access Downtime Viewer Application Software module to operate. CONTRACTOR shall certify to COUNTY that the 724Access Downtime Viewer Application Software module is installed and operating in accordance with the Specifications documented as set forth in Deliverable 2.8.1.

CONTRACTOR shall develop test plans and scripts for the 724Access Downtime Viewer System. With CONTRACTOR's expert review, guidance and assistance, COUNTY will review, suggest any necessary revisions and validate the test plans and scripts, in each case. CONTRACTOR, with COUNTY's reasonable assistance as requested, shall modify the test scripts as required and shall thoroughly test the 724Access Downtime Viewer System to ensure that the 724access Downtime Viewer Application Software module and all Components function as designed. The test shall ensure that 724Access is initiated and available as specified for both planned and unplanned Downtime consistent with JHIS workflows. Following CONTRACTOR testing, COUNTY will execute the test scripts in accordance with CONTRACTOR's expert review, assistance, and guidance.

CONTRACTOR shall certify that the hardware and software for the 724Access Downtime Viewer environment has been configured and tested in accordance with Specifications. This Report shall consist of the following:

1. A listing of the CONTRACTOR owned hardware and software for the 724Access Downtime Viewer Application Software module that has been installed including, without limitation, equipment type, model number, serial number, location, name, version number, and license number.
2. Certification that all COUNTY owned Specified Hardware and Operating Software for 724Access Downtime Viewer is operating properly in accordance with the Specifications.
3. Problem reporting and escalation procedures.

Deliverable 2.8.2: Installed, Configured, and Tested 724Access Downtime Viewer Application Software Module

CONTRACTOR shall certify in writing that the 724Access Downtime Viewer COUNTY owned Specified Hardware and Operating Software and CONTRACTOR owned hardware and software is operating in accordance with the Specifications.

CONTRACTOR shall certify, in writing, that CONTRACTOR and COUNTY have successfully tested the 724Access Downtime Viewer Application Software.

Subtask 2.8.3: Train COUNTY Trainers to use 724Access Downtime Viewer Application Software Module

CONTRACTOR shall conduct training for COUNTY technical staff in the configuration of the 724Access Downtime Viewer Application Software module and in any necessary local support activities. Training shall include knowledge transfer including installation, configuration and operational procedures for the 724Access Downtime Viewer Application Software. Training shall also include maintenance and monitoring of the replication of data to the local workstations

Deliverable 2.8.3: Trained COUNTY Trainers

CONTRACTOR shall deliver training classes and example training materials to enable COUNTY to create additional end user training materials as necessary and certify in writing that all training as described in Subtask 2.8.3 has been successful.

Subtask 2.8.4: Implement 724Access Downtime Viewer Application Software Module

CONTRACTOR shall perform all work necessary to move 724Access Downtime Viewer capability to Production Use.

Deliverable 2.8.4: Production Use of 724Access Downtime Viewer Application Software Module

CONTRACTOR shall document the readiness of the Production Domain for 724Access Downtime Viewer in both Scheduled and Unscheduled Downtime events (as defined in Exhibit D).

TASK 3: PHASE 2 SYSTEM APPLICATION SOFTWARE DEVELOPMENT

CONTRACTOR shall make recommendations on design to enable COUNTY to finalize the Phase 2 system design CONTRACTOR shall build and implement the Phase 2 System in this Task with the input and participation of COUNTY in accordance with the MethodM processes and the PCD. The Phase 2 System Application Software modules and Interfaces consist of:

1. St. John Sepsis Agent (Application Service Provider)
2. Extended PowerChart Enhanced View and PowerNotes (PowerChart)
3. Extended CPDI and eSignature (CAMM)
4. PowerChart ECG (Cerner Cardiovascular)
5. Pyxis Medstation Interface with ADT (Open Port Interfaces)
6. Inpatient Pharmacy Med Orders/Outpatient Pharmacy (PharmNet)
7. Point of Care Medication Administration
8. Advanced Care Documentation (CareNet)
9. Billing, Accounts Receivable, Eligibility Verification, Address Validation, and all Patient Accounting Interfaces (Patient Accounting)
10. Chart Search (Application Service Provider)
11. PowerChart Maternity (Womens Health).

As a prerequisite to this Task, the Phase 1 System, as described in Task 2, shall be in Production Use at all COUNTY Facilities. Upon completion of this Task, the Phase 2 System shall be in Production Use at all COUNTY Facilities.

Subtask 3.1: Phase 2 Project Preparation

Subtask 3.1.1: Conduct Phase 2 Project Preparation and Planning

CONTRACTOR shall conduct a project briefing for COUNTY department executives who represent the leadership of the JHIS stakeholders. CONTRACTOR shall assess COUNTY's project team computer skills and project readiness. CONTRACTOR shall introduce CONTRACTOR's project team, and demonstrate the tools to be used during the execution of work defined in this Statement of Work. CONTRACTOR shall provide opportunities to COUNTY for hands-on experience with the tools to be used. CONTRACTOR shall introduce MethodM and outline the events within the methodology. CONTRACTOR shall Tailor and deliver data collection materials including the Preliminary Design Assessment (PDA) for COUNTY use and train COUNTY's staff in requirements development using the materials. As required according to the assessment of COUNTY's project staff readiness conducted during this Subtask, CONTRACTOR shall conduct, Project Management Workshop, Project Team Workshop and Solution/Tools Introduction and other training (as specified in Attachment E (JHIS Training) to this Statement of Work). COUNTY's project team will participate in this session as provided for in MethodM, including validation and development of

COUNTY's project governance and COUNTY goals and expectations for the project. CONTRACTOR shall provide for and COUNTY will participate in the completion of Tailored PDAs as required by MethodM.

CONTRACTOR shall update the PCD based upon detailed project planning for Phase 2 development. CONTRACTOR shall conduct an assessment of the technical infrastructure and document findings and recommendations in a technical assessment report, excluding wireless assessments.

Deliverable 3.1.1: Phase 2 Project Preparation and Planning

CONTRACTOR shall conduct the executive project briefing and the project preparation session described in Subtask 3.1.1. CONTRACTOR shall provide an updated PCD and a report based upon the technical assessment.

Subtask 3.1.2: Install, Test and Certify Phase 2 System Application Software Modules

CONTRACTOR shall deliver, install, configure and provide initial unit test and Internal Integration test of the Phase 2 System Application Software modules in the Build Domain, consistent with the PCD, for Tailoring and test. The installation and configuration shall include, without limitation, the following:

1. The Phase 2 System Application Software modules.
2. Optional Application Software modules elected by COUNTY to be moved to the Phase 2 System.
3. Reference database provided by CONTRACTOR.
4. Required content such as, Ambulatory Content, Medisource, Multum, CMT, CPT as specified in Attachment B(Schedule of JHIS Software).
5. Other software or tools provided by CONTRACTOR (e.g., MethodM, Bedrock, Lights-on).

CONTRACTOR shall at this time deliver and transfer any and all Licenses for the System Software if not already transferred to COUNTY.

Following successful System Software installation and testing, CONTRACTOR shall deliver a written System Software Installation Report and Certification to COUNTY containing the following:

1. A listing of all of the software that has been installed, as well as product description, version number, and license number(s) with corresponding reference to Attachment B (Schedule of JHIS Software) of this Statement of Work.
2. Software reference and operating manuals and all other Documentation pertaining to the Phase 2 Application Software modules.
3. Problem reporting and escalation procedures.
4. Certification that the System Software has been installed properly for development and test and is operating as designed.

Deliverable *3.1.2:* CONTRACTOR Installed, Tested, and Certified Phase 2 System Application Software Modules

CONTRACTOR shall certify in writing that the Phase 1 System Application Software modules have been installed and tested and are operating in accordance with the Agreement.

Subtask 3.2: Conduct MethodM Phase 2 Project Kickoff Event

With participation by COUNTY as provided in the PCD, CONTRACTOR shall conduct the MethodM project kickoff, consisting of the kickoff presentation, the current state analysis, and the scope review. CONTRACTOR shall present the outstanding Preliminary Design Assessment (PDA) items and a plan for completion. CONTRACTOR shall conduct and document COUNTY workflows and conduct onsite walkthrough of the Phase 2 System Application Software modules. CONTRACTOR shall document concerns using a scope review template and process. CONTRACTOR shall present data collection materials and requirements as applicable. CONTRACTOR shall review and conduct current state workflow analysis and document issues relevant to the Phase 1 System Application Software modules. During this event, CONTRACTOR shall complete the Tailored Onsite Workflow Assessments (OWAs) for the Phase 2 System.

Deliverable 3.2: MethodM Phase 2 Project Kickoff Event

CONTRACTOR shall conduct the kickoff event described in Subtask 3.2. CONTRACTOR shall assemble the completed OWAs and present the results to COUNTY along with the outstanding PDA items and plan for completion thereof.

Subtask 3.3: Develop and Install each Phase 2 System Application Software Module

For each Phase 2 System Application Software module, CONTRACTOR shall perform Subtasks 3.1.1, 3.1.2, and 3.1.3. CONTRACTOR shall recommend design, shall build and test, all as described in this Statement of Work, with the input and participation of COUNTY in accordance with the MethodM processes and the PCD, such Application Software module consistent with the Agreement. CONTRACTOR shall recommend design, shall test with COUNTY's participation, integrate, and implement each Phase 2 System Application Software module in the order of or in combinations approved in the PCD (Deliverable 1.1). When applicable, CONTRACTOR shall Tailor each Phase 2 System Application Software module as necessary for the System to perform in accordance with the Agreement. When applicable, CONTRACTOR shall incorporate content, subscriptions, and ancillary con-

tent in the design and build of each Phase 2 System Application Software module. CONTRACTOR and COUNTY shall test such Application Software module consistent with Paragraph 9 (Acceptance of System by COUNTY) of the body of the Agreement and this Statement of Work. CONTRACTOR shall organize, schedule, manage, and conduct joint COUNTY and CONTRACTOR events defined in the PCD (Deliverable 1.1) and required to complete the design, build, test, and implementation of each Phase 2 System Application Software module in accordance with the MethodM processes accepted in the PCD (Deliverable 1.1). CONTRACTOR shall report on the results of such events and recommend any changes to COUNTY processes that are necessary to improve the Tailoring processes consistent with the Agreement.

Subtask 3.3.1: Design each Phase 2 System Application Software Module

For each Phase 2 System Application Software module, CONTRACTOR shall recommend design and document such Application Software module based upon the input and participation of COUNTY in accordance with the MethodM processes and the PCD. CONTRACTOR shall Tailor such Application Software module in accordance with the Specifications. CONTRACTOR shall incorporate in the design of such Application Software module required Interfaces. This Subtask includes, but is not limited to, the design of core data elements and tables, reference tables, edit criteria, required Interfaces, System Test plans and scripts that will be provided with input and participation from COUNTY, modification of clinical and business processes, and all other entities associated with the design for this Application Software module and/or its Interfaces.

For each Phase 2 System Application Software module, CONTRACTOR shall document the design, database, and Tailoring decisions using standardized System Documentation tools as specified in this Statement of Work or according to CONTRACTOR Documentation standards approved in writing by the COUNTY Project Director. CONTRACTOR shall Tailor and present to Users as a Prototype the database, business rules, screens, and reports of such Application Software module, and shall incorporate User feedback from the Prototype sessions in the design. CONTRACTOR and COUNTY shall mutually arrange and schedule design review sessions approved in the PCD in accordance with the MethodM event process or designated in writing by COUNTY's Project Director.

CONTRACTOR shall identify and document the impact of the design on COUNTY's current clinical and business processes and the expected modifications of such clinical and business processes under Phase 2 System operation, including without limitation interactions among clinical processes and correctional processes. CONTRACTOR shall certify, in writing, that CONTRACTOR has successfully designed such Application Software module and Interfaces relevant to such Application Software module.

CONTRACTOR shall conduct training in process demonstration, and database table Tailoring as relevant to JHIS-specific User-defined database specifications based on

the results of the MethodM PDA and OWA processes. Specific classes and descriptions of such classes are identified in Attachment E (JHIS Training) to this Statement of Work.

Deliverable 3.3.1: Design Documentation for each Phase 2 System Application Software Module

CONTRACTOR shall deliver to COUNTY all design Documentation for each Phase 2 System Application Software module. CONTRACTOR shall certify, in writing, that CONTRACTOR has successfully completed the design Documentation. CONTRACTOR shall deliver training classes and training materials consistent with the classes described in Attachment E (JHIS Training) to this Statement of Work and certify in writing that all training as described in Subtask 3.3.1 (Design each Phase 2 System Application Software Module) has been successfully completed.

Subtask 3.3.2: Build and Unit Test each Phase 2 System Application Software Module

CONTRACTOR shall build, validate and demonstrate to COUNTY each Phase 2 System Application Software module based upon the final design resulting from the Prototype process performed during Subtask 3.3.1 (Design each Phase 2 System Application Software Module) and documented in Deliverable 3.3.1 (Design Documentation for each Phase 2 System Application Software Module).

CONTRACTOR shall conduct training for COUNTY participants in System validation. Specific classes and descriptions of such classes are identified in Attachment E (JHIS Training) of the Statement of Work.

For each as-built Phase 2 System Application Software module, CONTRACTOR shall develop test plans and scripts for such Tailored Application Software module with COUNTY input and participation. With CONTRACTOR's expert review, guidance and assistance, COUNTY will review, suggest any necessary revisions and validate the test plans and scripts, in each case, as they relate to COUNTY-specific Tailoring. CONTRACTOR, with COUNTY's reasonable assistance as requested, shall modify the test scripts as required and shall thoroughly test such Application Software module as part of this process, including, without limitation, Unit Testing of applicable Interfaces, but without integration of other Application Software modules. Following CONTRACTOR testing, COUNTY will execute the test scripts in accordance with the MethodM processes, with CONTRACTOR's expert review, assistance and guidance. The results of all testing shall be documented in accordance with the MethodM processes.

CONTRACTOR shall certify, in writing, that CONTRACTOR has successfully built and that CONTRACTOR and COUNTY have successfully tested each Phase 2 System Application Software module in accordance with the Specifications and the de-

sign approved in Deliverable 3.3.1 (Design Documentation for each Phase 2 System Application Software Module) for such Application Software module.

Deliverable 3.3.2: Built and Unit Tested each Phase 2 System Application Software Module

CONTRACTOR shall demonstrate each Phase 2 System Application Software module to COUNTY. CONTRACTOR shall certify, in writing, that CONTRACTOR has successfully built such module completely and accurately based upon the Documentation generated in Deliverable 3.3.1 (Design Documentation for each Phase 2 System Application Software Module) and CONTRACTOR and COUNTY have successfully tested such Application Software module as described in Subtask 3.3.2. The results of all Tests shall be documented in accordance with the MethodM processes.

Subtask 3.3.3: System Test each Phase 2 System Application Software Module

For each as-built Phase 2 System Application Software module, CONTRACTOR with COUNTY input and participation shall develop System Test plans and scripts for such Tailored Application Software module. With CONTRACTOR's expert review, guidance and assistance, COUNTY will review, suggest any necessary revisions and validate the test plans and scripts, in each case, as they relate to COUNTY-specific Tailoring. CONTRACTOR, with COUNTY's reasonable assistance as requested, shall modify the test scripts as required and shall thoroughly System Test each Phase 2 System Application Software module to ensure that all components of this module function as designed. The System Test shall ensure that all software code, data structures, departmental workflows, policies and procedures and other Tailoring specific to such Application Software module operate in a manner consistent with the design of this module. Following CONTRACTOR testing, COUNTY will execute the test scripts in accordance with MethodM, with CONTRACTOR's expert review, assistance and guidance. The results of all System Testing shall be documented in accordance with the MethodM processes.

CONTRACTOR shall certify, in writing, that CONTRACTOR and COUNTY have successfully System Tested such Application Software module and that it functions in accordance with the Specifications and the Agreement.

Deliverable 3.3.3: System Tested each Phase 2 System Application Software Module

CONTRACTOR shall certify, in writing, that CONTRACTOR and COUNTY have successfully System Tested all components of each Phase 2 System Application Software module, that CONTRACTOR has corrected all identified Deficiencies and that such Application Software module functions in accordance with the Specifications and the Agreement. CONTRACTOR shall deliver Documentation of such Application Software module as designed, built and tested.

Subtask 3.4: Plan and Perform Integration Tests for the Phase 2 System

Subtask 3.4.1: Plan Integration Tests for the Phase 2 System

For the as-built Phase 2 System, CONTRACTOR shall review and revise as needed the Integration Testing strategy documented in the PCD (Deliverable 1.1). CONTRACTOR with COUNTY input and participation shall develop a test plan consisting of test scripts and scenarios that take into account departmental workflows, policies and procedures and other Tailoring and that shall be used in the conduct of the Integration Tests under Subtask 3.4.2. With CONTRACTOR's expert review, guidance and assistance, COUNTY will review, suggest any necessary revisions and validate the test plans and scripts, in each case, as they relate to COUNTY-specific Tailoring. CONTRACTOR, with COUNTY's reasonable assistance as requested, shall modify the test scripts as required and scripts shall generally consist of all defined input and expected output results for each function based on the Specifications. The test plan shall encompass all testing across and between Phase 2 System Application Software modules required to ensure that the System operates in an integrated fashion and integrates with pass through information from and to the Interface systems.

Deliverable 3.4.1: Integration Test Plans and Test Scripts for the Phase 2 System

CONTRACTOR shall deliver an update to the Integration Testing strategy documented in the Project Control Document. CONTRACTOR with COUNTY input shall also deliver a test plan consisting of test scripts and scenarios that shall be used in the conduct of the Integration Tests under Subtask 3.4.2. The test plan shall be developed and validated as described under Subtask 3.4.1.

Subtask 3.4.2: Perform Integration Tests for the Phase 2 System

CONTRACTOR shall conduct Internal Integration Testing for the as-built Phase 2 System. Following CONTRACTOR testing, COUNTY will execute the Integration Testing for the as built Phase 2 System. Utilizing test scripts in accordance with MethodM, with CONTRACTOR's expert review, assistance and guidance. CONTRACTOR shall successfully perform all required corrective action to ensure the successful operation and interoperability of all Phase 2 System Application Software modules and all Interfaces. COUNTY will participate by engaging in the corrective action taken to facilitate their troubleshooting skills and increase their knowledge and understanding of the system. The results of all Integration Testing shall be documented in accordance with the MethodM processes. CONTRACTOR shall certify, in writing, that CONTRACTOR and COUNTY have successfully conducted all Inte-

gration Testing for the Phase 2 System and that CONTRACTOR has successfully performed all required corrective action.

Deliverable 3.4.2: Successful Integration Test Results for the Phase 2 System

CONTRACTOR shall conduct Integration Testing for the as-built Phase 2 System. Following CONTRACTOR testing, COUNTY will execute the test scripts in accordance with MethodM, with CONTRACTOR's expert review, assistance and guidance. CONTRACTOR shall successfully perform all required corrective action to ensure the successful operation and interoperability of all Phase 2 System Application Software modules and all Interfaces. The results of all Integration Testing shall be documented in accordance with the MethodM processes. CONTRACTOR shall certify, in writing, that CONTRACTOR and COUNTY have successfully conducted all Integration Testing for the Phase 2 System and that CONTRACTOR has successfully performed all required corrective action.

Subtask 3.5: Prepare for Phase 2 System Cutover and Conversion

Subtask 3.5.1: Develop System Cutover and Conversion Plan for the Phase 2 System

CONTRACTOR shall develop a System Cutover and Conversion Plan for the Phase 2 System that identifies the steps required to load existing automated and manual data and to perform other activities required as part of the System cutover and conversion process, including without limitation conversion to new or modified clinical and business processes, policies and procedures. The plan shall include, without limitation the unique conversion requirements of each Phase 2 System Application Software module, including without limitation, conversion of automated and manual data required for production conversion and transfer to the Production Domain of successfully tested all Phase 2 System Application Software modules and Interfaces and confirmation of successful User Acceptance Testing.

CONTRACTOR shall define the timing of conversion programs and shall provide an orientation to COUNTY's conversion support staff. CONTRACTOR shall document in the plan the cutover support required by CONTRACTOR and COUNTY during the transition from current manual clinical and business processes to Production Use of the Phase 2 System.

CONTRACTOR shall also define in the plan a mechanism to verify the plan by conducting, with COUNTY participation in accordance with the PCD and otherwise the Agreement, desk exercises, plan reviews, walk-throughs, checklist confirmations (peripheral device readiness, network equipment readiness, COUNTY technical staffing provisioning and training, site visits, COUNTY circuit stressors and bandwidth confirmation, data transfer and conversion, chart imports, staff movement and redeployment, communication plans, contingency plans, emergency response, CTC

operations and intra and inter-CTC failover), and any other plan review that can prudently be exercised in advance to minimize the risk of conversion failure.

Deliverable 3.5.1: System Cutover and Conversion Plan for the Phase 2 System

CONTRACTOR shall deliver the System Cutover and Conversion Plan for the Phase 2 System that identifies the steps required to perform the System cutover and conversion process and how the COUNTY and CONTRACTOR resources will be deployed during the cutover. CONTRACTOR shall incorporate in the Deliverable all of the results of Subtask 3.5.1.

Subtask 3.5.2: Prepare for System Cutover and Conversion for the Phase 2 System

CONTRACTOR, with COUNTY participation in accordance with the PCD, shall verify the System Cutover and Conversion Plan as provided in Subtask 3.5.1 (Develop System Cutover and Conversion Plan for the Phase 2 System) to ensure CONTRACTOR and COUNTY readiness for actual System cutover required for transition to Production Use of all Phase 2 System Application Software modules in the Production Domain.

CONTRACTOR and COUNTY shall each identify required plan corrections and all actions required to perform the plan during the conversion and cutover process. CONTRACTOR with COUNTY input and participation shall successfully correct the plan, inventory all necessary COUNTY and CONTRACTOR corrective actions, and obtain the written approval of COUNTY's Project Director, which may be granted or withheld in his sole discretion.

CONTRACTOR shall certify, in writing, that CONTRACTOR and COUNTY have successfully performed all necessary corrective actions to perform the plan required by Deliverable 3.5.1 (System Cutover and Conversion Plan for the Phase 2 System) and that all Phase 2 System Application Software modules are ready for System cutover and conversion.

Deliverable 3.5.2: Verified System Cutover and Conversion Plan for the Phase 2

CONTRACTOR shall certify, in writing, that CONTRACTOR and COUNTY, as well as the Phase 2 System, are ready for cutover and conversion.

Subtask 3.6: Develop and Deliver User Training for the Phase 2 System

Consistent with the provisions of Exhibit D (Service Level Agreement) CONTRACTOR shall create and provision a Training Domain for COUNTY User Training.

Subtask 3.6.1: Develop Training Classes and Training Materials for the Phase 2 System

CONTRACTOR shall review and confirm the User Training Strategy developed as part of the PCD. CONTRACTOR shall develop a Learning Plan and access to Solution Training materials for the Phase 2 System. Workflow diagrams will be provided for the as built Phase 2 System. The Learning Plan and Solution Training materials shall provide COUNTY trainers with a comprehensive presentation of the functionality and use of the Phase 2 System within clinical and business operations of Medical Services Bureau. CONTRACTOR will make Solution Training material available via UCern that shall provide COUNTY trainers with techniques for delivering the training to Users. The Learning Plan shall define training approach, tools, and, where applicable, facility requirements. CONTRACTOR shall additionally provide examples of end user training with respect to all or any portion of the modules included in the Phase 2 System that COUNTY trainers may re-use or modify in creating User training manuals and guides, or, alternatively, named references to clients from whom COUNTY may request such examples. CONTRACTOR shall consult with COUNTY trainers as needed during the Learning Plan Development phase and Materials Development Workshop to assist with COUNTY's development of User training manuals and guides.

Deliverable 3.6.1: Documented Training Classes and Training Materials for the Phase 2 System

CONTRACTOR shall deliver training materials for the Phase 2 System that consist of the results of Subtask 3.6.1.

Subtask 3.6.2: Train the COUNTY Trainers for the Phase 2 System

CONTRACTOR shall deliver training classes and training materials to COUNTY system analysts and subject matter experts via the System Validation session, r, for the as-built Phase 2 System, including each Phase 2 System Application Software module and Interface. CONTRACTOR shall present the training classes and materials in a minimum of one (1) training session per Phase 2 System Application Software module, adequate in duration to cover all functionality and expected clinical and business process changes. CONTRACTOR shall conduct all training live and remotely in the Training Domain. The training materials and classes shall give COUNTY trainers sufficient instruction in the use of the Phase 2 System and each Phase 2 System Application Software module in the Medical Services Bureau environment in order to prepare them to train Users in the use of the Phase 2 System as Tailored to meet the Specifications and support the expected clinical and business processes. CONTRACTOR shall deliver training classes and training materials consistent with Attachment E (JHIS Training) of this Statement of Work.

Deliverable 3.6.2: Trained COUNTY Trainers for the Phase 2 System

CONTRACTOR shall deliver the training sessions and materials as described in Subtask 3.6.1 (Develop Training Classes and Training Materials for the Phase 2 System) and Subtask 3.6.2 (Train COUNTY Trainers for the Phase 2 System) and shall certify in writing that all such training has been successful.

Subtask 3.7: Prepare Reference Documentation for the Phase 2 System

CONTRACTOR shall prepare reference Documentation for the as-built Phase 2 System.. Such Documentation shall, , provide COUNTY with a comprehensive reference source of System functionality and data definitions in the form of CONTRACTOR's Change Management Artifact Templates (CMATs) approved by COUNTY, Cerner Millennium Support Guides, design decision matrices, CCL Reports, Discern Reports, and as otherwise provided in MethodM Online. In the event that no CMAT exists that accurately reflects the as-built, Tailored System, CONTRACTOR's Project Director and COUNTY's Project Director will collaborate to define reference Documentation for the as-built System that is acceptable to COUNTY. CONTRACTOR shall provide electronic links or access from the Phase 2 System and each Phase 2 System Application Software module or Interface to online help and shall assist COUNTY in the use of these resources.

Deliverable 3.7: Reference Documentation for the Phase 2 System

CONTRACTOR shall provide access to COUNTY to comprehensive reference Documentation as described in Subtask 3.7. CONTRACTOR shall deliver reference Documentation in the formats and using the methods defined in the Agreement and in the introductory section to this Statement of Work, according to the provisions of Subparagraph 4.6 of the body of the Agreement. CONTRACTOR shall deliver electronic links or access to online help and Documentation from the Phase 2 System as well as each Phase 2 System Application Software module and Interface

Subtask 3.8: Conduct User Acceptance Testing of the Phase 2 System

Following successful performance of all CONTRACTOR testing of the Phase 2 System as described in this Statement of Work, CONTRACTOR shall actively support COUNTY in the conduct of User Acceptance Testing of the Phase 2 System as described in Subparagraph 9.3 (User Acceptance Tests) of the body of the Agreement, including without limitation providing all consultation and assistance requested by COUNTY.

Consistent with the provisions of Exhibit D (Service Level Agreement) CONTRACTOR shall create and provision a Certification Domain for User Acceptance Testing.

COUNTY will perform User Acceptance Testing of the Phase 2 System as described in Subparagraph 9.3 (User Acceptance Tests) of the body of the Agreement based upon Integration Test scripts approved by COUNTY as part of Deliverable 4.4.1, as well as additional test scripts prepared by COUNTY in its sole discretion. COUNTY will conduct User Acceptance Testing of the Phase 2 System. Scripts shall generally consist of all defined input and expected output results for each function and Interface transaction based on the Specifications.

COUNTY will document test results consisting of all Deficiencies discovered during testing. COUNTY will identify, track, and report Deficiencies detected during User Acceptance Testing in discrepancy reports.

CONTRACTOR shall correct all Deficiencies in the Phase 2 System identified by COUNTY and as otherwise set forth in Subparagraph 9.4 (Failed Testing) of the body of the Agreement. In addition to taking corrective action, CONTRACTOR shall provide required support to COUNTY acceptance testers in the operation of the Phase 2 System. Following corrective action by CONTRACTOR, COUNTY will continue testing the System in the Production Domain in the same state until the Phase 2 System has been successfully User Acceptance Tested and is ready for transition to Production Use, as determined in accordance with Subparagraph 2.4 (Approval of Work) and Subparagraph 9.4 (Failed Testing) of the body of the Agreement. COUNTY will participate by engaging in the corrective action taken to facilitate their troubleshooting skills and increase their knowledge and understanding of the system..

Deliverable 3.8: Successfully Conducted User Acceptance Testing of the Phase 2 System

COUNTY will conduct, with active support from CONTRACTOR, User Acceptance Tests of the Phase 2 System. CONTRACTOR's support to COUNTY in the conduct of User Acceptance Testing shall include, without limitation, providing test scripts that have been created with COUNTY input and participation and used in Integration Testing, successfully performing all required corrective action to resolve Deficiencies in the Phase 2 System identified by COUNTY in discrepancy reports prepared during testing, and assisting COUNTY acceptance testers in the operation of the Phase 2 System, each Phase 2 System Application Software module, Interfaces, and clinical and business processes.

Subtask 3.9: Implement the Phase 2 System for Production Use at all COUNTY Facilities

CONTRACTOR shall implement the Phase 2 System for Production Use at all COUNTY Facilities. CONTRACTOR shall make the Phase 2 System fully operational and in Production Use at all COUNTY Facilities. CONTRACTOR shall provide as-needed support for COUNTY conversion to Production Use at all COUNTY Facilities CONTRACTOR will staff project team resources that will be assigned to cutover support in a central command room onsite at a COUNTY Facility and adequate support staffing at the CTC for the cutover period or as specified in the PCD, and adequate support staffing at the CTC.

Deliverable 3.9: Production Use of the Phase 2 System at all COUNTY Facilities

CONTRACTOR shall deliver the fully operational Phase 2 System in Production Use at all COUNTY Facilities.

Subtask 3.10: Conduct Post-Implementation System Review for the Phase 2 System

Following implementation of Production Use of the Phase 2 System at all COUNTY Facilities, CONTRACTOR shall collect and evaluate operational results to assess the success and shortcomings of the System implementation efforts. CONTRACTOR shall submit the Post-Implementation Review Report to the COUNTY Project Director to give COUNTY feedback on the implementation process of the Phase 2 System. This report shall evaluate the Phase 2 System cutover, conversion, and implementation process and shall provide feedback on the following: (a) User and organizational satisfaction; (b) identification of necessary process workflow enhancement concerns/potential; (c) CONTRACTOR recommended workflow practice effectiveness and adoption; (d) System performance concerns; and (e) short and long term planning goals.

Deliverable 3.10: Post-Implementation Review Report for the Phase 2 System

CONTRACTOR shall deliver a Post-Implementation Review Report that contains the results of the work performed in Subtask 3.10.

Subtask 3.11: Maintain Production Use of Phase 2 System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities

The Phase 2 System shall be maintained in Production Use at all COUNTY Facilities with no material Deficiencies, as set forth in Subparagraph 9.1 (General) of the body of the Agreement, for thirty (30) consecutive days subsequent to COUNTY's written approval of Deliverable 3.9 (Production Use of Phase 2 System at All COUNTY Facilities) and as specified in Exhibit D (Service Level Agreement).

Deliverable 3.11: Production Use of Phase 2 System for Thirty (30)

Consecutive Days with No Deficiencies at all COUNTY Facilities

The Phase 2 System shall operate in Production Use at all COUNTY Facilities with no material Deficiencies, as set forth in Subparagraph 9.1 (General) of the body of the Agreement, for thirty (30) consecutive days subsequent to COUNTY's written approval of Deliverable 3.9 (Production Use of Phase 2 System at all COUNTY Facilities).

TASK 4: PHASE 3 SYSTEM APPLICATION SOFTWARE DEVELOPMENT

CONTRACTOR shall design, build and implement the Phase 3 System in this Task with the input and participation of COUNTY in accordance with the MethodM processes and the PCD. The Phase 3 System Application Software modules and Interfaces consist of:

1. Lighthouse Falls and Pressure Ulcer Prevention
2. Lighthouse Delirium
3. Lighthouse Restraints
4. Lighthouse Emergent Stroke and TIA Management with eSubmission
5. Lighthouse Sepsis
6. Lighthouse Glycemic Control
7. Lighthouse Anticoagulation Management
8. Lighthouse Activity Intolerance and Impaired Mobility
9. PowerInsight Data Warehouse

As a prerequisite to this Task, the Phase 2 System, as described in Task 2, shall be in Production Use at all COUNTY Facilities and the Post-Phase 2 Application Software Upgrade, as described in Task 5, shall be completed. Upon completion of this Task, the Phase 3 System shall be in Production Use at all COUNTY Facilities.

Subtask 4.1: Phase 3 Project Preparation

Subtask 4.1.1: Conduct Phase 3 Project Preparation and Planning

CONTRACTOR shall conduct a project briefing for COUNTY department executives who represent the leadership of the JHIS stakeholders. CONTRACTOR shall assess COUNTY's project team computer skills and project readiness. CONTRACTOR shall introduce CONTRACTOR's project team, and demonstrate the tools to be used during the execution of work defined in this Statement of Work. CONTRACTOR shall provide opportunities to COUNTY for hands-on experience with the tools to be used. CONTRACTOR shall introduce MethodM and outline the events within the methodology. CONTRACTOR shall Tailor and deliver data collection materials including the Preliminary Design Assessment (PDA) for COUNTY use and train COUNTY's staff in requirements development using the materials. As required according to the assessment of COUNTY's project staff readiness conducted during this Subtask, CONTRACTOR shall conduct PC Basics, Project Management Workshop, Project Team Workshop and Solution/Tools Introduction and other training (as specified in Attachment E (JHIS Training) to this Statement of Work). COUNTY's project team will participate in this session as provided for in MethodM, including validation and development of COUNTY's project governance and COUNTY goals and expectations for the project. CONTRACTOR shall provide for and COUNTY will participate in the completion of Tailored PDAs as required by MethodM.

CONTRACTOR shall update the PCD based upon detailed project planning for Phase 3 development. CONTRACTOR shall conduct an assessment of the technical infrastructure and document findings and recommendations in a technical assessment report.

Deliverable 4.1.1: Phase 3 Project Preparation and Planning

CONTRACTOR shall conduct the executive project briefing and the project preparation session described in Subtask 4.1.1. CONTRACTOR shall provide an updated PCD and a report based upon the technical assessment.

Subtask 4.1.2: Install, Test and Certify Phase 3 System Application Software Modules

CONTRACTOR shall deliver, install, configure and test the Phase 3 System Application Software modules in the Build Domain, consistent with the PCD, for Tailoring and test. The installation and configuration shall include, without limitation, the following:

1. The Phase 3 System Application Software modules.
2. Optional Application Software modules elected by COUNTY to be moved to the Phase 2 System.
3. Reference database provided by CONTRACTOR.
4. Required content such Lighthouse , Multum, CMT, CPT as specified in Attachment B(Schedule of JHIS Software).
5. Other software or tools provided by CONTRACTOR (e.g., MethodM, Bedrock, Lights-on).

CONTRACTOR shall at this time deliver and transfer any and all Licenses for the System Software if not already transferred to COUNTY.

Following successful System Software installation and testing, CONTRACTOR shall deliver a written System Software Installation Report and Certification to COUNTY containing the following:

1. A listing of all of the software that has been installed, as well as product description, version number, and license number(s) with corresponding reference to Attachment B (Schedule of JHIS Software) of this Statement of Work.
2. Software reference and operating manuals and all other Documentation pertaining to the Phase 3 Application Software modules.
3. Problem reporting and escalation procedures.
4. Certification that the System Software has been installed properly for development and test and is operating as designed.

Deliverable *4.1.2:* CONTRACTOR Installed, Tested, and Certified Phase 3 System Application Software Modules

CONTRACTOR shall certify in writing that the Phase 3 System Application Software modules have been installed and tested and are operating in accordance with the Specifications and the Agreement.

Subtask 4.2: Conduct MethodM Phase 3 Project Kickoff Event

With participation by COUNTY as provided in the PCD, CONTRACTOR shall conduct the MethodM project kickoff, consisting of the kickoff presentation, the current state analysis, and the scope review. CONTRACTOR shall present the outstanding Preliminary Design Assessment (PDA) items and a plan for completion. CONTRACTOR shall conduct and document COUNTY workflows and conduct on-site walkthrough of the Phase 3 System Application Software modules. CONTRACTOR shall document concerns using a scope review template and process. CONTRACTOR shall present data collection materials and requirements as applicable. CONTRACTOR shall review and conduct current state workflow analysis and document issues relevant to the Phase 3 System Application Software modules. During this event, CONTRACTOR shall complete the Tailored Onsite Workflow Assessments (OWAs) for the Phase 3 System.

Deliverable 4.2: MethodM Phase 3 Project Kickoff Event

CONTRACTOR shall conduct the kickoff event described in Subtask 4.2. CONTRACTOR shall assemble the completed OWAs and present the results to COUNTY along with the outstanding PDA items and plan for completion thereof.

Subtask 4.3: Develop and Install each Phase 3 System Application Software Module

For each Phase 3 System Application Software module, CONTRACTOR shall perform Subtasks 4.3.1, 4.3.2, and 4.3.3 CONTRACTOR shall recommend design, shall build and test, all as described in this Statement of Work, with the input and participation of COUNTY in accordance with the MethodM processes and the PCD, such Application Software module consistent with the Agreement. CONTRACTOR shall recommend design, test, integrate, and implement each Phase 3 System Application Software module in the order of or in combinations approved in the PCD (Deliverable 1.1). When applicable, CONTRACTOR shall Tailor each Phase 3 System Application Software module as necessary for the System to perform in accordance with the Agreement. When applicable, CONTRACTOR shall incorporate content, subscriptions, and ancillary content in the design and build of each Phase 3 System Application Software module. CONTRACTOR shall test such Application Software module consistent with Paragraph 9 (Acceptance of System by COUNTY) of the

body of the Agreement and this Statement of Work. CONTRACTOR shall organize, schedule, manage, and conduct joint COUNTY and CONTRACTOR events defined in the PCD (Deliverable 1.1) and required to complete the design, build, test, and implementation of each Phase 1 System Application Software module in accordance with the MethodM processes accepted in the PCD (Deliverable 1.1). CONTRACTOR shall report on the results of such events and recommend any changes to COUNTY processes that are necessary to improve the Tailoring processes consistent with the Agreement.

Subtask 4.3.1: Design each Phase 3 System Application Software Module

For each Phase 3 System Application Software module, CONTRACTOR shall make design recommendations and document the COUNTY design decisions for such Application Software module based upon the input and participation of COUNTY in accordance with the MethodM processes and the PCD. CONTRACTOR shall Tailor such Application Software module in accordance with the Specifications. CONTRACTOR shall incorporate in the design of such Application Software module required Interfaces if any. This Subtask includes, but is not limited to, the design of core data elements and tables, reference tables, edit criteria, required Interfaces, System Test plans and scripts, modification of clinical and business processes, and all other entities associated with the design for this Application Software module and/or its Interfaces.

For each Phase 3 System Application Software module, CONTRACTOR shall document the design, database, and Tailoring decisions using standardized System Documentation tools as specified in this Statement of Work or according to CONTRACTOR Documentation standards approved in writing by the COUNTY Project Director. CONTRACTOR shall Tailor and present to Users as a Prototype the database, business rules, screens, and reports of such Application Software module, and shall incorporate User feedback from the Prototype sessions in the design. CONTRACTOR and COUNTY shall mutually arrange and schedule design review sessions approved in the PCD in accordance with the MethodM event process or designated in writing by COUNTY's Project Director.

CONTRACTOR shall identify and document the impact of the design on COUNTY's current clinical and business processes and the expected modifications of such clinical and business processes under Phase 3 System operation, including without limitation interactions among clinical processes and correctional processes. CONTRACTOR shall certify, in writing, that CONTRACTOR has successfully designed such Application Software module and Interfaces relevant to such Application Software module.

CONTRACTOR shall conduct training in process demonstration, and database table Tailoring as relevant to JHIS-specific User-defined database specifications based on the results of the MethodM PDA and OWA processes. Specific classes and descriptions of such classes are identified in Attachment E (JHIS Training) to this Statement of Work.

Deliverable 4.3.1: Design Documentation for each Phase 3 System Application Software Module

CONTRACTOR shall deliver to COUNTY all design Documentation for each Phase 3 System Application Software module. CONTRACTOR shall certify, in writing, that CONTRACTOR has successfully completed the design Documentation. CONTRACTOR shall deliver training classes and training materials consistent with the classes described in Attachment E (JHIS Training) to this Statement of Work and certify in writing that all training as described in Subtask 4.3.1 (Design each Phase 3 System Application Software Module) has been successfully completed.

Subtask 4.3.2: Build and Unit Test each Phase 3 System Application Software Module

CONTRACTOR shall build, validate and demonstrate to COUNTY each Phase 3 System Application Software module based upon the final design resulting from the Prototype process performed during Subtask 4.3.1 (Design each Phase 3 System Application Software Module) and documented in Deliverable 4.3.1 (Design Documentation for each Phase 3 System Application Software Module).

CONTRACTOR shall conduct training for COUNTY participants in the System Validation session. Specific classes and descriptions of such classes are identified in Attachment E (JHIS Training) of the Statement of Work.

For each as-built Phase 3 System Application Software module, CONTRACTOR with COUNTY input and participation shall develop test plans and scripts for such Tailored Application Software module. With CONTRACTOR's expert review, guidance and assistance, COUNTY will review, suggest any necessary revisions and validate the test plans and scripts, in each case, as they relate to COUNTY-specific Tailoring. CONTRACTOR, with COUNTY's reasonable assistance as requested, shall modify the test scripts as required and shall thoroughly test such Application Software module as part of this process, including, without limitation, Unit Testing of applicable Interfaces, but without integration of other Application Software modules. Following CONTRACTOR testing, COUNTY will execute the test scripts in accordance with the MethodM processes, with CONTRACTOR's expert review, assistance and guidance. The results of all testing shall be documented in accordance with the MethodM processes.

CONTRACTOR shall certify, in writing, that CONTRACTOR has successfully built and that CONTRACTOR and COUNTY have successfully tested each Phase 3 System Application Software module in accordance with the Specifications and the design approved in Deliverable 4.3.1 (Design Documentation for each Phase 3 System Application Software Module) for such Application Software module.

Deliverable 4.3.2: Built and Unit Tested each Phase 3 System Application

Software Module

CONTRACTOR shall demonstrate each Phase 3 System Application Software module to COUNTY. CONTRACTOR shall certify, in writing, that CONTRACTOR has successfully built such module completely and accurately based upon the Documentation generated in Deliverable 4.3.1 (Design Documentation for each Phase 3 System Application Software Module) and CONTRACTOR and COUNTY have successfully tested such Application Software module as described in Subtask 4.3.2. The results of all Tests shall be documented in accordance with the MethodM processes.

Subtask 4.3.3: System Test each Phase 3 System Application Software Module

For each as-built Phase 3 System Application Software module, CONTRACTOR with COUNTY input and participation shall develop System Test plans and scripts for such Tailored Application Software module. With CONTRACTOR's expert review, guidance and assistance, COUNTY will review, suggest any necessary revisions and validate the test plans and scripts, in each case, as they relate to COUNTY-specific Tailoring. CONTRACTOR, with COUNTY's reasonable assistance as requested, shall modify the test scripts as required and shall thoroughly System Test each Phase 3 System Application Software module to ensure that all components of this module function as designed. The System Test shall ensure that all software code, data structures, departmental workflows, policies and procedures and other Tailoring specific to such Application Software module operate in a manner consistent with the design of this module. Following CONTRACTOR testing, COUNTY will execute the test scripts in accordance with MethodM, with CONTRACTOR's expert review, assistance and guidance. The results of all System Testing shall be documented in accordance with the MethodM processes.

CONTRACTOR shall certify, in writing, that CONTRACTOR and COUNTY have successfully System Tested such Application Software module and that it functions in accordance with the Specifications and the Agreement.

Deliverable 4.3.3: System Tested each Phase 3 System Application Software Module

CONTRACTOR shall certify, in writing, that CONTRACTOR and COUNTY have successfully System Tested all components of each Phase 3 System Application Software module, that CONTRACTOR has corrected all identified Deficiencies and that such Application Software module functions in accordance with the Specifications and the Agreement. CONTRACTOR shall deliver Documentation of such Application Software module as designed, built and tested.

Subtask 4.4: Plan and Perform Integration Tests for the Phase 3 System

Subtask 4.4.1: Plan Integration Tests for the Phase 3 System

For the as-built Phase 3 System, CONTRACTOR shall review and revise as needed the Integration Testing strategy documented in the PCD (Deliverable 1.1). CONTRACTOR with COUNTY input and participation shall develop a test plan consisting of test scripts and scenarios that take into account departmental workflows, policies and procedures and other Tailoring and that shall be used in the conduct of the Integration Tests under Subtask 4.4.2. With CONTRACTOR's expert review, guidance and assistance, COUNTY will review, suggest any necessary revisions and validate the test plans and scripts, in each case, as they relate to COUNTY-specific Tailoring. CONTRACTOR, with COUNTY's reasonable assistance as requested, shall modify the test scripts as required and scripts shall generally consist of all defined input and expected output results for each function based on the Specifications. The test plan shall encompass all testing across and between Phase 3 System Application Software modules required to ensure that the System operates in an integrated fashion and integrates with pass through information from and to the Interface systems.

Deliverable 4.4.1: Integration Test Plans and Test Scripts for the Phase 3 System

CONTRACTOR shall deliver an update to the Integration Testing strategy documented in the Project Control Document. CONTRACTOR with COUNTY input and participation shall also deliver a test plan consisting of test scripts and scenarios that shall be used in the conduct of the Integration Tests under Subtask 4.4.2. The test plan shall be developed and validated as described under Subtask 4.4.1.

Subtask 4.4.2: Perform Integration Tests for the Phase 3 System

CONTRACTOR shall conduct Internal Integration Testing for the as-built Phase 3 System. Following CONTRACTOR testing, COUNTY conducts Integration Testing for the as-built Phase 3 System and will execute the test scripts in accordance with MethodM, with CONTRACTOR's expert review, assistance and guidance. CONTRACTOR shall successfully perform all required corrective action to ensure the successful operation and interoperability of all Phase 3 System Application Software modules and all Interfaces. COUNTY will participate by engaging in the corrective action taken to facilitate their troubleshooting skills and increase their knowledge and understanding of the System. The results of all Integration Testing shall be documented in accordance with the MethodM processes. CONTRACTOR shall certify, in writing, that CONTRACTOR and COUNTY have successfully conducted all Integration Testing for the Phase 3 System and that CONTRACTOR has successfully performed all required corrective action.

Deliverable 4.4.2: Successful Integration Test Results for the Phase3 System

CONTRACTOR shall conduct Internal Integration Testing for the as-built Phase 3 System. Following CONTRACTOR testing, COUNTY shall conduct Integration Testing of the as-built Phase 3 System and will execute the test scripts in accordance with MethodM, with CONTRACTOR's expert review, assistance and guidance. CONTRACTOR shall successfully perform all required corrective action to ensure the successful operation and interoperability of all Phase 3 System Application Software modules and all Interfaces. COUNTY will participate by engaging in the corrective action taken to facilitate their troubleshooting skills and increase their knowledge and understanding of the System. The results of all Integration Testing shall be documented in accordance with the MethodM processes. CONTRACTOR shall certify, in writing, that CONTRACTOR and COUNTY have successfully conducted all Integration Testing for the Phase 3 System and that CONTRACTOR has successfully performed all required corrective action.

Subtask 4.5: Prepare for Phase 3 System Cutover and Conversion

Subtask 4.5.1: Develop System Cutover and Conversion Plan for the Phase 3 System

CONTRACTOR shall develop a System Cutover and Conversion Plan for the Phase 3 System that identifies the steps required to load existing automated and manual data and to perform other activities required as part of the System cutover and conversion process, including conversion to new or modified clinical and business processes, policies and procedures. The plan shall include, without limitation the unique conversion requirements of each Phase 3 System Application Software module, including without limitation, conversion of automated and manual data required for production conversion and transfer to the Production Domain of successfully tested all Phase 3 System Application Software modules and Interfaces and confirmation of successful User Acceptance Testing.

CONTRACTOR shall define the timing of conversion programs and shall provide an orientation to COUNTY's conversion support staff. CONTRACTOR shall document in the plan the cutover support required by CONTRACTOR and COUNTY during the transition from current manual clinical and business processes to Production Use of the Phase 3 System.

CONTRACTOR shall also define in the plan a mechanism to verify the plan by conducting, with COUNTY participation in accordance with the PCD and otherwise the Agreement, desk exercises, plan reviews, walk-throughs, checklist confirmations (peripheral device readiness, network equipment readiness, COUNTY technical staffing provisioning and training, site visits, COUNTY circuit stressors and bandwidth confirmation, data transfer and conversion, chart imports, staff movement and redeployment, communication plans, contingency plans, emergency response, CTC operations and intra and inter-CTC failover), and any other plan review that can prudently be exercised in advance to minimize the risk of conversion failure.

Deliverable 4.5.1: System Cutover and Conversion Plan for the Phase 3 System

CONTRACTOR shall deliver the System Cutover and Conversion Plan for the Phase 3 System that identifies the steps required to perform the System cutover and conversion process and how the COUNTY and CONTRACTOR resources will be deployed during the cutover. CONTRACTOR shall incorporate in the Deliverable all of the results of Subtask 4.5.1.

Subtask 4.5.2: Prepare for System Cutover and Conversion for the Phase 3 System

CONTRACTOR, with COUNTY participation in accordance with the PCD, shall verify the System Cutover and Conversion Plan as provided in Subtask 4.5.1 (Develop System Cutover and Conversion Plan for the Phase 3 System) to ensure CONTRACTOR and COUNTY readiness for actual System cutover required for transition to Production Use of all Phase 3 System Application Software modules in the Production Domain.

CONTRACTOR and COUNTY shall each identify required plan corrections and all actions required to perform the plan during the conversion and cutover process. CONTRACTOR shall successfully correct the plan, inventory all necessary COUNTY and CONTRACTOR corrective actions, and obtain the written approval of COUNTY's Project Director, which may be granted or withheld in his sole discretion.

CONTRACTOR shall certify, in writing, that CONTRACTOR and COUNTY have successfully performed all necessary corrective actions to perform the plan required by Deliverable 4.5.1 (System Cutover and Conversion Plan for the Phase 3 System) and that all Phase 3 System Application Software modules are ready for System cutover and conversion.

Deliverable 4.5.2: Verified System Cutover and Conversion Plan for the Phase 3 System

CONTRACTOR shall certify, in writing, that CONTRACTOR and COUNTY, as well as the Phase 3 System, are ready for cutover and conversion.

Subtask 4.6: Develop and Deliver User Training for the Phase 3 System

Consistent with the provisions of Exhibit D (Service Level Agreement) CONTRACTOR shall create and provision a Training Domain for COUNTY User Training.

Subtask 4.6.1: Develop Training Classes and Training Materials for the Phase 3 System

CONTRACTOR shall review and confirm the User Training Strategy developed as part of the PCD. CONTRACTOR shall develop Learning Plan and access to Solution Training material for the standard Phase 3 System. and provide workflow diagrams for the as-built system. The Learning Plan and Solution Training material that will be made available via UCern, along with the workflow diagrams shall provide COUNTY trainers with a comprehensive presentation of the functionality and use of the Phase 3 System within clinical and business operations of Medical Services Bureau. The Solution Training materials shall provide COUNTY trainers with techniques for delivering the training to Users. The Learning Plan shall define training approach, tools, and, where applicable, facility requirements. CONTRACTOR shall additionally provide examples of end user training with respect to all or any portion of the modules included in the Phase 3 System that COUNTY trainers may re-use or modify in creating User training manuals and guides, or, alternatively, named references to clients from whom COUNTY may request such examples. CONTRACTOR shall consult with COUNTY trainers as needed throughout the Learning Plan Development phase Materials Development Workshop to help with COUNTY's development of User training manuals and guides.

Deliverable 4.6.1: Documented Training Classes and Training Materials for the Phase 3 System

CONTRACTOR shall deliver training materials for the Phase 3 System that consist of the results of Subtask 4.6.1.

Subtask 4.6.2: Train the COUNTY Trainers for the Phase 3 System

CONTRACTOR shall deliver training classes and training materials to COUNTY system analysts and subject matter experts, as designated by COUNTY's Project Director, for the as-built Phase 3 System, including each Phase 3 System Application Software module and Interface. CONTRACTOR shall present the training classes and materials in a minimum of one (1) training session per Phase 3 System Application Software module, adequate in duration to cover all functionality and expected clinical and business process changes. CONTRACTOR shall conduct all training live and remotely in the Training Domain. The training materials and classes shall give COUNTY trainers sufficient instruction in the use of the Phase 3 System and each Phase 3 System Application Software module in the Medical Services Bureau environment in order to prepare them to train Users in the use of the Phase 3 System as Tailored to meet the Specifications and support the expected clinical and business processes. CONTRACTOR shall deliver training classes and training materials consistent with Attachment E (JHIS Training) of this Statement of Work.

Deliverable 4.6.2: Trained COUNTY Trainers for the Phase 3 System

CONTRACTOR shall deliver the training sessions and materials as described in Subtask 4.6.1 (Develop Training Classes and Training Materials for the Phase 3 System) and Subtask 4.6.2 (Train COUNTY Trainers for the Phase 3 System) and shall certify in writing that all such training has been successful.

Subtask 4.7: Prepare Reference Documentation for the Phase 3 System

CONTRACTOR shall prepare reference Documentation for the as-built Phase 3 System. Such Documentation shall, , provide COUNTY with a comprehensive reference source of System functionality and data definitions in the form of CONTRACTOR's Change Management Artifact Templates (CMATs) approved by COUNTY, Cerner Millennium Support Guides, design decision matrices, CCL Reports, Discern Reports, and as otherwise provided in MethodM Online. In the event that no CMAT exists that accurately reflects the as-built, Tailored System, CONTRACTOR's Project Director and COUNTY's Project Director will collaborate to define reference Documentation for the as-built System that is acceptable to COUNTY. CONTRACTOR shall provide electronic links or access from the Phase 3 System and each Phase 3 System Application Software module or Interface to online help and shall assist COUNTY in the use of these resources.

Deliverable 4.7: Reference Documentation for the Phase 3 System

CONTRACTOR shall provide access to COUNTY to comprehensive reference Documentation as described in Subtask 4.7. CONTRACTOR shall deliver reference Documentation in the formats and using the methods defined in the Agreement and in the introductory section to this Statement of Work, according to the provisions of Subparagraph 4.6 of the body of the Agreement. CONTRACTOR shall deliver electronic links or access to online help and Documentation from the Phase 3 System as well as each Phase 3 System Application Software module and Interface

Subtask 4.8: Conduct User Acceptance Testing of the Phase 3 System

Following successful performance of all CONTRACTOR and COUNTY testing of the Phase 3 System as described in this Statement of Work, CONTRACTOR shall actively support COUNTY in the conduct of User Acceptance Testing of the Phase 3 System as described in Subparagraph 9.3 (User Acceptance Tests) of the body of the Agreement, including without limitation providing all consultation and assistance requested by COUNTY.

Consistent with the provisions of Exhibit D (Service Level Agreement) CONTRACTOR shall create and provision a Certification Domain for User Acceptance Testing.

COUNTY will perform User Acceptance Testing of the Phase 3 System as described in Subparagraph 9.3 (User Acceptance Tests) of the body of the Agreement based upon Integration Test scripts approved by COUNTY as part of Deliverable 4.4.1, as well as additional test scripts prepared by COUNTY in its sole discretion. COUNTY will conduct User Acceptance Testing of the Phase 3 System. Scripts shall generally consist of all defined input and expected output results for each function and Interface transaction based on the Specifications.

COUNTY will document test results consisting of all Deficiencies discovered during testing. COUNTY will identify, track, and report Deficiencies detected during User Acceptance Testing in discrepancy reports.

CONTRACTOR shall correct all Deficiencies in the Phase 3 System identified by COUNTY and as otherwise set forth in Subparagraph 9.4 (Failed Testing) of the body of the Agreement. COUNTY will participate by engaging in the corrective action taken to facilitate their troubleshooting skills and increase their knowledge and understanding of the System. In addition to taking corrective action, CONTRACTOR shall provide required support to COUNTY acceptance testers in the operation of the Phase 3 System. Following corrective action by CONTRACTOR, COUNTY will continue testing the System in the Production Domain in the same state until the Phase 3 System has been successfully User Acceptance Tested and is ready for transition to Production Use, as determined in accordance with Subparagraph 2.4 (Approval of Work) and Subparagraph 9.4 (Failed Testing) of the body of the Agreement.

Deliverable 4.8: Successfully Conducted User Acceptance Testing of the Phase 3 System

COUNTY will conduct, with active support from CONTRACTOR, User Acceptance Tests of the Phase 3 System. CONTRACTOR's support to COUNTY in the conduct of User Acceptance Testing shall include, without limitation, providing test scripts that have been created with COUNTY input and participation, used in Integration Testing, successfully performing all required corrective action to resolve Deficiencies in the Phase 3 System identified by COUNTY in discrepancy reports prepared during testing, and assisting COUNTY acceptance testers in the operation of the Phase 3 System, each Phase 3 System Application Software module, Interfaces, and clinical and business processes.

Subtask 4.9: Implement the Phase 3 System for Production Use at all COUNTY Facilities

CONTRACTOR shall implement the Phase 3 System for Production Use at all COUNTY Facilities. CONTRACTOR shall make the Phase 3 System fully operational and in Production Use at all COUNTY Facilities. CONTRACTOR shall provide support for COUNTY conversion to Production Use at all COUNTY Facilities, as well as CONTRACTOR staff IT project team resources assigned to cutover support in a central command center onsite at one COUNTY Facility and adequate support staffing at the CTC for the cutover period or as specified in the PCD, and adequate support staffing at the CTC.

Deliverable 4.9: Production Use of the Phase 3 System at all COUNTY Facilities

CONTRACTOR shall deliver the fully operational Phase 3 System in Production Use at all COUNTY Facilities.

Subtask 4.10: Conduct Post-Implementation System Review for the Phase 3 System

Following implementation of Production Use of the Phase 3 System at all COUNTY Facilities, CONTRACTOR shall collect and evaluate operational results to assess the success and shortcomings of the System implementation efforts. CONTRACTOR shall submit the Post-Implementation Review Report to the COUNTY Project Director to give COUNTY feedback on the implementation process of the Phase 3 System. This report shall evaluate the Phase 3 System cutover, conversion, and implementation process and shall provide feedback on the following: (a) User and organizational satisfaction; (b) identification of necessary process workflow enhancement concerns/potential; (c) CONTRACTOR recommended workflow practice effectiveness and adoption; (d) System performance concerns; and (e) short and long term planning goals.

Deliverable 4.10: Post-Implementation Review Report for the Phase 3 System

CONTRACTOR shall deliver a Post-Implementation Review Report that contains the results of the work performed in Subtask 4.10.

Subtask 4.11: Maintain Production Use of Phase 3 System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities

The Phase 3 System shall be maintained in Production Use at all COUNTY Facilities with no material Deficiencies, as set forth in Subparagraph 9.1 (General) of the body of the Agreement, for thirty (30) consecutive days subsequent to COUNTY's written approval of Deliverable 4.9 (Production Use of Phase 3 System at All COUNTY Facilities) and as specified in Exhibit D (Service Level Agreement).

Deliverable 4.11: Production Use of Phase 3 System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities

The Phase 3 System shall operate in Production Use at all COUNTY Facilities with no material Deficiencies, as set forth in Subparagraph 9.1 (General) of the body of the Agreement, for thirty (30) consecutive days subsequent to

COUNTY's written approval of Deliverable 4.9 (Production Use of Phase 3 System at all COUNTY Facilities).

TASK 5: POST- PHASE 2 SYSTEM UPGRADE

An Application Software Upgrade shall be performed under this Task to the most recent generally available code level. This Task will be performed after successful implementation of Phase 2 System and Production Use of Phase 2 System for Thirty (30) Consecutive Days with no Deficiencies at all COUNTY Facilities (Deliverable 3.11) and prior to the initiation of Task 4 (Phase 3 System Application Software Development). Upon completion of this Task, the System will be in full Production Use using the most recent generally available code. This Task shall be performed consistent with the Specifications as defined in Exhibit D (Service Level Agreement).

Subtask 5.1: Prepare System Cutover and Conversion Plan to Post-Phase 2 System Upgrade

CONTRACTOR shall develop a System Cutover and Conversion Plan for the Post-Phase 2 System Upgrade that identifies the steps required to perform the System cutover and conversion process and how the COUNTY and CONTRACTOR resources will be deployed during the cutover. The cutover and conversion plan shall address the following:

(a) determines and documents initial package requirements, including but not limited to the database build requirements and the identification and resolution of potential issues with Tailoring of the System, implementation of user-defined components, and issues with installed code.

(b) documents the testing plan in accordance with Subparagraph 9.2 (CONTRACTOR Testing) of the Agreement. CONTRACTOR shall coordinate testing as provided in the updated PCD including, but not limited to, definition of testing requirements, identification of appropriate testers, and engagement of appropriate resources to complete the build and testing.

(c) identifies, documents and mitigates Post-Phase 2 Upgrade project risks and identifies and secures project resources.

(d) ensures that CONTRACTOR provided Tailoring, previously implemented Upgrades and Updates, Cerner Command Language (CCL) scripts and custom reports, are identified, modified, and repackaged as necessary to ensure that the Upgraded System will operate in accordance with the Agreement.

(e) ensures that appropriate CONTRACTOR resources are scheduled for Upgrade and post Upgrade support.

Deliverable 5.1: System Cutover and Conversion Plan for Post-Phase 2 Upgraded System

CONTRACTOR shall deliver the System Cutover and Conversion Plan for the Post-Phase 2 System Upgrade that identifies the steps required to perform the System cutover and conversion process and how the COUNTY and CONTRACTOR resources will be deployed during the cutover. CONTRACTOR shall incorporate in the Deliverable all of the results of Subtask 5.1.

Subtask 5.2: Convert and Unit Test Applications Software to Post-Phase 2 Upgraded System

CONTRACTOR shall acquire, install, implement, configure and enable the Domain(s) and related resources such as the Lights On network®, MethodM®, Bedrock®, and software necessary to complete, test, and validate the Post-Phase 2 System Upgrade to be implemented in accordance with the provisions of Deliverable 5.1: System Cutover and Conversion Plan for Post-Phase 2 System Upgrade.

CONTRACTOR shall ensure that no updates to the System are implemented affecting the Production Domain during the Post-Phase 2 System Upgrade project. CONTRACTOR shall configure Interfaces for Non-Production Domains in accordance with the provisions of Deliverable 5.1: System Cutover and Conversion Plan for Post-Phase 2 System Upgrade.

CONTRACTOR shall further validate Non-Production Domains that will be upgraded in order to ensure that such Domains are true copies of the Production Domain prior to performing Upgrade activities. CONTRACTOR shall upgrade (a) Non-Production Domains per Domain strategy and the Approved Upgrade Plan, including but not limited to loading Front-end System code warehouse and configuring the Multum, remote report distribution ("RRD"), and charting servers and (b) Front-End System devices in the Production Domain.

COUNTY will use existing test plans and scripts for testing of existing System Application Software modules and Interfaces. CONTRACTOR shall provide test plans and scripts for new features and functionality. Based upon these test plans and scripts, CONTRACTOR shall conduct initial Unit Testing of System Application Software modules and Interfaces and COUNTY will then conduct Unit Testing

Deliverable 5.2: Unit Tested Post-Phase 2 Upgraded System

CONTRACTOR shall certify, in writing, that CONTRACTOR and COUNTY have successfully converted and tested System Application Software modules and Interfaces in accordance with the provisions of Deliverable 5.1 (System Cutover and Conversion Plan for Post-Phase 2 System Upgrade).

Subtask 5.3: Conduct Full System Testing of Post-Phase 2 Upgraded System

CONTRACTOR shall perform CONTRACTOR tests in accordance with the provisions of Subparagraph 9.2 of the Agreement (CONTRACTOR Testing) and Deliver-

able 5.1 (System Cutover and Conversion Plan for Post-Phase 2 System Upgrade). Upon completion of this Subtask, the Upgraded System shall be ready for User Acceptance Testing.

Deliverable 5.3: Successful System Tests for Post-Phase 2 Upgraded System

CONTRACTOR shall certify, in writing, that CONTRACTOR has successfully completed full system testing of the System Application Software modules and Interfaces in accordance with the provisions of Deliverable 5.1 (System Cutover and Conversion Plan for Post-Phase 2 System Upgrade).

Subtask 5.4: Conduct User Acceptance Testing of Post-Phase 2 Upgraded System

Following successful performance of all CONTRACTOR testing of the System as described in this Statement of Work, CONTRACTOR shall actively support COUNTY in the conduct of User Acceptance Testing of the Post-Phase 2 System Upgrade as described in Subparagraph 9.3 (User Acceptance Tests) of the body of the Agreement, including without limitation providing all consultation and assistance requested by COUNTY.

Consistent with the provisions of Exhibit D (Service Level Agreement) CONTRACTOR shall create and provision a Certification Domain for User Acceptance Testing.

COUNTY will perform User Acceptance Testing of the Post-Phase 2 System Upgrade as described in Subparagraph 9.3 (User Acceptance Tests) of the body of the Agreement based upon test scripts prepared by COUNTY in its sole discretion. COUNTY will conduct User Acceptance Testing of the Upgraded System. Scripts shall generally consist of all defined input and expected output results for each function and Interface transaction.

COUNTY will document test results consisting of all Deficiencies discovered during testing. COUNTY will identify, track, and report Deficiencies detected during User Acceptance Testing in discrepancy reports.

CONTRACTOR shall correct all Deficiencies in the Upgraded System identified by COUNTY and as otherwise set forth in Subparagraph 9.4 (Failed Testing) of the body of the Agreement. In addition to taking corrective action, CONTRACTOR shall provide required support to COUNTY acceptance testers in the operation of the Post-Phase 2 Upgraded System. Following corrective action by CONTRACTOR, COUNTY will continue testing the System in the Certification Domain in the same state until the Upgraded System has been successfully User Acceptance Tested and is ready for transition to Production Use, as determined in accordance with Subparagraph 2.4 (Approval of Work) and Subparagraph 9.4 (Failed Testing) of the body of the Agreement.

Deliverable 5.4: Successfully Conducted User Acceptance Testing for Post-Phase 2 Upgraded System

COUNTY will conduct, with active support from CONTRACTOR, User Acceptance Tests of the Post-Phase 2 Upgraded System. CONTRACTOR's support to COUNTY in the conduct of User Acceptance Testing shall include, providing example test scripts used in System Testing, successfully performing all required corrective action to resolve Deficiencies in the Post-Phase 2 Upgraded System identified by COUNTY in discrepancy reports prepared during testing, and assisting COUNTY acceptance testers in the operation of the Post-Phase 2 Upgraded System, each System Application Software module, Interfaces, and clinical and business processes

Subtask 5.5: Develop and Deliver User Training Materials of Post-Phase 2 Upgraded System

CONTRACTOR shall deliver training materials to COUNTY system analysts and subject matter experts, as designated by COUNTY's Project Director, for the new features and functionality of the Upgraded System Application Software modules and Interfaces. The training materials shall give COUNTY trainers sufficient instruction in the use of the Upgraded System in the Medical Services Bureau environment in order to prepare them to train Users in the use of the Upgraded System as Tailored to support the clinical and business processes.

Deliverable 5.5: Training Materials for Post-Phase 2 System

CONTRACTOR shall develop and deliver the training materials as described in Subtask 5.5 (Develop and Deliver Training Materials for the Post Phase 2 System).

Subtask 5.6: Implement the Post-Phase 2 Upgraded System at all COUNTY Facilities

CONTRACTOR shall implement the Upgraded System for Production Use at all COUNTY Facilities. CONTRACTOR shall make the Post-Phase 2 Upgraded System fully operational and in Production Use at all COUNTY Facilities. CONTRACTOR shall provide remote support for COUNTY conversion to Production Use at all COUNTY Facilities.. and adequate support staffing at the CTC for the cutover period or as specified in the PCD, and adequate support staffing at the CTC.

Deliverable 5.6: Production Use of Post-Phase 2 Upgraded System at all COUNTY Facilities

CONTRACTOR shall deliver the fully operational Upgraded System in Production Use at all COUNTY Facilities.

Subtask 5.7: Maintain Production Use of Post-Phase 2 Upgraded System for Thirty (30) Days with No Deficiencies at all COUNTY Facilities

The Upgraded System shall be maintained in Production Use at all COUNTY Facilities with no material Deficiencies, as set forth in Subparagraph 9.1 (General) of the body of the Agreement, for thirty (30) consecutive days subsequent to COUNTY's written approval of Deliverable 5.6 (Production Use of Post-Phase 2 Upgraded System at all COUNTY Facilities) and as specified in Exhibit D (Service Level Agreement).

Deliverable 5.7: Production Use of Post-Phase 2 Upgraded System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities

The Upgraded System shall operate in Production Use at all COUNTY Facilities with no material Deficiencies, as set forth in Subparagraph 9.1 (General) of the body of the Agreement, for thirty (30) consecutive days subsequent to COUNTY's written approval of Deliverable 5.6 (Production Use of Post-Phase 2 Upgraded System at all COUNTY Facilities).

TASK 6: POST- PHASE 3 SYSTEM UPGRADE

An Application Software Upgrade shall be performed under this Task to the most recent generally available code level. This Task will be performed after successful implementation of Phase 3 System and Production Use of Phase 3 System for Thirty (30) Consecutive Days with no Deficiencies at all COUNTY Facilities (Deliverable 4.11). Upon completion of this Task, the System will be in full Production Use using the most recent generally available code. This Task shall be performed consistent with the Specifications as defined in Exhibit D (Service Level Agreement).

Subtask 6.1: Prepare System Cutover and Conversion Plan to Post-Phase 3 System Upgrade

CONTRACTOR shall develop a System Cutover and Conversion Plan for the Post-Phase 3 System Upgrade that identifies the steps required to perform the System cutover and conversion process and how the COUNTY and CONTRACTOR resources will be deployed during the cutover. The cutover and conversion plan shall address the following:

(a) determines and documents initial package requirements, including but not limited to the database build requirements and the identification and resolution

of potential issues with Tailoring of the System, implementation of user-defined components, and issues with installed code.

(b) documents the testing plan in accordance with Subparagraph 9.2 (CONTRACTOR Testing) of the Agreement. CONTRACTOR shall coordinate testing as provided in the updated PCD including, but not limited to, definition of testing requirements, identification of appropriate testers, and engagement of appropriate resources to complete the build and testing.

(c) identifies, documents and mitigates Post-Phase 2 Upgrade project risks and identifies and secures project resources.

(d) ensures that CONTRACTOR provided Tailoring, previously implemented Upgrades and Updates, Cerner Command Language (CCL) scripts and custom reports, are identified, modified, and repackaged as necessary to ensure that the Upgraded System will operate in accordance with the Agreement.

(e) ensures that appropriate CONTRACTOR resources are scheduled for Upgrade and post Upgrade support.

Deliverable 6.1: System Cutover and Conversion Plan for Post-Phase 3 Upgraded System

CONTRACTOR shall deliver the System Cutover and Conversion Plan for the Post-Phase 3 System Upgrade that identifies the steps required to perform the System cutover and conversion process and how the COUNTY and CONTRACTOR resources will be deployed during the cutover. CONTRACTOR shall incorporate in the Deliverable all of the results of Subtask 6.1.

Subtask 6.2: Convert and Unit Test Applications Software to Post-Phase 3 Upgraded System

CONTRACTOR shall acquire, install, implement, configure and enable the Domain(s) and related resources such as the Lights On network®, MethodM®, Bedrock®, and software necessary to complete, test, and validate the Post-Phase 3 System Upgrade to be implemented in accordance with the provisions of Deliverable 6.1: System Cutover and Conversion Plan for Post-Phase 3 System Upgrade.

CONTRACTOR shall ensure that no updates to the System are implemented affecting the Production Domain during the Post-Phase 3 System Upgrade project. CONTRACTOR shall configure Interfaces for Non-Production Domains in accordance with the provisions of Deliverable 6.1: System Cutover and Conversion Plan for Post-Phase 3 System Upgrade.

CONTRACTOR shall further validate Non-Production Domains that will be upgraded in order to ensure that such Domains are true copies of the Production Domain prior to performing Upgrade activities. CONTRACTOR shall upgrade (a) Non-Production Domains per Domain strategy and the Approved Upgrade Plan, including but not

limited to loading Front-end System code warehouse and configuring the Multum, remote report distribution ("RRD"), and charting servers and (b) Front-End System devices in the Production Domain.

COUNTY will use existing test plans and scripts for testing of existing System Application Software modules and Interfaces. CONTRACTOR shall provide test plans and scripts for new features and functionality. Based upon these test plans and scripts, CONTRACTOR shall conduct initial Unit Testing of System Application Software modules and Interfaces and COUNTY will then conduct Unit Testing

Deliverable 6.2: Unit Tested Post-Phase 3 Upgraded System

CONTRACTOR shall certify, in writing, that CONTRACTOR has successfully converted and tested System Application Software modules and Interfaces in accordance with the provisions of Deliverable 6.1 (System Cutover and Conversion Plan for Post-Phase 3 System Upgrade).

Subtask 6.3: Conduct Full System Testing of Post-Phase 3 Upgraded System

CONTRACTOR shall perform CONTRACTOR tests in accordance with the provisions of Subparagraph 9.2 of the Agreement (CONTRACTOR Testing) and Deliverable 6.1 (System Cutover and Conversion Plan for Post-Phase 3 System Upgrade). Upon completion of this Subtask, the Upgraded System shall be ready for User Acceptance Testing.

Deliverable 6.3: Successful System Tests for Post-Phase 3 Upgraded System

CONTRACTOR shall certify, in writing, that CONTRACTOR has successfully completed full system testing of the System Application Software modules and Interfaces in accordance with the provisions of Deliverable 6.1 (System Cutover and Conversion Plan for Post-Phase 3 System Upgrade).

Subtask 6.4: Conduct User Acceptance Testing of Post-Phase 3 Upgraded System

Following successful performance of all CONTRACTOR testing of the System as described in this Statement of Work, CONTRACTOR shall actively support COUNTY in the conduct of User Acceptance Testing of the Post-Phase 3 System Upgrade as described in Subparagraph 9.3 (User Acceptance Tests) of the body of the Agreement, including without limitation providing all consultation and assistance requested by COUNTY.

Consistent with the provisions of Exhibit D (Service Level Agreement) CONTRACTOR shall create and provision a Certification Domain for User Acceptance Testing.

COUNTY will perform User Acceptance Testing of the Post-Phase 3 System Upgrade as described in Subparagraph 9.3 (User Acceptance Tests) of the body of the Agreement based upon test scripts prepared by COUNTY in its sole discretion. COUNTY will conduct User Acceptance Testing of the Upgraded System. Scripts shall generally consist of all defined input and expected output results for each function and Interface transaction.

COUNTY will document test results consisting of all Deficiencies discovered during testing. COUNTY will identify, track, and report Deficiencies detected during User Acceptance Testing in discrepancy reports.

CONTRACTOR shall correct all Deficiencies in the Upgraded System identified by COUNTY and as otherwise set forth in Subparagraph 9.4 (Failed Testing) of the body of the Agreement. In addition to taking corrective action, CONTRACTOR shall provide required support to COUNTY acceptance testers in the operation of the Post-Phase 3 Upgraded System. Following corrective action by CONTRACTOR, COUNTY will continue testing the System in the Certification Domain in the same state until the Upgraded System has been successfully User Acceptance Tested and is ready for transition to Production Use, as determined in accordance with Subparagraph 2.4 (Approval of Work) and Subparagraph 9.4 (Failed Testing) of the body of the Agreement.

Deliverable 6.4: Successfully Conducted User Acceptance Testing for Post-Phase 3 Upgraded System

COUNTY will conduct, with active support from CONTRACTOR, User Acceptance Tests of the Post-Phase 3 Upgraded System. CONTRACTOR's support to COUNTY in the conduct of User Acceptance Testing shall include, without limitation, providing example test scripts used in System Testing, successfully performing all required corrective action to resolve Deficiencies in the Post-Phase 3 Upgraded System identified by COUNTY in discrepancy reports prepared during testing, and assisting COUNTY acceptance testers in the operation of the Post-Phase 3 Upgraded System, each System Application Software module, Interfaces, and clinical and business processes

Subtask 6.5: Develop and Deliver User Training Materials of Post-Phase 3 Upgraded System

CONTRACTOR shall deliver training materials to COUNTY system analysts and subject matter experts, as designated by COUNTY's Project Director, for the new features and functionality of the Upgraded System Application Software modules and Interfaces. The training materials shall give COUNTY trainers sufficient instruc-

tion in the use of the Upgraded System in the Medical Services Bureau environment in order to prepare them to train Users in the use of the Upgraded System as Tailored to support the clinical and business processes.

Deliverable 6.5: Training Materials for Post-Phase 3 System

CONTRACTOR shall develop and deliver the training materials as described in Subtask 5.5 (Develop and Deliver Training Materials for the Post Phase 3 System).

Subtask 6.6: Implement the Post-Phase 3 Upgraded System at all COUNTY Facilities

CONTRACTOR shall implement the Upgraded System for Production Use at all COUNTY Facilities. CONTRACTOR shall make the Post-Phase 3 Upgraded System fully operational and in Production Use at all COUNTY Facilities. CONTRACTOR shall provide as-needed remote support for COUNTY conversion to Production Use at all COUNTY Facilities, and adequate support staffing at the CTC for the cutover period or as specified in the PCD, and adequate support staffing at the CTC.

Deliverable 6.6: Production Use of Post-Phase 3 Upgraded System at all COUNTY Facilities

CONTRACTOR shall deliver the fully operational Upgraded System in Production Use at all COUNTY Facilities.

Subtask 6.7: Maintain Production Use of Post-Phase 3 Upgraded System for Thirty (30) Days with No Deficiencies at all COUNTY Facilities

The Upgraded System shall be maintained in Production Use at all COUNTY Facilities with no material Deficiencies, as set forth in Subparagraph 9.1 (General) of the body of the Agreement, for thirty (30) consecutive days subsequent to COUNTY's written approval of Deliverable 6.6 (Production Use of Post-Phase 2 Upgraded System at all COUNTY Facilities) and as specified in Exhibit D (Service Level Agreement).

Deliverable 6.7: Production Use of Post-Phase 3 Upgraded System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities

The Upgraded System shall operate in Production Use at all COUNTY Facilities with no material Deficiencies, as set forth in Subparagraph 9.1 (General) of the body of the Agreement, for thirty (30) consecutive days subsequent to COUNTY's written approval of Deliverable 6.6 (Production Use of Post-Phase 3 Upgraded System at all COUNTY Facilities).

TASK 7: CHANGE MANAGEMENT PLAN

Subtask 7.1: Develop Change Management Plan

CONTRACTOR and COUNTY will prepare and implement a change management plan for continuous improvement of the System. The change management plan shall include, without limitation, the following and may be augmented or further refined as specified in Section V of Exhibit D (Service Level Agreement) of this Agreement as agreed in writing by the COUNTY's Project Director and the CONTRACTOR's Project Director.

1. Change management objectives.
2. Change recommendations based on gap analysis.
3. Stakeholder participation strategies in proposing and prioritizing changes.
4. Success factors and measures of success.
5. Risk factors and risk mitigation actions.
6. Communication plan and communication channels.

Deliverable 7.1: Change Management Plan

CONTRACTOR shall document the change management plan.

TASK 8: CUSTOM PROGRAMMING MODIFICATIONS AND ADDITIONAL INTERFACES

CONTRACTOR shall provide Custom Programming Modifications and Additional Interfaces with respect to which a Change Notice or an Amendment has been entered into under Paragraph 6 (Change Notices and Amendments) of the body of the Agreement and in accordance with the procedures set forth in Subparagraph 7.5 (Other Professional Services) of the body of the Agreement. The Change Notice or Amendment shall include the Tasks and Deliverables with respect to the specific Custom Programming Modification or Additional Interface, which at a minimum shall include the applicable of the following Subtasks 8.1, 8.2, and 8.3.

Subtask 8.1: Prepare System Design Reports for Custom Programming Modifications and Additional Interfaces

CONTRACTOR shall analyze COUNTY requirements in detail and shall prepare a System Design Report (SDR) for each Custom Programming Modification and Additional Interface. If no project schedule is provided in the applicable Change Notice or Amendment, then within ten (10) working days of receipt of the approved SDR from COUNTY, CONTRACTOR shall provide a delivery date for the SDR. The SDR shall take into account all then implemented Application Software modules, Third

Party Software modules, Optional Phase Systems, Interfaces and previously approved SDRs. Each SDR shall include, without limitation, the following and any other items mutually agreed upon by COUNTY's Project Director and CONTRACTOR's Project Director:

A. Design Specifications, which must address and be consistent with COUNTY approved requirements for the Custom Programming Modification or Additional Interface;
B. Database impact;
C. User interface impact and impact on clinical and business processes;
D. Report impact;
E. Documentation impact;
F. Training impact;
G. Network impact;
H. Special considerations, such as impact on current and future processing Response Time and Availability (as defined under Exhibit D);
I. Estimated time for completion (subject to change depending on COUNTY's response date and CONTRACTOR's workload);
J. Estimated time to complete any Interfaces; and
K. Estimated time for any automated conversion programs to complete.

Review and approval of each SDR shall be in accordance with Subparagraph 2.4 of the body of the Agreement. If no project schedule is specified in the Change Notice or Amendment, Within ten (10) working days of COUNTY's written approval of the SDR, COUNTY's Project Director shall notify CONTRACTOR whether to begin development and implementation of the Custom Programming Modification or Additional Interface, unless such period is extended as agreed in writing by CONTRACTOR's Project Director and COUNTY's Project Director.

Any changes or revisions to COUNTY-approved SDRs shall be mutually agreed to in writing by CONTRACTOR's Project Director and COUNTY's Project Director. The approved SDR, as well as any agreed changes and revisions, shall be the basis for CONTRACTOR's development of the Custom Programming Modification or Additional Interface.

Deliverable 8.1: System Design Reports for Custom Programming Modifications and Additional Interfaces

CONTRACTOR shall document the System design for each Custom Programming Modification or Additional Interfaces in a System Design Report.

Subtask 8.2: Build and Test Custom Programming Modifications and Additional Interfaces

CONTRACTOR shall build and test with COUNTY participation each Custom Programming Modification and Additional Interface in accordance with the applicable COUNTY-approved System Design Report and the applicable Change Notice or

Amendment. Testing shall include, without limitation, Unit, System, and Integration Testing in a manner comparable to the test procedures for the Application Software modules as described in TASKS 3 and 4 of this Statement of Work and in Subparagraph 9.2 of the Agreement. CONTRACTOR shall certify in writing that CONTRACTOR has successfully built each Custom Programming Modification and Additional Interface completely and accurately based upon the COUNTY approved SDR, that COUNTY has successfully tested the Custom Programming Modification and Additional Interfaces, has successfully corrected all identified Deficiencies and that the Custom Programming Modification or Additional Interface, as the case may be, functions as designed, and that the Custom Programming Modification or Additional Interface, as the case may be, is ready for User Acceptance Testing. COUNTY will conduct User Acceptance Testing for each Custom Programming Modification and Additional Interface prior to Production Use.

Deliverable 8.2: Built and Tested Custom Programming Modifications and Additional Interfaces

CONTRACTOR shall certify in writing that CONTRACTOR has successfully built each Custom Programming Modification and Additional Interface based upon the COUNTY approved SDR, has successfully tested such Custom Programming Modification and Additional Interface, has successfully corrected all identified Deficiencies, that the Custom Programming Modification or Additional Interface as the case may be functions as designed, and that such Custom Programming Modification or Additional Interface, as the case may be, is ready for User Acceptance Testing. COUNTY will conduct User Acceptance Testing for each Custom Programming Modification and Additional Interface prior to Production Use.

Subtask 8.3: Install and Document Custom Programming Modifications and Additional Interfaces

CONTRACTOR shall install each Custom Programming Modification and Additional Interface for Production Use. CONTRACTOR shall provide updates to the Documentation applicable to each Custom Programming Modification or Additional Interface and shall also provide written instructions and demonstration on the use of each Custom Programming Modification and Additional Interface. For each Custom Programming Modification and Additional Interface that CONTRACTOR determines and COUNTY agrees impacts training, CONTRACTOR shall provide a training plan for written approval by COUNTY's Project Director in his sole discretion, updated inserts for the System training materials, and hands-on training classes for designated COUNTY staff.

Deliverable 8.3: Production Use of Custom Programming Modifications and Additional Interfaces

CONTRACTOR shall install each Custom Programming Modification and Additional Interfaces for Production Use. CONTRACTOR shall Deliver: (1) all object code and

related Licenses and Documentation for the Custom Programming Modification, Additional Interface and any other impacted Application Software, (2) all Documentation and procedures necessary to train Users and maintain the System, including, but not limited to, all Interfaces to any interfacing systems, and (3) all data files and their record layouts for all Interfaces to any interfacing systems.

ATTACHMENT A

JHIS TECHNICAL AND OPERATIONAL REQUIREMENTS

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I. PRIVACY AND SECURITY REQUIREMENTS

CONTRACTOR shall implement privacy and security controls based on industry standards for health care applications and health information exchange. CONTRACTOR shall consult the Project Manager for guidance CONTRACTOR shall use the following laws, regulations and standards for guidance on how to comply with these requirements:

GENERAL

1. The Administrative Simplification provisions of The Health Insurance Portability and Accountability Act (HIPAA) as amended, particularly the following rules or guidance
    a. Code of Federal Regulations (CFR) Title 45, Parts 160, 162, and 164
    b. Centers for Medicare & Medicaid Services (CMS) "HIPAA Security Guidance for Remote Use of and Access to Electronic Protected Health Information"
    c. National Institute of Standards and Technology (NIST), "Introductory Resource Guide for Implementing the Health Insurance Portability and Accountability Act (HIPAA) Security Rule" (SP 800-66 REV 1)
2. Health Information Technology for Economic and Clinical Health Act, Public Law 111-005 (HITECH).
3. Privacy and Information Security provisions of the Patient Safety and Quality Improvement Act of 2005
4. Privacy and Information Security provisions of Titles 15 and 24 of the California Code of Regulations
5. California Government Code Section 16.5 (a) and California Code of Regulations Section 22002
6. Relevant County of Los Angeles Code and Policy including current versions of
    a. Chapter 6 of the Board of Supervisors Policy Manual (www.countypolicy.co.la.ca.us)
    b. Information Technology provisions of the County Fiscal Manual (http://auditorweb.co.la.ca.us/Auditor-Controller/CountyFiscalManual)
    c. COUNTY Information Security Strategic Plan
    d. COUNTY Security Standard for Network Connections to External Entities
7. Sheriff's Department Information Technology security policies as provided by the Sheriff's Department's Data Security Unit that have been previously been provided to CONTRACTOR.

SECURITY REQUIREMENTS

Item	Criterion	Cerner Resource or Comment
	ADMINISTRATION	
1.	CONTRACTOR shall develop and deliver a Security Planning and Standards Document that explains how JHIS meets the legal and COUNTY security policy requirements.	
2.	CONTRACTOR shall provide COUNTY with comprehensive documentation of how to configure JHIS security controls necessary to support and manage system security, including auditing and logs.	
3.	CONTRACTOR shall supply a security assessment analysis and report on an annual basis that identifies threats, risks, and vulnerabilities applicable to JHIS and identifies appropriate remediation activities for CONTRACTOR and COUNTY.	
4.	JHIS shall enable authorized administrators to assign restrictions and privileges to COUNTY defined Users or groups of users based on roles	
5.	JHIS shall support removal of a User's privileges by an administrator by disabling the User's account without removing the account.	
6.	JHIS shall support COUNTY Data Systems Bureau Specified Hardware and Operating Software security updating / patching policies.	
7.	JHIS shall not permit any unauthenticated User to access any System component or resource.	
8.	Prior to User logon, JHIS shall display a restricted access warning message.	
	AUTHENTICATION	
9.	For all phases of System and each Optional Phase, Specified Hardware and Operating Software shall not prevent the COUNTY from implementing its internal security controls, including two-factor authentication for external Users using COUNTY virtual private network or other COUNTY authorized web access tools.	
10.	JHIS shall enable one and only one session per User unless an exception is authorized by the COUNTY Project Director.	
11.	Once available CONTRACTOR shall consider the feasibility of support for Global Federated Identity and Privilege Management (GFIPM) authentication.	
	AUTHORIZATION	

Item	Criterion	Cerner Resource or Comment
12.	JHIS shall enable administrators to classify User privileges and access to System resources according to i) User, ii) User roles / positions and role-based groups, iii) organization or context of use such as COUNTY Facility or sensitivity of medical condition or service, iv) User-patient relationship.	
13.	JHIS shall provide role-based authorization to control access to System resources and functions.	
14.	JHIS shall enforce the most restrictive privileges needed by each role to conduct tasks specified for that role.	
15.	JHIS shall enable specified roles to block specific parts of a patient's record from access by any other User (e.g. HIV or mental health information).	
16.	JHIS shall support access to blocked information by a clinician for treatment purposes when necessary to manage an emergency. In this situation JHIS shall require such clinician to document the need and shall not modify such clinician's specified privileges or roles.	
	DATA INTEGRITY	
17.	JHIS shall support data integrity across all Application Software modules and all System resources.	
18.	JHIS shall prevent any User from modifying or destroying a record item that has been signed by an authorized User.	Once data is signed or verified by a user, it can be amended or corrected, but the original version is retained.
	ELECTRONIC SIGNATURES	
19.	JHIS shall provide an electronic signature capability that complies with applicable State and Federal laws and industry standards.	
20.	JHIS shall ensure that the electronic signature mechanism is a) unique to the signer, b) under the signer's sole control, c) capable of being verified and d) linked to the data so that, if the data are changed, the signature is invalidated.	
21.	The JHIS electronic signature capability shall comply with the Certification Commission for Healthcare Information Technology (CCHIT) certification criteria or equivalent: Security regarding Access Control, Security: Audit, and Security: Authentication.	
	AUDIT CAPABILITIES (CONTRACTOR's P2Sentinel Security)	
22.	CONTRACTOR shall provide Security Logging and Reporting functionality for JHIS that conform to the Audit Trail and Node Authentication (ATNA) standards published by ONCHIT and conforming to the requirements of the American Recovery and Reinvestment Act of 2009 (ARRA), ("P2-Sentinel ").	Satisfied by P2Sentinel

Item	Criterion	Cerner Resource or Comment
23.	CONTRACTOR shall provide one (1) onsite training session for System Administration COUNTY Users and one(1) onsite training session for County end users.	Satisfied by P2Sentinel
24.	CONTRACTOR shall provide online access to audit data for five (5) years following when such data is entered into JHIS.	Satisfied by P2Sentinel
25.	CONTRACTOR shall support an average log volume amount of 25GB/day.	Satisfied by P2Sentinel
26.	P2 Sentinel shall track and log security related events from the JHIS System and generate retrievable audit reports for them.. The events to be transmitted to P2Sentinel will be determined by the COUNTY as described in Exhibit D and shall include at a minimum patient record transactions including create, retrieve, updates and delete, patient registration, scheduling, and orders, and signature events.	Satisfied by P2Sentinel
27.	P2 Sentinelshall track and log authorized User access failure, import and export including printing of Protected Health Information (PHI) through JHIS, and security administration activities and make the record of such events available to COUNTY.	Satisfied by P2Sentinel
28.	Audit event reports made available to COUNTY via P2Sentnel shall include event date and time, result of the event, cause of the event, trigger for the event and/or User, and affected JHIS System components.	Satisfied by P2Sentinel
29.	JHIS shall support time synchronization for logging security events using Network Time Protocol or Simple Network Time Protocol (NTP/SNTP)	Satisfied by P2Sentinel
30.	P2Sentinel shall permit only authorized Users to access audit records, and shall prevent the modification or deletion of audit records except by explicitly authorized Users.	Satisfied by P2Sentinel
	INTERNET TRANSACTIONS	
31.	JHIS shall support encryption of all PHI over any open network, including the Internet, using the strongest available encryption standard at least at the level of the Advanced Encryption Standard (AES) and an open protocol such as SSL or IPSec.	
32.	JHIS shall encrypt any PHI stored on or transition over any mobile, portable or removable device, including without limitation laptop computers, PDAs, CD-ROMs, and thumb drives, using the strongest available encryption at least at the level of Advanced Encryption Standard (AES).	
	WIRELESS	
33.	Specified Hardware and Operating Software shall permit Sheriff's Department to implement secure wireless networks in accordance with Sheriff's Department standards.	
	MethodM Online and/or UCern or Cerner.com SERVICES ("Online Services")	

Item	Criterion	Cerner Resource or Comment
34.	CONTRACTOR's Online Services through internet shall not be used for storage, management, or reporting of PHI.	
35.	JHIS security information and procedures shall not be stored on or available through CONTRACTOR's Online Services through internet.	
36.	Authentication to the JHIS Online Services sites shall be controlled via the COUNTY VPN for off-site Users.	
37.	CONTRACTOR shall configure the Online Services sites to limit download and upload of data from such sites and shall log and report on all authorized off-line work.	
	CONTRACTOR Support Staff	
38.	CONTRACTOR support staff shall be US citizens or will be legally authorized to work in the US. CONTRACTOR will provide I-9 forms or written certification on CONTRACTOR letterhead for non US citizens that they are legally authorized to work in the US.	
39.	CONTRACTOR support staff be physically located in the US.	

II. REMOTE HOSTING SERVICES

A. GENERAL

(1) CONTRACTOR shall: provide and shall host JHIS at the Cerner Technology Centers (CTCs) located at:

3200 N. Rockcreek Kansas City, MO 64117	777 NW Blue Parkway Lee Summit, MO

where it is understood that one site hosts the Production Domain and the second site provides failover and backup facilities.

1. The CTCs shall provide uninterrupted power and service to the System.

2. The CTCs shall operate as N+1, dual-fed, redundant data centers that meet and shall continue to meet industry standards for concurrently maintainable and fault tolerant Data Centers in compliance with published standards (such as but not limited to those of the Uptime Institute, American National Standards Institute (ANSI) Telecommunications Infrastructure Standard TIA 942, or ISO 20000).

3. Each CTC shall operate twenty-four (24) hours per day, seven (7) days per week (herein sometimes "24 x 7"), every day of each year during the Term.

(2) CONTRACTOR shall provide and manage Domains as defined under Exhibit A (Statement of Work) of the Agreement but not less than the following:

1. One (1) Production Domain available upon COUNTY Acceptance of Deliverable 2.1 (Production Use of System with Remote Hosting Services) of this Exhibit A (Statement of Work) for which Remote Hosting Services apply, and subject to the provisions of Subparagraph 6.3 of the Agreement.

2. One (1) Certification Domain available upon COUNTY Acceptance of Deliverable 2.1 (Production Use of System with Remote Hosting Services) for each Phase System for which the Remote Hosting Option applies, and subject to the provisions of Subparagraph 6.3 of the Agreement.

3. One (1) Build Domain available upon COUNTY acceptance of Deliverable 2.1 (Production Use of System with Remote Hosting Services) for each Phase System for which the Remote Hosting Option applies, as agreed by the

COUNTY's Project Director and the CONTRACTOR's Project Director and subject to the provisions of Subparagraph 6.3 of the Agreement.

4. One (1) Training Domain available at least one month before the commencement of Subtask 2.4.6 (Develop and Deliver User Training of Phase 1 System) of the Statement of Work, at least one month before the commencement of Subtask 3.6.1 (Develop and Deliver User Training of Phase 2 System) of the Statement of Work, and at least one month before the commencement of Subtask 4.6.1 (Develop and Deliver User Training of Phase 3 System) of the Statement of Work for which the Remote Hosting Option applies, as agreed by the COUNTY's Project Director and the CONTRACTOR's Project Director and subject to the provisions of Subparagraph 6.3 of the Agreement. The Training Domain shall remain available for COUNTY Use for a period of not less than six (6) months following COUNTY Acceptance of Deliverable 2.4.6 (Training Materials and Trained COUNTY Trainers for Phase 1 System), a period of not less than six (6) months following COUNTY Acceptance of Deliverable 3.6.2 (Trained COUNTY Trainers for Phase 2 System), and a period of not less than six (6) months following COUNTY Acceptance of Deliverable 4.6.2 (Trained COUNTY Trainers for Phase 3 System) .

5. One (1) Mock Domain available for each Upgrade or major Update upon COUNTY Acceptance of the Upgrade Plan as specified in Section III.A.(1).(h) of Exhibit D (Service Level Agreement) and Exhibit A (Statement of Work) subject to the provisions of Paragraph 6.3 of the Agreement.

Item	Criterion	Cerner Resource or Comment
40.	JHIS shall support 625 Peak Concurrent Logons.	
41.	JHIS shall be available for Use 99.9% of the time.	
42.	JHIS storage and processing capacity shall be sized adequately to support the number of registered patients, transaction volumes, images and growth as provided in Exhibit D (Service Level Agreement).	
43.	Scheduled Downtime (as defined in Exhibit D) shall not exceed 3 hours per quarter unless approved by COUNTY's Project Director.	

B. ONGOING MAINTENANCE AND SUPPORT SERVICES

CONTRACTOR shall support and continue to support and maintain the System in accordance with Exhibit D (Service Level Agreement) and as provided in the System Operations Plan specified in Deliverables 1.3 of Exhibit A. With respect to the Upgrade Implementation Services and the Application Management Services (AMS) elements of the Service Level Agreement, COUNTY shall be entitled to the following:

Item	Criterion	Cerner Resource or Comment
44.	Without limitation, all Upgrades and Updates that result from regulatory conditions as further specified in Subparagraph I.A.(6) of the Service Level Agreement (Exhibit D) of this Agreement.	
45.	Two (2) CONTRACTOR Upgrades subsequent to implementation of Phase 1 System during the Initial Term as specified in Task 5 and Task 6 of Exhibit A (Statement of Work).	

ATTACHMENT B

SCHEDULE OF JHIS SOFTWARE

Capitalized terms used in this Attachment B without definition have the meaning given to such terms in the body of the Agreement and if not defined therein, in the body of this Exhibit A (Statement of Work). Scope of use limit of 1 domain refers to one production domain in all instances. Non-production domains are also within scope of use.

I. SYSTEM SOFTWARE

Item	Phase 1 Existing System Application Software Licenses		CONTRACTOR Solution Code	Scope of Use Limit	User Licenses Cost
1.	PowerChart	PowerOrders	PS-20576	2200 Users	Already licensed
		Clinical Data Repository	PS-20570		
		PowerNote	CA-22480		
2.	CareNet	Care Documentation	PS-22719	2200 Users	Already licensed
		MAR	PS-22732		
		PowerPlan	CA-20344		
		CareCompass	CA-22700		
3.	Access Management	Cerner Registration Management	CP-20735	2200 Users	Already licensed
		Cerner Scheduling Management	CP-20740		
4.	PathNet	General Laboratory	PA-20070	2200 Users	Already

Item	Phase 1 Existing System Application Software Licenses		CONTRACTOR Solution Code	Scope of Use Limit	User Licenses Cost
		Microbiology	PA-20075		licensed
		Anatomic Pathology	PA-20080		
		CAP SNOWMED III International for Pathology	PA-22214		
5.	PharmNet	Inpatient Pharmacy	PH-20160	2200 Users	Already licensed
		Outpatient Pharmacy	PH-20170		
		Departmental Clinical Supply Chain for Pharmacy	PH-25201		
6.	RadNet	Radiology Management	RA-20135	2200 Users	Already licensed
7.	Health Information Management	Cerner Health Information Management	MR-20400	2200 Users	Already licensed
8.	Supply Chain	Materials Management	PO-20200	2200 Users	Already licensed
8a.	Open Engine	Open Engine	OE-20850	1 domain	Already licensed
		Open Engine Communications Services	OE-22850	I domain	
		Asynchronous Communications Services	OE-22870	1 domain	
8b.	Open Port	TCPIP	IF-29560	1 domain	Already licensed
		ADT/Demographics Incoming	IF-29010	1 domain	
		Results Incoming(Discrete Data	IF-29050	1 domain	

Item	Phase 1 Existing System Application Software Licenses		CONTRACTOR Solution Code	Scope of Use Limit	User Licenses Cost
	Open Port Interfaces	Elements)			
		Results Incoming(Displayable Text)	IF-29055	1 domain	
		IF-29230 Orders Outgoing(with statuses)	IF-29230	1 domain	
		Automed Drug Packaging Interface	IF-29720	3 Channels	
		Billing Outgoing Batch	IF-29275	1 domain	
		Purchase Order Acknowledgment Inbound(855)	IF-29522	1 domain	
		Purchase Order Outbound(850)	IF 29562	1 domain	
		PC Encoder Interface	IF-29665	1 domain	
		Telcor QML Point of Care	MD-TC02 -	1 Channel	Already licensed
		Unidirectional Device Interface	IF-29650	10 Channels	
		Bidirectional Device Interface	IF-29655	1 Channel	
9.	CareAware MultiMedia	CPDI Server Concurrent Connections (50-74)(0050310)	QC-1000	50-74 concurrent users 150,000 pages a month	Already licensed

Item	Phase 1 Existing System Application Software Licenses		CONTRACTOR Solution Code	Scope of Use Limit	User Licenses Cost
		eSignature	50240	75 Concurrent Users	
		Worklist Manager (Modality Worklist) (PACS)	MM-22271	1 domain 11 modalities	
		CareAware MultiMedia-DICOM (PACS)	MM-22270	1 domain 11 modalities	
		Cerner Provision Workstation(PACS)	MM-22720	1 domain 11 modalities	
		CAMM Image Distribution(PACS)	MM-22276	1 domain 11 modalities	
10.	PowerInsight Explorer		PI-20611	2200 Users	Already licensed
11.	Telemedicine- INet Virtual		IC-20393	4 Concurrent users- 12 Carts	Already licensed
Phase 1 New System Software Licenses			**CONTRACTOR Solution Code**	**Scope of Use**	**License Costs**
12.	P2 Sentinel Enterprise		CTP-P2S-ENT	1 domain up to 150 workstations	$93,750 See Phase 1 New Third party Software.

Item	Phase 1 Existing System Application Software Licenses		CONTRACTOR Solution Code	Scope of Use Limit	User Licenses Cost
13.	724 Access- Downtime Viewer		CTP-T1-724-DTV	1 domain up to 150 workstations	$220,000 See Phase 1 New Third party Software.
14.	Open Port	AutoMed Drug Packaging Interface	IF-29720	6 Additional Channels	$51,975
	Total Phase 1 System Application Software				$365,725

Item	Subscription-Based Phase 1 Application Software Modules		CONTRACTOR Solution Code	Scope of Use Limit	Monthly Fees
1.	CPT Codes		KS-22092 - CPT Codes	1 User prior to Production Use 300 Users per year after Production Use of Phase 2	$13.50 (Annually per CPT user)
2.	Ambulatory Content Package- KS26982	Medisource Foundation for Ambulatory	(KS26982) KS-26965	175 Providers	$94,500 (Total for Ambulatory Content Package)

Item	Subscription-Based Phase 1 Application Software Modules		CONTRACTOR Solution Code	Scope of Use Limit	Monthly Fees
		PowerNote for Ambulatory	(KS26982) KS-26960	175 Providers	Included above.
		CMT Ambulatory	(KS26970) KS-26970	175 Providers	Included above.
		Executable Knowledge Foundation Ambulatory	(KS-26970) KS26953	175 Providers	Included above.

Item	Phase 1 Existing Third Party Software			Scope of Use Limit	User Licenses Cost
1.	ApplicationXtender Server		456-003-002	50-74 concurrent users	Already licensed
2.	CPDI-AX License		30751		Already licensed
3.	Integrated full station		60960		Already licensed
4.	Cedara Broker			I PACS domain	Already licensed
		Cedara OPT URS Server/Broker	24472		

Item	Phase 1 Existing Third Party Software		Scope of Use Limit	User Licenses Cost
Phase 1 New Third Party Software				
5.	Golden Gate License for 724DT Perpetual Tier- 0-500 beds	GG-T1-724DT	500 beds	$55,000
6.	P2Sentinel- Sensage Clinical Enterprise 12 core-1 collector	SEN-CE-12	1 collector	$133,100
7.	Merge Port Software Integrator's Kit	SW0030-246-0001-4	PACS Domain	$11,400
	Total Phase 1 Third Party Software			$199,500

Item	Phase 1 Managed Services Third Party Product Hosting	Cost
1	3M	$0

Item	Phase 2 System Application Software Modules		CONTRACTOR Solution Code	Scope of Use Limit	User Licenses Cost
1.	CareAwareMultiMedia	Cerner eSignature Facility License	CTESIG-FAC	Enterprise Wide License	$0 (See also Phase

					2 Third-Party Software)
		Digital Objects	MM-22260	2200 Users	$192,000
2.	Power Point of Care	Point of Care Medication Administration	PH-22780	2200 Users	$283,500
3.	PharmNet	Outpatient Pharmacy	PH-20170	Already licensed-see above	Already licensed
		Inpatient Pharmacy	PH-20160		
4.	Cerner Cardiovascular	Powerchart ECG	CV-22520	2200 Users	$100,000
5.	Patient Accounting	Patient Accounting	PF-20450	2200 Users	$437,325
6.	Womens Health	Powerchart Maternity	WH-102220A	3 Providers	$3,333
7.	Open Port Interfaces	Remittance Incoming	IF 29200	1 domain	$3,366
		Abstracted Data Incoming	IF-29130	I domain	$2,523
		General Ledger Outgoing	IF-29306	1 domain	$3,366
		Electronic Healthcare Claims Out_Institutional	IF 29342	1 domain	$3,365
		Electronic HealthCare Claims Out_Professional	IF-29343	1 domain	$3,365
		Pyxis Medstation	IF-29970	2 channel	$17,325
		ADT Demographics Outgoing	IF-29220	1 domain	$3,061
8.	CareNet	Advanced Care Documentation	CA-22346A	2200 Users	$218,078
	Total Phase 2 System Application Software				$1,270,607

Item	Phase 2 Third Party Software	Contractor Solution Code	Scope of Use Limit	User Licenses Cost
1.	Application Xtender Server	456-100-469	75 Concurrent Users	$247,500
1a.	ApplicationXtender Web Services	456-100-402	Enterprise Wide Server	$26,400
1b.	AX to CAMM	456-100-645_51-100	51- 100 Users	$9,000
1c.	ApplicationXtender Reports Management Server	456-100-439	Enterprise Wide Server	$13,200
1d.	ApplicationXtender Reports Management PDF	456-100-392	Enterprise Wide Server	$6,600
1e.	Mortara ECG Viewer Site License (00057725)	MORT-VIEW	I domain	$20,000
1f.	Lexmark Document Distributor	43C-0097-CRE-SG	1 domain	$18,000
	Total Phase 2 Third Party Software			$340,700

Item	Phase 2 Application Service Providers	Contractor Solution Code	Scope of Use Limit	User Licenses Cost
1.	St. John Sepsis	CE-10300-PKG	1 domain	$0
2.	Chart Search	CE-10200-PKG	1 domain	$0

Item	Phase 2 Transaction Services	Contractor Solution Code	Contractor Solution Code	Scope of Use Limit	Monthly Fees
1.	Eligibility and Benefits Verification	Eligibility and Benefits Verification	RC-20325-TRANS	16,000 monthly eligibility requests	$3,520
		Eligibility and Benefits Monthly Overage rate	TSEDI-ELIG-BILL	Per transaction	.24 each multiplied by the number of overages per month
		Address Validation	RC-20331	16,000 monthly	Included in above $3,520 monthly fee.

Item	Phase 3 System Application Software Modules	CONTRACTOR Solution Code	Scope of Use Limit	User Licenses Cost
1.	PowerInsight Explorer	PH- 20611	Alreadylicensed –see above	Already licensed
	Total Phase 3 System Application Software			$0

Item	Subscription-Based Phase 3 Application Software Modules	CONTRACTOR Solution Code	Scope of Use Limit	Annual Fees
1.	Lighthouse: Falls Prevention	LH-20107	2200 Users	$11,028
2.	Lighthouse:Delirium	LH-20152	2200 Users	$8,352
3.	Lighthouse:Restraints	LH-20169	2200 Users	$8,352
4.	Lighthouse: Pressure Ulcer Prevention	LH-20106	2200 Users	$18,480
5.	Lighthouse:Glycemic Control	LH-20136	2200 Users	$19,524
6.	Lighthouse:Sepsis	LH-20142	2200 Users	$28,824
7.	Lighthouse:Emergent Stroke and TIA Management w/e Submission	LH-20177	2200 Users	$22,200
8.	Lighthouse Anticoagulation Management	LH-20150	2200Users	$15,180
9.	Lighthouse Activity Intolerance and Impaired Mobility	LH-20127	2200 Users	$8,352
	Total Phase 3 Subscription-Based Application Software			$140,292

Item	Phase 3 Third Party Software		Scope of Use Limit	User Licenses Cost
1.	SAP Business Objects Runtime License for PowerInsight	PI-20701	2200 users	$75,000
	Total Phase 3 Third Party Software			$75,000

Item	Optional System Application Software Modules		CONTRACTOR Solution Code	Scope of Use Limit	User License Cost
1.	PharmNet	Clinically Driven Supply Chain for Pharmacy	PH-25201	Already licensed	Already licensed
2.	Open Port Interfaces	Purchase Order Outbound (850)	IF-29562	Already licensed	Already licensed
		Purchase Order Acknowledgement Inbound(855)	IF-29522	Already licensed	Already licensed
		Advanced Shipment Inbound(856)	IF-29524	I domain	Already licensed
		Electronic Invoice Inbound(810)	IF-29526	1 domain	Already licensed
3.	RadNet	Mammography Management	RA-22625	Already licensed	Already licensed
4.	iAware	CareAware Infusion Management	IW-20450	25 Beds	$28,750
5.		CareAware iAware Platform	IW-20200		$12,500
6.	CareAware iBus	CareAware iBus for POC Medication Administration	CI-201000	25 Beds	$65,000
		CareAware iBus for Bedside Medical Devices	CI-200800		Included
		CareAware AlertLink	CI-200855		$48,750
		Cerner CareAware VitalsLink	CW-CAVLINK	25 Devices	$19,500
7.	Mpages Development Kit		PS-22700	250,000 admissions and outpatient visits	$159,905
8.	Digital Dictation	Integrated Digital Dictation Integration Software	RA-22252	4 users	$22,050
		Integrated Digital Dictation	RA-22254	4 devices	$4,410
9.	Open Port Interfaces	Temporary Bedside Device Storage(iBus)	IF-29687	25 Beds	$20,475

Item	Optional System Third Party Software		CONTRACTOR Solution Code	Scope of Use Limit	User Licenses Cost
1.	iAccess- Single Sign On	OneSign SSPW Mgmt	CTP-IATK-USER	2,200 Users	$22,000
2.		OneSign SSO		2,200 Users	$176,000

Item	Optional Subscriptions		CONTRACTOR Solution Code	Scope of Use Limit	User Licenses Cost
1.	iBus	Cerner Device Manager Library	IF-29665	25 Beds	$1,016 per month

See Attached: Third Party Software pass-through provisions.

SNOMED
PASS-THROUGH PROVISIONS

The following provisions apply with respect to the software and content ("SNOMED") provided to the Client by the College of American Pathologists ("CAP").

1. **Copyright and Trademark Ownership.** Client acknowledges that CAP owns and shall retain ownership of the copyright in and trademark of SNOMED. Client shall not take any action adverse to the CAP's rights in the trademark "SNOMED" and shall not apply for any trademark or service mark registrations for the title of Client's product(s) or services that includes the trademark "SNOMED".

2. **Notices and Acknowledgments.** Client shall identify in informational materials that SNOMED contains SNOMED® International. In addition, Client shall include the following notice of copyright and acknowledgment on SNOMED and any associated materials that include portions of SNOMED or references to CAP or SNOMED, including advertising and promotional materials: "**This product incorporates SNOMED® International -- The Systematized Nomenclature of Medicine, used by permission of the College of American Pathologists. © 200_ College of American Pathologists. SNOMED is a registered trademark of the College of American Pathologists, all rights reserved.**" The year of first publication of the latest update of SNOMED shall be included as the year specified in the above acknowledgement.

3. **FAR/DFAR Regulations.** With respect to products provided to United States government entities, the following applies:

   This product includes commercial technical data and/or computer data bases developed exclusively at private expense by SNOMED International, a division of the College of American Pathologists with offices at 325 Waukegan Road, Northfield, Illinois 60093-2750. U.S. Government rights to use, modify, reproduce, release, perform, display, or disclose these technical data and/or computer data bases are subject to the limited rights restrictions of DFARS 252.227-7015(b) (2) (June 1995) for U.S. Department of Defense procurements and the limited rights restrictions of FAR 52.227-14 (June 1987), and any applicable agency FAR Supplements, for non-Department of Defense Federal procurements.

4. FEES. In consideration of the rights granted herein, Client shall pay the fees specified in Client's agreement with reseller.

PASS-THROUGH PROVISIONS – MULTUM

With respect to the proprietary drug information service (for purposes of this particular attachment only, the "Service") provided to Client by Multum, the following provisions shall apply:

Client may use the service only in connection with Cerner software. Every effort has been made to ensure that the information provided in the Service is accurate, up-to-date, and complete, but no guarantee is made to that effect. In addition, the drug information contained herein may be time sensitive. The Service is intended for use by consumers in the United States.

The Service does not endorse drugs, diagnose patients, or recommend therapy. The Service is an informational resource designed to assist licensed healthcare practitioners in caring for their patients; however, it is not a substitute for the care provided by licensed healthcare practitioners. The absence of a warning for a given drug or drug combination in no way should be construed to indicate that the drug or drug combination is safe, effective or appropriate for any given patient. Multum does not assume any responsibility for any aspect of healthcare administered with the aid of information the Service provides.

Disclaimer of Warranties

CLIENT ACKNOWLEDGES THAT THE SERVICE IS PROVIDED ON AN "AS IS" BASIS. EXCEPT FOR WARRANTIES WHICH MAY NOT BE DISCLAIMED AS A MATTER OF LAW, MULTUM MAKES NO REPRESENTATIONS OR WARRANTIES WHATSOEVER, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO REPRESENTATIONS OR WARRANTIES REGARDING THE ACCURACY OR NATURE OF THE CONTENT OF THE SERVICE, WARRANTIES OF TITLE, NONINFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

IN ADDITION, WITHOUT LIMITING THE FOREGOING, THE SERVICE HAS BEEN DESIGNED FOR USE IN THE UNITED STATES ONLY AND COVERS THE DRUG PRODUCTS USED IN PRACTICE IN THE UNITED STATES. MULTUM PROVIDES NO CLINICAL INFORMATION OR CHECKS FOR DRUGS NOT AVAILABLE FOR SALE IN THE UNITED STATES AND CLINICAL PRACTICE PATTERNS OUTSIDE THE UNITED STATES MAY DIFFER SUBSTANTIALLY FROM INFORMATION SUPPLIED BY THE SERVICE. MULTUM DOES NOT WARRANT THAT USES OUTSIDE THE UNITED STATES ARE APPROPRIATE.

Client acknowledges that updates to the Service are at the sole discretion of Multum. Multum makes no representations or warranties whatsoever, express or implied, with respect to the compatibility of the Service, or future releases thereof, with any computer hardware or software, nor does Multum represent or warrant the continuity of the features or the facilities provided by or through the Service as between various releases thereof.

Assumption of Risk, Disclaimer of Liability, Indemnity

CLIENT ASSUMES ALL RISK FOR SELECTION AND USE OF THE SERVICE AND CONTENT PROVIDED THEREON. MULTUM SHALL NOT BE RESPONSIBLE FOR ANY ERRORS, MISSTATEMENTS, INACCURACIES OR OMISSIONS REGARDING CONTENT DELIVERED THROUGH THE SERVICE OR ANY DELAYS IN OR INTERRUPTIONS OF SUCH DELIVERY.

CLIENT ACKNOWLEDGES THAT MULTUM: (A) HAS NO CONTROL OF OR RESPONSIBILITY FOR THE CLIENT'S USE OF THE SERVICE OR CONTENT PROVIDED THEREON, (B) HAS NO KNOWLEDGE OF THE SPECIFIC OR UNIQUE CIRCUMSTANCES UNDER WHICH THE SERVICE OR CONTENT PROVIDED THEREON MAY BE USED BY THE CLIENT, (C) UNDERTAKES NO OBLIGATION TO SUPPLEMENT OR UPDATE CONTENT OF THE SERVICE, AND (D) HAS NO LIABILITY TO ANY PERSON FOR ANY DATA OR INFORMATION INPUT ON THE SERVICE BY THE CLIENT TO THE SERVICE.

MULTUM SHALL NOT BE LIABLE TO ANY PERSON (INCLUDING BUT NOT LIMITED TO CLIENT AND PERSONS TREATED BY OR ON BEHALF OF CLIENT) FOR, AND CLIENT AGREES TO INDEMNIFY AND HOLD MULTUM HARMLESS FROM ANY CLAIMS, LAWSUITS, PROCEEDINGS, COSTS, ATTORNEY'S FEES, DAMAGES OR OTHER LOSSES (COLLECTIVELY, "LOSSES") ARISING OUT OF OR RELATING TO (A) CLIENT'S USE OF THE SERVICE OR CONTENT PROVIDED THEREON AND (B) ANY DATA OR INFORMATION INPUT ON THE SERVICE BY ANY PERSON OR ENTITY OTHER THAN MULTUM, IN ALL CASES INCLUDING BUT NOT LIMITED TO LOSSES FOR TORT, PERSONAL INJURY, MEDICAL MALPRACTICE OR PRODUCT LIABILITY. FURTHER, WITHOUT LIMITING THE FOREGOING, IN NO EVENT SHALL MULTUM BE LIABLE FOR ANY DIRECT, EXEMPLARY, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR INDIRECT DAMAGES, INCLUDING DAMAGES FOR LOSS OF PROFITS, LOSS OF BUSINESS, OR DOWN TIME, EVEN IF MULTUM HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE INFORMATION CONTAINED WITHIN THE SERVICE IS INTENDED FOR USE ONLY BY PHYSICIANS AND OTHER HEALTHCARE PROFESSIONALS WHO SHOULD RELY ON THEIR CLINICAL DISCRETION AND JUDGMENT IN DIAGNOSIS AND TREATMENT. AS BETWEEN CLIENT AND MULTUM, THE CLIENT HEREBY ASSUMES FULL RESPONSIBILITY FOR INSURING THE APPROPRIATENESS OF USING AND RELYING UPON THE INFORMATION IN VIEW OF ALL ATTENDANT CIRCUMSTANCES, INDICATIONS, AND CONTRAINDICATIONS.

MULTUM
PASS-THROUGH PROVISIONS

Multum's total liabilities in connection with this agreement, whether arising under contract or otherwise, are limited to the fees received by Multum under this agreement specifically relating to the Client's service or product which is the subject of the claim.

CPT
PASS-THROUGH PROVISIONS

The following provisions apply with respect to the software and content ("CPT") provided to the Client by the American Medical Association ("AMA"):

1. Client acknowledges that an updated version of CPT in the System is dependent upon continuing contractual relations with the AMA;

2. This license is non-transferable, nonexclusive, and for the sole purpose of internal use by Client in the territory in English. The territory is defined as: the United States and its territories and Argentina, Australia, Belgium, Canada, Chile, Colombia, Israel, Italy, Jamaica, Japan, Mexico, New Zealand, Norway, Panama, Portugal, South Africa, Spain, Sweden, Turkey, United Kingdom, Venezuela, and the Cayman Islands;

3. Client acknowledges that a license fee or other consideration has been given to create a binding contract;

4. Client is prohibited from using CPT or information contained therein in any public electronic bulletin board or public computer-based information system (including the Internet and World Wide Web unless subject to the provisions of the Cerner Business Agreement);

5. Client is prohibited from publishing, distributing via the internet or other public computer based information system, translating, or transferring possession of the CPT contained in the System or a copy or portion of it.

6. Client is prohibited from creating derivative works (including translation) based on CPT, selling, leasing, licensing the CPT or otherwise making the System or any portion thereof available to any unauthorized party;

7. Client is prohibited from making copies of the CPT in the System except for the purposes of back up or archival purposes. CPT is copyrighted by the AMA and all notices of proprietary rights, including trademark and copyright in CPT must appear on all permitted back up or archival copies made by the Client;

8. Client shall ensure that anyone who is authorized access to the CPT contained in the System complies with the provisions of this agreement;

9. THE CPT LICENSED FROM THE AMA AND CONTAINED IN THE SYSTEM IS PROVIDED "AS IS," AND IN NO CASE SHALL AMA BE LIABLE FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES, LOST PROFITS FOR SEQUENCE, ACCURACY OR COMPLETENESS OF DATA, FAILURE TO MEET CLIENT'S REQUIREMENTS, OR OTHER LEGAL THEORY. CLIENT'S SOLE REMEDY WITH REGARD TO THE SYSTEM IS AGAINST CERNER AND IS SET FORTH IN THE CERNER BUSINESS AGREEMENT BETWEEN CERNER AND CLIENT. CERNER AGREES TO CORRECT DEFECTS IN THE SYSTEM AS SET FORTH IN THE CERNER BUSINESS AGREEMENT. AMA FURTHER DISCLAIMS ALL LIABILITY FOR ANY CONSEQUENCES DUE TO USE, MISUSE OR INTERPRETATION OF INFORMATION CONTAINED IN OR NOT CONTAINED IN CPT;

10. Client's license is subject to termination in the event of default;

11. In the event that a provision is determined to violate any law or is unenforceable, the remainder of this agreement shall remain in full force;

12. Client is subject to the following U.S. Government rights:

U.S. Government Rights. This product includes CPT which is commercial technical data and/or commercial computer software and/or commercial computer software documentation, as applicable which were developed exclusively at private expense by the American Medical Association, 515 North State Street, Chicago, Illinois 60610. U.S. Government rights to use, modify, reproduce, release, perform, display, or disclose these technical data and/or commercial computer software and/or commercial computer software documentation are subject to the limited rights restrictions of DFARS 252.227-7015(b)(2) (June 1995) and/or subject to the restrictions of DFARS 252.227-7202-1(a) (June 1995) and DFARS 252.227-7202-3(a) (June 1995), as applicable for U.S. Department of Defense procurements and the limited rights restrictions of FAR 52.227-14 (June 1987) and or subject to the restricted rights provisions of FAR 52.227-14 (June 1987) and FAR 52.227-19 (June 1987), as applicable, and any applicable agency FAR Supplements, for non-Department of Defense Federal procurements.

13. CPT is copyrighted to the AMA and CPT is a registered trademark of the AMA.

PLEASE READ THE FOLLOWING TERMS AND CONDITIONS

This Product contains computer programs and other proprietary material and information, the use of which is subject to and expressly conditioned upon acceptance of this end-user license and service agreement ("Agreement").

This Agreement is a legally binding document between the organization that will make end-use of the Product (the "Customer") and EMC (which means (i) EMC Corporation, if Customer is located in the United States; (ii) the local EMC sales subsidiary, if Customer is located in a country in which EMC Corporation has a local sales subsidiary; and (iii) EMC (Benelux) B.V., S.a.r.l., if Customer is located outside the United States and in a country in which EMC Corporation does not have a local sales subsidiary). Unless EMC agrees otherwise in writing, this Agreement governs Customer's use of the Product except to the extent all or portion of the Product: (a) is the subject of a separate written agreement; (b) is the subject of a separate written agreement between Customer and a Distributor (provided such complies with EMC's agreement with the Distributor), or (c) is governed by a third party licensor's terms and conditions. Capitalized terms have the definitions in Section 1 or as otherwise indicated below.

By clicking on the "Agree" or "Accept" or similar button at the end of this Agreement, or proceeding with the installation, use or reproduction of this Product, or authorizing any other person to do so, you are representing to EMC that you are authorized to bind the Customer, and that you are agreeing on behalf of the Customer that the terms of this Agreement shall govern the relationship of the parties with regard to the subject matter in this Agreement and are waiving any rights, to the maximum extent permitted by applicable law, to any claim anywhere in the world concerning the enforceability or validity of this Agreement. If the terms of this Agreement are considered an offer by EMC, acceptance by Customer is expressly limited to the terms of this Agreement, to the exclusion of all other terms.

If you do not have authority to agree to the terms of this Agreement on behalf of the Customer, or do not accept the terms of this Agreement, (i) click on the "Cancel" or "Decline" or other similar button at the end of this Agreement and/or immediately cease any further attempt to install or use this Product for any purpose, (ii) remove any partial or full copies made from this Product; and (iii) return the Product, along with proof of purchase, to the company from whom you obtained the Product. In such event, no license shall be deemed to have been granted by EMC.

1. DEFINITIONS.

A. "Confidential Information" means and includes the terms of this Agreement (including all Quotes), the Products and Support Tools and all confidential and proprietary information of EMC or Customer, including without limitation, all business plans, product plans, financial information, software, designs, and technical, business and financial data of any nature whatsoever, provided that such information is marked or designated in writing as "confidential," "proprietary," or any other similar term or designation. Confidential Information does not include information that is (i) rightfully in the receiving party's possession without obligation of confidentiality prior to receipt from the disclosing party, (ii) a matter of public knowledge through no fault of the receiving party, (iii) rightfully furnished to the receiving party by a third party without restriction on disclosure or use; or (iv) independently developed by the receiving party without use of or reference to the disclosing party's Confidential Information.

B. "Customer" means either (i) a natural person who is personally bound by the terms of this Agreement and utilizes the Product for personal use and not within the scope of employment with a business entity; or (ii) a business entity, its officers, directors, proprietors, trustees, owners, principals, employees, contractors, agents or representatives.

C. "Distributor" means a reseller, distributor, system integrator, service provider, independent software vendor, value-added reseller, OEM or other partner that is authorized by EMC to license the Product to end users. The term shall also refer to any third party duly authorized by a Distributor to license the Products to end users.

D. "Documentation" means the then-current, generally available, written user manuals and online help and guides for the Product provided by EMC.

E. "Evaluation Product" means a copy of the generally available or pre-release version of EMC software product which contains this Agreement, and any copies made by or on behalf of Customer, and all Documentation for the foregoing, licensed for a limited duration for the specific purpose of evaluation prior to licensing or purchase.

F. "Product" means the EMC software product which contains this Agreement, and any copies made by or on behalf of Customer, Software Releases, and all Documentation for the foregoing. Products do not include Evaluation Products.

G. "Product Notice" means the then-current notice by which EMC informs Customer of a Product's then-current use rights and restrictions, warranty term, warranty upgrade and maintenance terms. Product Notices may be delivered by means of Quotes, written notices, contract riders and/or a posting on the applicable EMC website, currently located at http://www.emc.com/products/warranty_maintenance/index.jsp. The terms of all applicable Product Notices shall be deemed incorporated into and made a part of this Agreement.

H. "Quote(s)" means one or more documents issued by EMC or a Distributor which identifies this Product, Evaluation Product, and/or a related Service, the applicable pricing and sufficient other information to complete the transaction.

I. "Service" means all services provided by EMC pursuant to this Agreement, if any.

J. "Software Release" means any new version of Product that is made generally available by EMC to customers who are current in the payment of maintenance and support fees, but does not mean a new Product.

K. "Support Tools" means any hardware, software and other tools and/or utilities used by EMC to perform diagnostic or remedial activities in connection with Products.

L. "User" means Customer's agents, employees, consultants or independent contractors authorized by Customer to use the Products on Customer's behalf.

2. ORDERING, PRICING AND PAYMENT.

A. Products – EMC Quotes. A Quote issued by EMC to Customer will be deemed accepted by Customer when Customer places an order by: (i) signing the Quote and returning it to EMC, (ii) issuing a purchase order for the Products and/or Services on the Quote, or (iii) sending EMC an email or other writing accepting the Quote. A Customer order is complete as to Products when the Product is made available to Customer. Following EMC's completion of an order or portion thereof, EMC will issue an invoice for the Products with respect to which the order is completed, such invoice to reflect the price for such Products as set forth on the Quote. Customer shall pay EMC the price stated on the invoice and also pay or reimburse EMC for all related taxes or withholdings, except for those taxes based on EMC's net income. If Customer is required to withhold taxes, then Customer will forward any withholding receipts to EMC at tax@emc.com. All amounts are due in the currency stated on the Quote and in full 30 days after the date of EMC's invoice, with interest accruing thereafter at the lesser of 1.5% per month or the highest lawful rate.

B. Products – Distributor Quotes. Customer shall not be liable to EMC for payment related to Products or Services obtained by Customer through a Distributor. EMC's delivery obligation with respect to Quotes issued by a Distributor and accepted by Customer is complete when EMC makes the Product available to Customer or to Distributor for delivery to Customer, as the case may be. Any terms and conditions in a Quote issued by Distributor or any purchase order or other ordering documentation issued by Customer to Distributor shall not be binding upon EMC for any reason.

C. Delivery. Product may be provided by shipment of physical media or by electronic means, if available. Title and risk of loss to physical media, if any, transfers to Customer upon shipment except for Canada, where such title and risk of loss pass when at the time and place when the media clears Canadian Customs. Customer shall pay all shipment related charges and transit insurance.

D. Audit Rights. EMC shall have the right to audit Customer's usage of the Product to confirm compliance with the terms of the Agreement and the Quote. Should such audit indicate usage of Product in excess of that for which Customer has paid, in addition to any other rights EMC may have for breach of this Agreement and the Quote, Customer shall promptly reconcile its account with EMC and pay the EMC invoice, either directly or through the applicable Distributor designated by EMC, if any, that results from such reconciliation.

3. RIGHT TO USE

A. LICENSE GRANT. Subject to Customer's compliance with this Agreement, the Product Notice, and payment of all license fees, EMC grants to Customer a nonexclusive, perpetual (except as otherwise set forth in the applicable Product Notice and/or Quote), and non-transferable license (with no right to sublicense) to use the Product for internal business purposes only, for the number of applicable licensing units and in accordance with any other license terms or restrictions set forth in the Product Notice and/or Quote. The foregoing license shall commence on the date of shipment or physical media, if any or electronic availability of such Product to Customer. Documentation is licensed solely for purposes of supporting Customer's use of the Product as permitted in this Section.

B. EVALUATION PRODUCTS. For an Evaluation Product, subject to Customer's compliance with this Agreement and the Product Notice, EMC grants to Customer a nonexclusive, revocable, limited term, and non-transferable license (with no right to sublicense) to use such Evaluation Product for non-production evaluation purposes only, for the number of applicable licensing units and in accordance with any other license terms or restrictions set forth in the Product Notice and/or Quote. The foregoing license shall commence on the date of shipment or electronic availability of such Evaluation Product to Customer for a period not to exceed thirty (30) days ("Evaluation Period"). Documentation is licensed solely for purposes of supporting Customer's use of the Evaluation Product as permitted in this Section. Customer shall not, without EMC's prior written consent, copy, provide, disclose or otherwise make available the Evaluation Product in any form to anyone other than Customer's Representative, who shall use the Evaluation Product solely for Customer's internal evaluation purposes in a manner consistent with this Section. Customer shall be fully responsible to EMC for the compliance of its Representatives herewith. Customer shall not disclose the results of any comparative or competitive analyses, benchmark testing, infringement testing, or analyses of EMC's products to any third party. Customer hereby assigns to EMC all of Customer's right, title and interest in any feedback related to any pre-release version of the Evaluation Product. EMC does not commit, promise, or agree to finally release and/or offer for sale the Evaluation Product, whether or not perfected. EMC reserves the right to unilaterally cease and abandon any Evaluation Product development project at any time without any obligation or liability whatsoever. Customer shall have no obligation or commitment to license an Evaluation Product, whether such is subsequently perfected or not. Evaluation Products are Confidential Information under this Agreement. EMC does not provide maintenance or support for any Evaluation Product. CUSTOMER RECOGNIZES THAT EVALUATION PRODUCTS MAY HAVE DEFECTS OR DEFICIENCIES WHICH CANNOT OR MAY NOT BE CORRECTED BY EMC. EMC shall have no liability to Customer for any action (or any prior related claims) brought by or against Customer alleging that Customer's sale, use or other disposition of any Evaluation Product infringes any patent, copyright, trade secret or other intellectual property right. In event of such an action, EMC retains the right to terminate this Agreement and take possession of the Evaluation Product. THIS SECTION STATES EMC'S ENTIRE LIABILITY WITH RESPECT TO ALLEGED INFRINGEMENTS OF INTELLECTUAL PROPERTY RIGHTS BY THE EVALUATION PRODUCT OR ANY PART OF THEM OR BY THEIR OPERATION.

C. License Restrictions. All Product licenses granted herein are for use of object code only. Customer may copy the Product for backup purposes only, and may copy Documentation as reasonably necessary in connection with Customer's authorized internal use of the Product. Customer shall not, without EMC's prior written consent, use Product in a service bureau or similar capacity, or copy, provide, disclose or otherwise make available Product in any form to anyone other than Customer's Users, who shall use Product solely for Customer's internal business purposes in a manner consistent with this Agreement. Customer shall be fully responsible to EMC for the compliance of Customer's Users herewith.

4. WARRANTY AND DISCLAIMER.

A. Duration. The warranty term for the Products shall be as set forth in the applicable Product Notice in effect as of the date of the Quote under which Customer ordered each Product. In the event of a conflict between the Product Notice and this Agreement, the Product Notice shall control. Evaluation Products contain no warranty and are provided to Customer "AS IS."

B. Product Warranty. EMC warrants that, from the date of shipment or the date of electronic availability, as applicable, the Product (excluding Product Releases) will substantially conform to the applicable Documentation for such Software. EMC does not warrant that the operation of the Product shall be uninterrupted or error free, or that all defects can be corrected. EMC's entire liability and Customer's exclusive remedies under the warranties described in this Section shall be for EMC, at its option, to use reasonable efforts to remedy such defects or performance failure or to replace the affected Product. If EMC is unable to make the affected Product operate as warranted within a reasonable time, then EMC shall refund the amount received by EMC for the affected Product upon return of the specific Software to EMC or its Distributor. The foregoing shall not void any supplementary remedies made available to Customer by a Distributor, with respect to which EMC shall have no liability or obligation.

C. Warranty Exclusions. Except as expressly stated in the applicable warranty set forth in this Agreement, and to the maximum extent permitted by law, EMC (including its suppliers) provides Product and Evaluation Product "AS IS" and makes no other express or implied warranties, written or oral, and ALL OTHER WARRANTIES ARE SPECIFICALLY EXCLUDED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT, AND ANY WARRANTY ARISING BY STATUTE, OPERATION OF LAW, COURSE OF DEALING OR PERFORMANCE, OR USAGE OF TRADE.

5. PRODUCT SUPPORT.

A. Support and Maintenance. If Customer has purchased maintenance or support Services for the Product from EMC, such shall be delivered by EMC as specified in applicable Product Notices. If Customer ceases support and later wishes to re-instate support, then re-instatement may be subject to certification at EMC's then-current rates. If Customer has purchased maintenance or support Services for the Product from a Distributor, then such shall be delivered as specified in Customer's agreement with the Distributor.

B. Support Tools. Support Tools are owned by or licensed to EMC. Customer authorizes EMC to store Support Tools and spare parts at the installation site and agrees that such are for use only by EMC authorized personnel. Customer shall not make, and shall use reasonable care to prohibit its personnel or any third party from making any copies, use, disclosure or transfer of Support Tools and/or such spare parts. EMC is authorized, upon the conclusion of any maintenance or warranty period or at any other time, upon reasonable notice to Customer, to enter the installation site, or to use remote means, to remove and/or disable Support Tools and spare parts and Customer shall reasonably cooperate in this effort.

6. CONFIDENTIALITY. Each party shall (i) use Confidential Information of the other party only for the purposes of exercising rights or performing obligations in connection with this Agreement, and (ii) use at least reasonable care to protect from disclosure to any third parties any Confidential Information disclosed by the other party for a period from EMC's issuance of the first Quote until three (3) years following the termination date of this Agreement, except with respect to the Products, Evaluation Products and Support Tools, which shall remain Confidential Information until one of the exceptions stated in Section 1(A) above applies. Notwithstanding the foregoing, a receiving party may disclose Confidential Information pursuant to a valid order of a court or authorized government agency provided that the receiving party has given the disclosing party prompt notice so that the disclosing party will have an opportunity to defend, limit or protect against such disclosure.

7. OWNERSHIP AND RESTRICTIONS. Products and Evaluation Products are licensed only. No title to, or ownership of, the Products or Evaluation Products is transferred to Customer. Customer shall reproduce and include copyright and other proprietary notices on and in any copies, including but not limited to partial, physical or electronic copies, of the Product and Evaluation Products. Neither Customer nor its Users shall modify, enhance, supplement, create derivative works from, reverse assemble, reverse engineer, reverse compile or otherwise reduce to human readable form the Product or Evaluation Products without EMC's prior written consent, nor shall Customer permit any third party to do the same.

8. INDEMNITY. EMC shall (i) defend Customer against any third party claim that a Product or Service infringes a patent, or a copyright enforceable in a country that is a signatory to the Berne Convention, and (ii) pay the resulting costs and damages finally awarded against Customer by a court of competent jurisdiction or the amounts stated in a written settlement signed by EMC. The foregoing obligations are subject to the following: Customer (a) notifies EMC promptly in writing of such claim, (b) grants EMC sole control over the defense and settlement thereof, (c) reasonably cooperates in response to an EMC request for assistance, and (d) is not in material breach of this Agreement. Should any such Product or Service become, or in EMC's opinion be likely to become, the subject of such a claim, EMC may, at its option and expense, (1) procure for Customer the right to make continued use thereof, (2) replace or modify such so that it becomes non-infringing, (3) request return of the Product and, upon receipt thereof, refund the price paid by Customer, less straight-line depreciation based on a four year useful life for Equipment and a three year useful life for Product, or (4) discontinue the Service and refund the portion of any pre-paid Service fee that corresponds to the period of Service discontinuation. EMC shall have no liability under this Section 8 to the extent that the alleged infringement arises out of or relates to:

(A) the use or combination of a Product or Service with third party products or services, (B) use for a purpose or in a manner for which the Product or Service was not licensed or designed, (C) any modification made by anyone other than EMC, (D) any modifications to a Product or Service made by EMC pursuant to Customer's or a Distributor's specific instructions, (E) any technology owned or licensed by Customer or a Distributor from third parties, (F) any Evaluation Products, or (G) use of any older version of the Product when use of a newer Software Release made available to Customer would have avoided the infringement. THIS SECTION STATES CUSTOMER'S SOLE AND EXCLUSIVE REMEDY AND EMC'S ENTIRE LIABILITY FOR THIRD PARTY INFRINGEMENT CLAIMS.

9. LIMITATION OF LIABILITY.

A Limitation on Direct Damages. TO MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, AND EXCEPT WITH RESPECT TO CLAIMS ARISING UNDER SECTION 8 OF THESE GENERAL TERMS AND CONDITIONS, EMC'S AND ITS SUPPLIERS' TOTAL LIABILITY AND CUSTOMER'S SOLE AND EXCLUSIVE REMEDY FOR ANY CLAIM OF ANY TYPE WHATSOEVER, ARISING OUT OF PRODUCT, EVALUATION PRODUCT OR SERVICE PROVIDED HEREUNDER, SHALL

BE LIMITED TO PROVEN DIRECT DAMAGES CAUSED BY EMC'S SOLE NEGLIGENCE IN AN AMOUNT NOT TO EXCEED (i) US$1,000,000, FOR DAMAGE TO REAL OR TANGIBLE PERSONAL PROPERTY; AND (ii) THE PRICE PAID BY CUSTOMER TO EMC FOR THE SPECIFIC SERVICE (CALCULATED ON AN ANNUAL BASIS, WHEN APPLICABLE) OR PRODUCT FROM WHICH SUCH CLAIM ARISES, FOR DAMAGE OF ANY TYPE NOT IDENTIFIED IN (i) ABOVE OR OTHERWISE EXCLUDED HEREUNDER.

B. No Indirect Damages. TO MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, AND EXCEPT WITH RESPECT TO CLAIMS REGARDING VIOLATION OF EMC'S INTELLECTUAL PROPERTY RIGHTS OR CLAIMS ARISING UNDER SECTIONS 6 OR 8 ABOVE, NEITHER CUSTOMER NOR EMC (INCLUDING EMC'S SUPPLIERS) SHALL HAVE LIABILITY TO THE OTHER FOR ANY SPECIAL, CONSEQUENTIAL, EXEMPLARY, INCIDENTAL, OR INDIRECT DAMAGES (INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, REVENUES, DATA AND/OR USE), EVEN IF ADVISED OF THE POSSIBILITY THEREOF.

10. WAIVER OF RIGHT TO BRING ACTIONS. Customer waives the right to bring any claim arising out of or in connection with this Agreement more than eighteen (18) months after the earlier of the date that the Customer became aware of the cause of action giving rise to such claim or the date that it should reasonably have become aware of it.

11. GOVERNMENT REGULATIONS. The Products and the technology included therein provided under this Agreement are subject to governmental restrictions on exports from the U.S.; restrictions on exports from other countries in which such Products and technology included therein may be produced or located; disclosures of technology to foreign persons; exports from abroad of derivative products thereof; and the importation and/or use of such Products and technology included therein outside of the United States (collectively, "Export Laws"). Diversion contrary to U.S. law is expressly prohibited. Customer shall, at its sole expense, comply with all Export Laws and EMC export policies made available to Customer by EMC. Customer represents that it is not a Restricted Person, which shall be deemed to include any person or entity: (1) located in or a national of Cuba, Iran, North Korea, Sudan, Syria, or any other countries that may, from time to time, become subject to U.S. export controls for anti-terrorism reasons or with which U.S. persons are generally prohibited from engaging in financial transactions; or (2) on any restricted person or entity list maintained by any U.S. governmental agency. Certain information, products or technology may be subject to the International Traffic in Arms Regulations ("ITAR"). This information, products or technology shall only be exported, transferred or released to foreign nationals inside or outside the United States in compliance with ITAR.

12. TERMINATION. Customer may terminate this Agreement for its convenience upon thirty (30) days' notice to EMC or Distributor. With respect to Evaluation Products only, this Agreement shall automatically expire and terminate upon the conclusion of the Evaluation Period. Either Customer or EMC may terminate this Agreement upon written notice due to the other party's material breach of the terms governing use of the Product; provided that such breach is not cured within thirty (30) days after the provision of written notice to the breaching party specifying the nature of such breach. Upon termination of this Agreement, Customer shall cease all use and return or certify destruction of the applicable Product (including copies) to EMC. Upon termination of the Agreement, the following Sections hereof shall survive in accordance with their terms: 1, 2 (only if fees are due and owing at termination), 4C, 5B, 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15.

13. NOTICES. Any notices permitted or required under this Agreement shall be in writing, and shall be deemed given when delivered (i) in person, (ii) by overnight courier, upon written confirmation of receipt, (iii) by certified or registered mail, with proof of delivery, (iv) by facsimile transmission with confirmation of receipt, or (v) by email, with confirmation of receipt (except for routine business communications issued by EMC, which shall not require confirmation from Customer). Notices shall be sent to the address, facsimile number or email address set forth below, or at such other address, facsimile number or email address as provided to the other party in writing. Notices for EMC Corporation shall be sent to: 176 South Street, Hopkinton, MA 01748. Fax for legal notices: 508.293.7780. Email for legal notices: legalnotices@emc.com

14. MISCELLANEOUS. EMC may identify Customer for reference purposes. This Agreement (i) is the complete statement of the agreement of the parties with regard to the subject matter hereof; and, with the exception of the Customer Guide, (ii) may be modified only by a writing signed by both parties. Except for the payment of fees, neither party shall be liable under this Agreement because of a failure or delay in performing its obligations hereunder on account of any force majeure event, such as strikes, riots, insurrection, terrorism, fires, natural disasters, acts of God, war, governmental action, or any other cause which is beyond the reasonable control of such party. Customer shall not assign this Agreement or any right or delegate any performance without EMC's prior written consent, which consent shall not be unreasonably withheld. Customer shall promptly notify EMC, and EMC may terminate this Agreement on thirty days' notice, if Customer merges with or is acquired by a third party or otherwise undergoes a change of control event. All terms of any purchase order or similar document provided by Customer, including but not limited to any pre-printed terms thereon and any terms that are inconsistent or conflict with this Agreement and/or a Quote, shall be null and void and of no legal force or effect. No waiver shall be deemed a waiver of any prior or subsequent default hereunder. If any part of this Agreement is held unenforceable, the validity of the remaining provisions shall not be affected. This Agreement is governed by: (i) the laws of the Commonwealth of Massachusetts when EMC means EMC Corporation; (ii) the laws of the applicable country in which the applicable EMC subsidiary is registered to do business when EMC means the local EMC subsidiary, and (iii) the laws of Switzerland when EMC means EMC (Benelux) B.V., S.a.r.l. In each case, the applicability of laws shall exclude any conflict of law rules. The U.N. Convention on Contracts for the International Sale of Goods shall not apply. In the event of a dispute concerning this Agreement, Customer consents to the sole and exclusive personal jurisdiction of the courts of competency in the location where EMC is domiciled.

15. COUNTRY SPECIFIC TERMS.

A. CANADA - The terms in this subsection A apply only when EMC means the EMC entity located in Canada - EMC Corporation of Canada:

1. Section 2.C. - The second sentence is deleted in its entirety and replaced with "Title and risk of loss to physical media, if any, transfers to Customer at the time and place that the media clears Canadian Customs.

2. Section 3.A. - The last two sentences are deleted and replaced with "The foregoing license shall commence on the date of shipment or physical media, if any when the media clears Canadian Customs or electronic availability of such Product to Customer." Documentation is licensed solely for purposes of supporting Customer's use of the Product as permitted in this Section.

3. Add the following at the end of Section 14.

The parties have required that this Agreement be drawn up in English and have also agreed that all notices or other documents required by or contemplated in this Agreement be written in English.

Les parties ont requis que cette convention soit rédigée en anglais et ont également convenu que tout avis ou autre document exigé aux termes des présentes ou découlant de l'une quelconque de ses dispositions sera préparé en anglais.

B. United Kingdom - The terms in this subsection B. apply only when EMC means the EMC entity located in the United Kingdom - EMC Computer Systems (UK) Limited:

1. Section 4.C. - The entire section is deleted and replaced with

C. Warranty Exclusions. Except as expressly stated in the applicable warranty set forth in this Agreement and the applicable exhibits, EMC (including its suppliers) provides Products "AS IS" and makes no other express or implied warranties, written or oral, and ALL OTHER WARRANTIES AND CONDITIONS (SAVE FOR THE WARRANTIES AND CONDITIONS IMPLIED BY SECTION 12 OF THE SALE OF GOODS ACT 1979) ARE SPECIFICALLY EXCLUDED TO THE FULLEST EXTENT PERMITTED BY LAW, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND ANY WARRANTY ARISING BY STATUTE, OPERATION OF LAW, COURSE OF DEALING OR PERFORMANCE, OR USAGE OF TRADE.

2. Section 9 is deleted in its entirety and replaced with the following:

9. LIMITATION OF LIABILITY AND PRESERVATION OF DATA.

A. The entire aggregate liability of EMC under or in connection with the supply of the Products, Evaluation Products or Service, whether in tort (including negligence), for breach of contract, misrepresentation or otherwise, is limited in respect of each event or a series of events: (i) to the amounts actually paid by Customer for the Products, Evaluation Products or Services which give rise to such liability during the twelve (12) month period immediately preceding the date of the cause of action giving rise to such claim; or (ii) Great British Pounds Sterling one million (£1,000,000), whichever is the greater amount. In no event shall either party be liable to the other or any other person or entity for loss of profits, loss of revenue, loss of use or any indirect, special, incidental, consequential or exemplary damages arising out of or in connection with this Agreement, the license of the Product or Evaluation Product, the provision of Services, and the use, performance, receipt or disposition of such Product or Evaluation Product or Services, even if such party has been advised of the possibility of such damages or losses. Nothing in this Agreement shall operate to exclude or restrict EMC's liability for: (a) death or personal injury resulting from negligence; (b) breach of obligations arising from section 12 of the Sale of Goods Act 1979; or (c) fraud.

B. CUSTOMER OBLIGATIONS IN RESPECT OF PRESERVATION OF DATA. During the Term of the Agreement, the Customer shall:

A. from a point in time prior to the point of failure, (i) make full and/or incremental backups of data which allow recovery in an application consistent form, and (ii) store such back-ups at an off-site location sufficiently distant to avoid being impacted by the event(s) (e.g. including but not limited to flood, fire, power loss, denial of access or air crash) and affect the availability of data at the impacted site;

B. have adequate processes and procedures in place to restore data back to a point in time and prior to point of failure, and in the event of real or perceived data loss, provide the skills/backup and outage windows to restore the data in question;

C. use anti-virus software, regularly install updates across all data which is accessible across the network, and protect all storage arrays against power surges and unplanned power outages with Uninterruptible Power Supplies; and

D. ensure that all operating system, firmware, system utility (e.g. but not limited to, volume management, cluster management and backup) and patch levels are kept to EMC recommended versions and that any proposed changes thereto shall be communicated to EMC in a timely fashion.

3. Section 14 is amended by adding the following at the end: ". Each of the parties acknowledges and agrees that in entering into this Agreement, it does not rely on, and shall have no remedy in respect of, any statement, representation, warranty or understanding (whether negligently or innocently made) of any person (whether party to this Agreement or not) other than as expressly set out in this Agreement as a warranty. The only remedy available to Customer for a breach of the warranties shall be for breach of contract under the terms of this Agreement. Nothing in this Section 9 shall however operate to limit or exclude any liability for fraud. No term of this Agreement shall be enforceable under the Contracts (Rights of Third Parties) Act 1999 by a person that is not a party to this Agreement. If any part of this Agreement is held unenforceable, the validity of the remaining provisions shall not be affected."

C. Ireland - The terms in this subsection C. apply only when EMC means the EMC entity located in Ireland - EMC Computer Systems Ireland Limited:

1. Section 4.C. - The entire section is deleted and replaced with

C. Warranty Exclusions. Except as expressly stated in the applicable warranty set forth in this Agreement and the applicable exhibits, EMC (including its suppliers) and makes no warranties, and ALL WARRANTIES, TERMS AND CONDITIONS, WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED BY LAW, CUSTOMER OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES, TERMS AND CONDITIONS, OF FITNESS FOR PURPOSE, DESCRIPTION, AND QUALITY ARE HEREBY EXCLUDED TO THE MAXIMUM EXTENT PERMITTED UNDER APPLICABLE LAW.

2. Sections 9 is deleted in its entirety and replaced with the following:

9. LIMITATION OF LIABILITY.

A. EMC does not exclude or limit its liability to the Customer for death or personal injury, or, breach of obligations implied by Section 12 of the Sale of Goods Act, 1893, as amended by the Sale of Goods and Supply of Services Act, 1980, or, due to the fraud or fraudulent misrepresentation of EMC, its employees or agents.

B. Subject always to subsection 9.A, the liability of EMC (including its suppliers) to the Customer under or in connection with an order, whether arising from negligent error or omission, breach of contract, or otherwise ("Defaults") shall be: (i) the aggregate liability of EMC for all Defaults resulting in direct loss of or damage to the tangible property of the Customer shall be limited to damages which shall not exceed the greater of two hundred per cent (200%) of the applicable price paid and/or payable for the Product, Evaluation Product or Service, or one million euros (euro 1,000,000); or (ii) the aggregate liability of EMC for all Defaults, other than those governed by subsection 9.B(i) shall be limited to damages which shall not exceed (a) in respect of the Product or Evaluation Product, the greater of one hundred and fifty per cent (150%) of the applicable price paid and/or payable or five hundred thousand euro (euro 500,000); or (b) in respect of the Services, the greater of one hundred and fifty per cent (150%) of the applicable charges paid and/or payable or five hundred thousand euro (euro 500,000).

C. In no event shall EMC (including its suppliers) be liable to Customer for (i) loss of profits, loss of business, loss of revenue, loss of use, wasted management time, cost of substitute services or facilities, loss of goodwill or anticipated savings, loss of or loss of use of any software or data; and/or (ii) indirect, consequential or special loss or damage; and/or (iii) damages, costs and/or expenses due to third party claims; and/or (iv) loss or damage due to the Customer's failure to comply with obligations under this Agreement, failure to do back-ups of data or any other matter under the control of the Customer. For the purposes of this Section 9 the term "loss" shall include a partial loss, as well as a complete or total loss.

D. The parties expressly agree that should any limitation or provision contained in this Section 9 be held to be invalid under any applicable statute or rule of law, it shall to that extent be deemed omitted, but if any party thereby becomes liable for loss or damage which would otherwise have been excluded such liability shall be subject to the other limitations and provisions set out in this Section 9.

E. The parties expressly agree that any order for specific performance made in connection with this Agreement in respect of EMC shall be subject to the financial limitations set out in sub-section 9.B.

F. The parties expressly agree that the provisions of Section 8, Indemnity, shall not be subject to the limitations and exclusions of liability set out in this Section 9.

G. CUSTOMER OBLIGATIONS IN RESPECT OF PRESERVATION OF DATA. During the Term of the Agreement the Customer shall:

A. from a point in time prior to the point of failure, (i) make full and/or incremental backups of data which allow recovery in an application consistent form, and (ii) store such back-ups at an off-site location sufficiently distant to avoid being impacted by the event(s) (e.g. including but not limited to flood, fire, power loss, denial of access or air crash) and affect the availability of data at the impacted site;

B. have adequate processes and procedures in place to restore data back to a point in time and prior to point of failure, and in the event of real or perceived data loss, provide the skills/backup and outage windows to restore the data in question;

C. use anti-virus software, regularly install updates across all data which is accessible across the network, and protect all storage arrays against power surges and unplanned power outages with Uninterruptible Power Supplies; and

D. ensure that all operating system, firmware, system utility (e.g. but not limited to, volume management, cluster management and backup) and patch levels are kept to EMC recommended versions and that any proposed changes thereto shall be communicated to EMC in a timely fashion.

3. Section 10 is deleted in its entirety and replaced with the following:

10. WAIVER OF RIGHT TO BRING ACTIONS: The Customer waives the right to bring any claim arising out of or in connection with this Agreement more than twenty-four (24) months after the date of the cause of action giving rise to such claim.

D. European Union - The terms in this subsection D. apply only when EMC means an EMC entity located in the European Union:

1. The following is added at the end of section 3.A

Customer or its Users shall not, and Customer shall not permit any third party to, modify, enhance, supplement, create derivative works from, reverse assemble, reverse engineer, reverse compile or otherwise reduce to human readable form the Product or Evaluation Product without EMC's prior written consent, except to the extent that local, mandatory law grants Customer the right to decompile such Product or Evaluation Product in order to obtain information necessary to render the Product or Evaluation Product interoperable with other software. In such event, Customer shall first inform EMC of its intention and request EMC to provide Customer with the necessary information. EMC may impose reasonable conditions on the provision of the requested information, including the payment of a reasonable fee.

E. Australia - The terms in this subsection E. apply only when EMC means an EMC entity located in Australia - EMC Global Holdings Company (Australian Branch) ABN 86 699 010 685:

1. Sections 9 is deleted in its entirety and replaced with the following:

9. LIMITATION OF LIABILITY.

A. Limitation on Direct Damages. EXCEPT WITH RESPECT TO CLAIMS ARISING UNDER SECTIONS 6 OR 8 OF THIS AGREEMENT, EMC'S AND ITS SUPPLIERS' TOTAL LIABILITY AND CUSTOMER'S SOLE AND EXCLUSIVE REMEDY FOR ANY CLAIM OF ANY TYPE WHATSOEVER, ARISING OUT OF PRODUCT, EVALUATION PRODUCT OR SERVICE PROVIDED HEREUNDER, SHALL BE LIMITED TO PROVEN DIRECT DAMAGES CAUSED BY EMC'S SOLE NEGLIGENCE IN AN AMOUNT NOT TO EXCEED (i) AUD$2,000,000, FOR DAMAGE TO REAL OR TANGIBLE PERSONAL PROPERTY; AND (ii) THE PRICE PAID BY CUSTOMER TO EMC FOR THE SPECIFIC SERVICE (CALCULATED ON AN ANNUAL BASIS, WHEN APPLICABLE) OR PRODUCT FROM WHICH SUCH CLAIM ARISES, FOR DAMAGE OF ANY TYPE NOT IDENTIFIED IN (i) ABOVE OR OTHERWISE EXCLUDED HEREUNDER.

B. No Indirect Damages. EXCEPT WITH RESPECT TO CLAIMS REGARDING VIOLATION OF EMC'S INTELLECTUAL PROPERTY RIGHTS OR CLAIMS ARISING UNDER SECTIONS 6 OR 8 ABOVE, NEITHER CUSTOMER NOR EMC (INCLUDING EMC'S SUPPLIERS) SHALL (a) HAVE LIABILITY TO THE OTHER FOR ANY SPECIAL, CONSEQUENTIAL, EXEMPLARY, INCIDENTAL, OR INDIRECT DAMAGES (INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, REVENUES, DATA AND/OR USE), EVEN IF ADVISED OF THE POSSIBILITY THEREOF; AND (b) BRING ANY CLAIM BASED ON PRODUCT OR SERVICE PROVIDED HEREUNDER MORE THAN EIGHTEEN (18) MONTHS AFTER THE CAUSE OF ACTION ACCRUES.

C. Trade Practices Legislation: EMC's liability under any statutory right or any condition or warranty, including any implied by any State Fair Trading Act or the Trade Practices Act, 1974 (Cth) is, to the maximum extent permitted by law, excluded. To the extent that such liability cannot be excluded, EMC's liability is limited at the option of EMC to: (a) in the case of Product or Evaluation Product, any one or more of the following: (i) the replacement thereof or the supply of its equivalent; (ii) the repair thereof; (iii) the payment of the cost of replacement thereof or of acquiring its equivalent; or (iv) the payment of the cost of having such repaired, and (b) in the case of any Services performed by EMC under or in connection with this Agreement: (i) the supply of those Services again; or (ii) the payment of the cost of having those Services supplied again.

F. New Zealand - The terms in this subsection F. apply only when EMC means an EMC entity located in New Zealand - EMC CORPORATION (NEW ZEALAND BRANCH) AKOS. 1188883:

1. Sections 9 is deleted in its entirety and replaced with the following:

9. LIMITATION OF LIABILITY.

A. Limitation on Direct Damages. EXCEPT WITH RESPECT TO CLAIMS ARISING UNDER SECTIONS 6 OR 8 OF THESE GENERAL TERMS AND CONDITIONS, EMC'S AND ITS SUPPLIERS' TOTAL LIABILITY AND CUSTOMER'S SOLE AND EXCLUSIVE REMEDY FOR ANY CLAIM OF ANY TYPE WHATSOEVER, ARISING OUT OF PRODUCT OR SERVICE PROVIDED HEREUNDER, SHALL BE LIMITED TO PROVEN DIRECT DAMAGES CAUSED BY EMC'S SOLE NEGLIGENCE IN AN AMOUNT NOT TO EXCEED (i) NZ$2,000,000, FOR DAMAGE TO REAL OR TANGIBLE PERSONAL PROPERTY; AND (ii) THE PRICE PAID BY CUSTOMER TO EMC FOR THE SPECIFIC SERVICE

(CALCULATED ON AN ANNUAL BASIS, WHEN APPLICABLE) OR PRODUCT FROM WHICH SUCH CLAIM ARISES, FOR DAMAGE OF ANY TYPE NOT IDENTIFIED IN (i) ABOVE OR OTHERWISE EXCLUDED HEREUNDER.

B. No Indirect Damages. EXCEPT WITH RESPECT TO CLAIMS REGARDING VIOLATION OF EMC'S INTELLECTUAL PROPERTY RIGHTS OR CLAIMS ARISING UNDER SECTIONS 6 OR 8 ABOVE, NEITHER CUSTOMER NOR EMC (INCLUDING EMC'S SUPPLIERS) SHALL (a) HAVE LIABILITY TO THE OTHER FOR ANY SPECIAL, CONSEQUENTIAL, EXEMPLARY, INCIDENTAL, OR INDIRECT DAMAGES (INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, REVENUES, DATA AND/OR USE), EVEN IF ADVISED OF THE POSSIBILITY THEREOF; AND (b) BRING ANY CLAIM BASED ON PRODUCT OR SERVICE PROVIDED HEREUNDER MORE THAN EIGHTEEN (18) MONTHS AFTER THE CAUSE OF ACTION ACCRUES.

C. Fair Trading Legislation. EMC's liability under any statutory right or any condition or warranty, including any implied by the Fair Trading Act 1986 or Consumer Guarantees Act 1993 ("FTA") or any similar law is, to the maximum extent permitted by law, excluded. To the extent that such liability cannot be excluded, EMC's liability is limited at the option of EMC to: (a) in the case of any Product or Evaluation Product, any one or more of the following: (i) the replacement thereof or the supply of its equivalent; (ii) the repair thereof; (iii) the payment of the cost of replacement thereof or of acquiring its equivalent; or (iv) the payment of the cost of having such repaired, and (b) in the case of any Services performed by EMC under or in connection with this Agreement: (i) the supply of those Services again; or (ii) the payment of the cost of having those Services supplied again.

SOFTWARE SUBLICENSING TERMS

The Following Terms Are Applicable To Sublicensing Of EMC Documentum Software, ONLY FOR THE PRODUCTS LISTED BELOW

The EMC Software licensed hereunder is subject to the Cerner business agreement between End User and Cerner, subject to the specific different terms set forth below:

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2. The (i) EMC Software is licensed only, and no title to, or ownership of, the EMC Software is transferred to End User; (ii) End User may not remove EMC's or its Cerner' copyright and other proprietary notices on and in any copies of the EMC Software; and (iii) End User shall not cause or permit any other to create derivative works from, reverse assemble, reverse engineer, reverse compile or otherwise reduce the EMC Software to human readable form.

3. Product Warranty. The EMC Software will, for a period of ninety (90) days from the date of shipment or the date of electronic availability, as applicable, substantially conform to the applicable documentation for such EMC Software. Cerner does not warrant that the operation of the EMC Software shall be uninterrupted or error free, or that all defects can be corrected. Cerner's entire liability and Customer's exclusive remedies under the warranties described in this Section shall be for Cerner, at its option, to use reasonable efforts to remedy such defects, or have the manufacturer remedy such defects or performance failure or to replace the affected EMC Software. If Cerner is unable to make the affected EMC Software operate as warranted within a reasonable time, then Cerner shall refund the amount received by Cerner for the affected EMC Software upon return of the specific EMC Software to Cerner.

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TITLE AND NON-INFRINGEMENT, AND ANY WARRANTY ARISING BY STATUTE, OPERATION OF LAW, COURSE OF DEALING OR PERFORMANCE, OR USAGE OF TRADE.

5. End User shall upon Cerner's request, promptly provide Cerner with a written statement certifying the extent of End User's usage of EMC Software identified by Cerner and/or allow Cerner or its designee to conduct a reasonable audit of the applicable End User facilities and records to determine whether or not End User's usage of such EMC Software is in conformance with its paid for license usage;

6. The EMC Software is confidential and contains EMC trade secrets and must be held in confidence with at least the same degree of care with which the End User protects its own similar confidential information.

THE ABOVE PASS THROUGH PROVISION IS FOR FOLLOWING PRODUCTS ONLY:

Model Number	Description
456-100-463	APPLICATIONXTENDER SERVER - 1 CC USER
456-100-464	APPLICATIONXTENDER SERVER - 5 CC USER
456-100-465	APPLICATIONXTENDER SERVER - 5 CC USER
456-100-466	APPLICATIONXTENDER SERVER - 10 CC USER
456-100-467	APPLICATIONXTENDER SERVER - 25 CC USER
456-100-468	APPLICATIONXTENDER SERVER - 50 CC USER
456-100-469	APPLICATIONXTENDER SERVER - 75 CC USER
456-100-470	APPLICATIONXTENDER SERVER - 100 CC USER
456-100-471	APPLICATIONXTENDER SERVER - 250 CC USER
456-100-472	APPLICATIONXTENDER SERVER - 500 CC USER
456-100-473	APPLICATIONXTENDER SERVER - 1000 CC USER
456-100-457	APPLICATIONXTENDER SERVER 25-49 ADD-ON - QTY 5
456-100-458	APPLICATIONXTENDER SERVER 50-74 ADD-ON - QTY 5
456-100-459	APPLICATIONXTENDER SERVER 75-99 ADD-ON - QTY 5
456-100-460	APPLICATIONXTENDER SERVER 100-249 ADD-ON - QTY 5

Model Number	Description
456-100-461	APPLICATIONXTENDER SERVER 250-499 ADD-ON - QTY 5
456-100-462	APPLICATIONXTENDER SERVER 500-999 ADD-ON - QTY 10
456-100-422	PLUGASUS SCANFIX FOR APPLICATIONXTENDER
456-100-999	APPLICATIONXTENDER USER WITH QSP
456-100-423	APPLICATIONXTENDER OCR SERVER
456-100-423	APPXTENDER FOR LOTUS NOTES/DOMINO CONNECTOR
456-100-424	SAP FOR APPXTENDER
456-100-425	APPLICATIONXTENDER IMAGE CAPTURE SERVER
456-100-426	QUICKSCAN PRO FOR APPLICATIONXTENDER
456-100-[illegible]	APPLICATIONXTENDER INTG MOD - 10 USERS
456-100-[illegible]	APPLICATIONXTENDER INTG MOD - 25 USERS
456-100-[illegible]	APPLICATIONXTENDER INTG MOD - 50 USERS
456-100-[illegible]	APPLICATIONXTENDER INTG MOD - 100 USERS
456-100-[illegible]	APPLICATIONXTENDER INTG MOD - 250 USERS
456-100-436	APPTENDER MEDIA DIST REINTEGRATION WIZARD
456-100-[illegible]	APPXTENDER MEDIA DISTRIBUTION LICENSE
456-100-428	APPXTENDER PROINDEX FULL TEXT CLIENT - 1 CC USER
456-100-429	APPXTENDER PROINDEX FULL TEXT CLIENT - 5 CC USER
456-100-431	APPXTENDER PROINDEX FULL TEXT CLIENT - 25 CC USER
456-100-432	APPXTENDER PROINDEX FULL TEXT CLIENT - 100 CC USER
456-100-433	APPXTENDER PROINDEX FULL TEXT CLIENT - 250 CC USER
456-100-[illegible]	APPXTENDER PROINDEX FULL TEXT SERVER
456-100-[illegible]	VERITY K2 CLIENT - 1 CC USER
456-100-[illegible]	VERITY K2 CLIENT - 5 CC USERS
456-100-[illegible]	VERITY K2 CLIENT - 25 CC USERS
456-100-[illegible]	VERITY K2 CLIENT - 100 CC USERS
456-100-[illegible]	VERITY K2 CLIENT - 250 CC USERS
456-100-[illegible]	VERITY K2 SERVER
456-100-[illegible]	RECORDS MANAGER FOR APPXTENDER DEVELOPER LICENSE
456-100-437	ADDITIONAL RECORDS MGR ADMIN CLIENT CONNECTION
456-100-[illegible]	RECORDS MANAGER FOR APPLICATIONXTENDER
456-100-[illegible]	RETENTION MANAGER FOR APPLICATIONXTENDER
456-100-[illegible]	APPXTENDER RETENTION MGMT W/CENTERA
456-100-[illegible]	APPXTENDER REPORTS MANAGEMENT SERVER
456-100-[illegible]	APPLICATIONXTENDER REPORTS MGMT BI GATEWAY
456-100-[illegible]	APPLICATIONXTENDER REPORTS MGMT MLP
456-100-[illegible]	APPLICATIONXTENDER REPORTS MGMT MLT MODE
456-100-[illegible]	APPLICATIONXTENDER REPORTS MGMT PCL
456-100-[illegible]	APPLICATIONXTENDER REPORTS MGMT PDF
456-100-[illegible]	APPXTENDER WEB ACCESS NET PAL - 25 USERS
456-100-[illegible]	APPXTENDER WEB ACCESS NET PAL - 50 USERS
456-100-447	APPXTENDER WEB ACCESS NET PAL - 75 USERS
456-100-[illegible]	APPXTENDER WEB ACCESS NET PAL - 100 USERS
456-100-[illegible]	APPXTENDER WEB ACCESS NET PAL - 250 USERS
456-100-[illegible]	APPXTENDER WEB ACCESS NET PAL - 500 USERS
456-100-[illegible]	APPXTENDER WEB ACCESS NET PAL - 1000 USERS
456-100-[illegible]	APPXTENDER WEB ACCESS NET PAL - 2500 USERS
456-100-[illegible]	APPXTENDER WEB ACCESS NET PAL - 5000 USERS
456-100-[illegible]	APPLICATIONXTENDER WORKFLOW ACCOUNTS PAYABLE

Model Number	Description
456-[illegible]022	WORKFLOW ATTENDER AP STARTER PK 5 USER
456-[illegible]074	WORKFLOW ATTENDER AP STARTER PK 10 USER
456-[illegible]452	APPXTENDER WORKFLOW SERVER
456-[illegible]453	APPXTENDER WORKFLOW PROCESS BUILDER
456-[illegible]407	APPXTENDER WORKFLOW SERVER - 5 CCU USERS
456-[illegible]408	APPXTENDER WORKFLOW SERVER - 10 CU USERS
456-[illegible]409	APPXTENDER WORKFLOW SERVER - 25 CU USERS
456-[illegible]410	APPXTENDER WORKFLOW SERVER - [illegible] USERS
456-[illegible]411	APPXTENDER WORKFLOW SERVER - 100 CU USERS
456-[illegible]415	APPLICATIONXTENDER DOCUMENT ROUTING - 50 USERS
456-[illegible]435	APPLICATIONXTENDER DOCUMENT ROUTING - 100 USERS
456-[illegible]436	APPLICATIONXTENDER DOCUMENT ROUTING - 250 USERS
456-[illegible]470	APPLICATIONXTENDER DOCUMENT ROUTING - 500 USERS
456-[illegible]402	APPLICATIONXTENDER WEB SERVICES
456-[illegible]451	APPXTENDER SDK, CDK AND WEB SERVICES DOC KIT
456-[illegible]492	APPLICATIONXTENDER WXU2 WEB SERVICES
AX	APPLICATIONXTENDER FAMILY MEDIA KIT
CNTWFAP	APPLICATIONXTENDER WORKFLOW FOR AP MEDIA KIT
456-[illegible]77	ApplicationXtender Registration Assistant 1 user
456-[illegible]78	ApplicationXtender Registration Assistant 5 user
456-[illegible]79	ApplicationXtender Registration Assistant 25 user
456-802-567-XXX	ApplicationXtender to CAMM License [illegible]
DOCUMENTUM D6 SOFTWARE for ASL	
AS-IMG-ENT	ARCHIVE SERVICES FOR IMAGING - ENTERPRISE
AS-IMG-EPK	ARCHIVE SERVICES FOR IMAGING - ENTERPRISE-PAGE PACK
AS-IMG-SPK	ARCHIVE SERVICES FOR IMAGING - STANDARD - PAGE PACK
AS-IMG-STD	ARCHIVE SERVICES FOR IMAGING - STANDARD
AS-MOSS-PLT	PLT ARCHIVE SERVICES SHAREPOINT PLATFORM - SERVER
AS-RPT-AFP	ARCH SVCS RPTS AFP TO PDF PLUG-IN
AS-RPT-AFP-A	ARCH SVCS RPTS AFP TO PDF/A PLUG-IN CPU
AS-RPT-CLIENT	ARCHIVE SERVICES FOR REPORTS CLIENT 5-1
AS-RPT-DIDE	ARCH SVCS RPTS METACODE DIDE TO PDF PLUG-IN CPU
AS-RPT-DIDE-A	ARCH SVCS RPTS METACODE DIDE TO PDF/A PLUG-IN CPU
AS-RPT-L1-SE	ARCHIVE SERVICES FOR REPORTS PROC SRVR LVL 1 CORE
AS-RPT-L2-SE	ARCHIVE SERVICES FOR REPORTS PROC SRVR LVL 2 CORE
AS-RPT-MIN-L1	ARCH SVCS RPTS MINING SVCS PLUG-IN LVL 1 CPU
AS-RPT-MIN-L2	ARCH SVCS RPTS MINING SVCS PLUG-IN LVL 2 CPU
AS-RPT-MINER	ARCHIVE SERVICES FOR REPORTS REPORT MINER ST
AS-RPT-PCL	ARCH SVCS RPTS PCL TO PDF PLUG-IN
AS-RPT-PCL-A	ARCH SVCS RPTS PCL DIDE TO PDF/A PLUG-IN CPU
AS-RPT-PS	ARCH SVCS RPTS POSTSCRIPT TO PDF PLUG-IN
AS-RPT-PS-A	ARCH SVCS RPTS POSTSCRIPT TO PDF/A PLUG-IN CPU
AS-RPT-SEARCH	ARCHIVE SERVICES FOR REPORTS SEARCH SERVICE SE
AS-RPT-SPLIT	ARCH SVCS RPTS ENHANCER AND SPLITTER PLUG-IN
AS-RPT-SPOOL	ARCHIVE SERVICES FOR REPORTS SPOOL CAPTURE SERVICE
AS-RPT-STUDIO	ARCHIVE SERVICES FOR REPORTS STUDIO ST
AS-RPT-WEBL1	ARCHIVE SERVICES FOR REPORTS WEB ACCESS LVL 1 CPU
AS-RPT-WEBL2	ARCHIVE SERVICES FOR REPORTS WEB ACCESS LVL 2 CPU
BPM-PKG-CORE	DOCUMENTUM PROCESS SUITE CORE PRODUCTS

Model Number	Description
BUS_ACTVT_MR	BUSINESS ACTIVITY MONITOR CORE
BUS-PROC_ANLC	PROCESS ANALYZER ST
BUS_PROC_MGR	PROCESS BUILDER ST
BUS-PROC_NAV	PROCESS NAVIGATOR ST
BUS_PROC_SVC	PROCESS INTEGRATOR CORE
BUS_PROC_SIM	PROCESS SIMULATOR ST
DOC_IMG_SVC	DOCUMENT IMAGE SERVICES
FORMS-BLDR	DOCUMENTUM FORMS BUILDER ST
FORMS-USER	DOCUMENTUM FORMS USER ST
PRC_NBLOC_EN	PROCESS CONN. BLOC BUILDS ENG SRVR
PRC_CONN_IDS	PROCESS CONNECTOR FOR IDS ST
PRC_CONN_PACK	PROCESS CONNECTOR PACK
PRC_ENG_RST	PROCESS ENGINE, DOCUMENTUM, RESTRICTED LICENSE CPU
PRC_ENGS_ID_MC	PROCESS ENGINE CORE
PRC_SRVS_SAP	PROCESS SERVICES FOR SAP LAUNCH & CMA PROCESS SUITE
PROC_NNC_OUNC	PROCESS CONN. CYGNUS REPORTS FT SRVR
PROC_DSGN_STU	DOCUMENTUM PROCESS DESIGN STUDIO
RECOSTAR_PRO	RECOSTAR PROFESSIONAL, DCR, 25 CPS, TP
TASKSPACE_ST	TASKSPACE USER SEAT
CLLB_SVS_SVR	DOCUMENTUM COLLABORATIVE SERVICES CPU-BASED
FRCLIENT	FROOM CORE ST
FR_MS_PROJ_SR	FROOM VIEWER FOR MS PROJECT SERVER
FROOT-CLIENT	FROOM REAL TIME WEB ADD-ON ST
FR_DEN_PACK	FROOM DEN USER PACK ST
FRM_ENT	FROOM ENTERPRISE ST
FRM_SRVR_SQL	FROOM SERVER FOR MS SQL SERVER ST
FRM_SRVR_SYB	FROOM SERVER (SYBASE) ST
DCTM_MGR_CON	DCTM COMP MGR - CONTRIBUTOR ST
DCTM_MGR_SMR	DCTM COMPLIANCE MGR - CONSUMER ST
DCM-CONSUMR	Documentum Compliance Manager - Consumer
DCM-CONTRIB	Documentum Compliance Manager - Contributor
EQUALITY_PAK	PRINT CONTROL SERVICES CPU
EMAIL_ACCT	EMAIL ACTIVATOR ST
FED-REC_SRCE	FEDERATED RECORDS SERVICES - SOURCES
FED-REC-SV_MC	FEDERATED RECORDS SERVICES - FRAMEWORK
REC_ACT_ENET	RECORDS ACTIVATOR SRVR
REC_ACTIONS	Documentum Records Activator Standard
REC_MGR_COORD	RECORDS MANAGER COORDINATOR ST
REC_MGR_EXT	RECORDS MANAGER CLIENT EXTENSION ST
REC_MGR_PHYS	PHYSICAL RECORDS MODULE (RECORDS MANAGER)
REC_MGR_USER	RECORDS MANAGER END USER SEAT ST
REC_MGR_ADMIN	RECORDS MANAGER ADMIN SEATS ST
RET_POL_ADMIN	RETENTION POLICY SERVICES ADMINISTRATOR ST
RET_POL_SV_MC	RETENTION POLICY SERVICES CORE
RM_ANZ_ADMIN	RECORDS MANAGER ADMINISTRATOR - COMMONWEALTH FED
RM_ANZ_COORD	RECORDS MANAGER COORDINATOR - COMMONWEALTH EDITION
RM_ANZ_EXT	RECORDS MANAGER CLIENT EXTENSION - COMMONWEALTH ED
CS_SHAR_PLT	CONTENT SERVICES SHAREPOINT PLATFORM - CLIENT
BRNCH_OFFICE	BRANCH OFFICE CACHE SVCS FNCRY PT INST

Model Number	Description
CDS-ADD-CPLS	CONTENT DIST SVCS - CPI
CDS-ADD-DIST	CONTENT DIST SVCS - DIST PACK
CNT-STOR-SVC	CONTENT STORAGE SERVICES TB
CNTNT-SERVER	CONTENT SERVER ST
CONT INT SVC	CONTENT INTELLIGENCE SERVICES CPI
CS-EMC-CNTRA	CONTENT SVCS FOR EMC CENTERA INST
CS-NTAP-SNAP	CONNECTOR FOR NTAP SNAPLOCK
CUSTOM-CLT	PURE CUSTOM CLIENT ST
DCTM-SERVER	DCTM HIGH VOLUME SERVER
LPCS-NOR-MEA	LANG PK CONSUMER WESTERN EUROPEAN INST
LPCS-WSTEMEA	LANG PK CUS WESTERN EUROPE INST
READ-ONLY-CLT	READ-ONLY ST
TRSTED-CNTS-MI	TRUSTED CONTENT SERVICES CORE
AD-ML	AUTHORING INTEGRATION SERVICES CORE
ALDVD-TRNS-ML	ALDVD VIDEO TRANSFORMATION SERVICES CORE
DAM-READ-ONLY	DAM READ-ONLY ST
DGTL-AST-MGR	DIGITAL ASSET MANAGER ST
MDA-TRNSFV-ML	MEDIA TRANSFORMATION SERVICES CORE
ADOBE-RES	ADOBE LIVECYCLE READER EXTENSIONS ST-TP
ADTS-J	ADVANCED DOCUMENT TRANSFORMATION SERVICES CPI
DOC-CLN-OTLK	DOCUMENTUM CLIENT FOR OUTLOOK ST
DTS-1	DOCUMENT TRANSFORMATION SVCS CPI
PDF-ANO-SVC	PDF ANNOTATION SERVICES ST-TP
PRTLT-USRLIC	PORTLET USER ST
WEBTOP-SEAT	WEBTOP CLIENT ST
XML-COMP-MGMT	EMC DOCUMENTUM XML COMPONENT SERVICES 2 CORE CPI
XML-COMP-USER	EMC DOCUMENTUM XML COMPONENT SERVICES USER
XML-DEV-KIT	EMC DOCUMENTUM XML DEVELOPMENT KIT ST
XML-DIFF-ENG	EMC DOCUMENTUM XML DIFF ENGINE SERVER
XML-HTTP-JOB	EMC DOCUMENTUM HTTP FOR A&D JOB CARD & VISITS CPI
XML-HTTP-MAN	EMC DOCUMENTUM HTTP FOR A&D MANUALS CPI
XML-HTTP-USR	EMC DOCUMENTUM HTTP FOR A&D USER
XML-PDM-LIC	EMC DOCUMENTUM PDM LOGIC ENGINE FOR A&D SERVER
XML-PUB-SVCS	EMC DOCUMENTUM DYNAMIC DELIVERY SERVICES 2 CORE CPI
XML-STOR	EMC DOCUMENTUM XML STORE 2 CORE CPI
XML-STOR-STAL	EMC DOCUMENTUM XML STORE STANDALONE 2 CORE CPI
XML-TDS-EP	EMC DOCUMENTUM TECH DOC SYS A&D ENG PROJECTS CPI
XML-TDS-SM	EMC DOCUMENTUM TECH DOC SYS A&D STRUCT MANUALS CPI
XML-TDS-SVR	EMC DOCUMENTUM TECH DOC SYS FOR A&D SERVER CPI
XML-TDS-TC	EMC DOCUMENTUM TECH DOC SYS A&D TASK
XML-TDS-USR	EMC DOCUMENTUM TECH DOC SYS FOR A&D USER
XML-TRF-SV-MC	XML TRANSFORMATION SERVICES CORE
DISCOV-MGR	DISCOVERY MANAGER ST
FS2-ADAPT10	FEDERATED SEARCH 10 ADAPTER PACK
FS2-ADAPT1	FEDERATED SEARCH 1 ADAPTER PACK
FS2-ADAPTUN	FEDERATED SEARCH UNLIMITED ADAPTER PACK
FS2-SDK	FEDERATED SEARCH SDK
FS2-SERVER	FEDERATED SEARCH SERVER
FS2-WEBTOP	WEBTOP FEDERATED SEARCH ST

Model Number	Description
IBM-ACROBAT	DOCUMENTUM IBM CLIENT FOR ADOBE ACROBAT ST
IBM-BCKUP-SVR	DOCUMENTUM IBM BACKUP SERVER CPT
IBM-BLACKBERRY	DOCUMENTUM IBM CLIENT FOR IBM BLACKBERRY ST
IBM-CLIENTS	BUNDLE OF IBM-MSOFFICE AND IBM-ACROBAT
IBM-DCTM	DOCUMENTUM IBM SERVICES FOR DOCUMENTUM CPT
IBM-DEV-SVR	DOCUMENTUM IBM DEVELOPMENT SERVER CPT
IBM-EMAIL	DOCUMENTUM IBM CLIENT FOR E-MAIL ST
IBM-EROOM	DOCUMENTUM IBM SERVICES FOR EROOM CPT
IBM-EXANET-SVR	DOCUMENTUM IBM EXTRANET SERVER CPT
IBM-MSOFFICE	DOCUMENTUM IBM CLIENT FOR MICROSOFT OFFICE ST
IBM-REPOS-SVR	DOCUMENTUM IBM REPOSITORY SERVER CPT
IBM-SDK	DOCUMENTUM IBM SDK CPT
IBM-SVR	DOCUMENTUM IBM SERVER CPT
ARCH-SVC-SAP	ARCHIVE SERVICES FOR SAP
CNTSV-SAPWA	CONTENT SVCS SAP WEBWAS ST
CNTSV-SAPWAS-MC	CONTENT SVC SAP REPOSITORY MGR CORE
EDOCS-E-MAIL	EMC Documentum Client for Lotus Notes
ECOMM-SAP-CS	CONTENT SERVICES FOR SAP CS
ECOMM-SAP-SA	CONTENT SVCS FOR SAP WEBAS ST
ECOMM-SIEBEL	CONTENT SVCS FOR SIEBEL EBUS IT
EXT-WS-SVCSAP	EXTERNAL WEBWAS SVCS FOR SAP ST
ADMINSTR-IR	DOCUMENTUM ADMINISTRATOR ST
ADO-NET-SVCS	ADO.NET SERVICES CPT
APPCONN-CNTL	APPLICATION CONNECTOR CUSTOM CLIENT ST
BULDOZER	CROWN SOFTWARE BULDOZER CPT
DCTM-LP-MGR	DCTM LANGUAGE PACK MANAGER ST
DEVELOPSTUDIO	DOCUMENTUM DEVELOPER STUDIO ST
DFC	DOCUMENTUM FOUNDATION CLASSES
IMPORT-MGR	DOCUMENTUM IMPORT MANAGER ST
REPORTINGSVCS	REPORTING SERVICES INST
DCTM-BEAPORT	CONTENT SVCS FOR BEA WEBLOGIC CPT
DCTM-WEB-PUB	WEB PUBLISHER ST
I-MARKUP	IMARKUP V6 ST
WBCACH-ARC-MC	SITE CACHING SVCS SOURCE CORE
WBCACH-TAR-MC	SITE CACHING SVCS - TARGET CORE
WP-PAGE-BUILD	WEB PUBLISHER PAGE BUILDER
WP-PUBLI-BUILD	Web Publisher Public Builder ST
WP-SITE-MGR	WEB PUBLISHER SITE MGR ST
XML-TARGET	XML TARGET CPT

PLEASE READ THE FOLLOWING TERMS AND CONDITIONS

The Following Terms Are Applicable To The Products Listed Below.

The Product licensed pursuant to the terms and conditions in this URL contains computer programs and other proprietary material and information, the use of which is subject to and expressly conditioned upon acceptance of the end-user license and services agreement that follows ("Agreement"). Unless EMC agrees otherwise in writing, this Agreement governs Customer's use of the Product except to the extent all or portion of the Product: (a) is the subject of a separate written agreement; (b) is the subject of a separate written agreement between Customer and a Distributor (provided such complies with EMC's agreement with the Distributor), or (c) is governed by a third party licensor's terms and conditions. Capitalized terms have the definitions in Section 1 or as otherwise indicated below.

Customer warrants and represents that the individual indicating assent or dissent to this Agreement possesses all requisite authority to do so on behalf of Customer. The foregoing shall include any individual who is employed by Customer, Distributor, or is an agent, contractor, service provider, or other third party representative, to the extent such person, agent or entity acts within the scope of an obligation or duty owed to Customer ("Representative"). A Representative other than Customer is not and shall not be a party or third party beneficiary to this Agreement.

By (1) selecting the "Accept" or similar button at the end of this Agreement; and/or (2) proceeding with the installation, use or reproduction of this Product, or authorizing any other person to do so, Customer irrevocably and unconditionally agrees to be bound by the terms and conditions of this Agreement. By assenting to the terms of this Agreement and in consideration of EMC's consent to license this Product to Customer subject to the terms herein, Customer hereby waives to the maximum extent permitted by applicable law any claim against EMC in any jurisdiction in the world concerning the validity or enforceability of this Agreement. If the terms of this Agreement are considered an offer by EMC, acceptance by Customer is expressly limited to these terms to the exclusion of all other terms.

If Customer does not agree with the terms of this Agreement, then Customer or its Representative shall (1) select the "Decline" or similar button at the end of this Agreement; (2) immediately cease any installation, use or reproduction of this Product; (3) uninstall and remove this Product from Customer's or any third party's equipment, along with any partial or full copies made using the Product; and (4) return the Product along with proof of purchase, to either the Distributor from which the Product was obtained, or if purchased from EMC, to EMC Corporation at 176 South Street, Hopkinton, MA 017480-9103, U.S.A.

1. DEFINITIONS.

A. "Confidential Information" means and includes the terms of this Agreement (including all Quotes), the Products and Support Tools and all confidential and proprietary information of EMC or Customer, including without limitation all business plans, product plans, financial information, software, designs, and technical, business and financial data of any nature whatsoever (including, without limitation, and marketing, pricing and other information regarding the Products), provided that such information is marked or designated in writing as "confidential," "proprietary," or any other similar term or designation. Confidential Information does not include information that is (i) rightfully in the receiving party's possession without obligation of confidentiality prior to receipt from the disclosing party, (ii) a matter of public knowledge through no fault of the receiving party, (iii) rightfully furnished to the receiving party by a third party without restriction on disclosure or use; or (iv) independently developed by the receiving party without use of or reference to the disclosing party's Confidential Information.

B. "Customer" means either (i) a natural person who is personally bound by the terms of this Agreement and utilizes the Product for personal use and not within the scope of employment with a business entity; or (ii) a business entity, its officers, directors, proprietors, trustees, owners, principals, employees, contractors, agents or representatives.

C. "Distributor" means a reseller, distributor, system integrator, service provider, independent software vendor, value-added reseller, OEM or other partner that is authorized by EMC to license the Product to end users. The term shall also refer to any third party duly authorized by a Distributor to license the Products to end users.

D. "Documentation" means the then-current, generally available, written user manuals and online help and guides for the Product provided by EMC.

E. "EMC" means (1) EMC Corporation, if Customer is domiciled in the United States, Puerto Rico, Mexico or Canada; (2) the following named wholly-owned affiliate of EMC Corporation, if Customer is domiciled in the country in parenthetical: EMC Computer Systems Argentina S.A. (Argentina), EMC Computer-Systems Brasil Ltda. (Brazil), EMC Chile S.A. (Chile), EMC del Peru, S.A (Peru), EMC Computer Systems Venezuela, S.A. (Venezuela), EMC Global Holdings Company (Australia Branch) (Australia), EMC Computer Systems (Beijing) Co., Ltd. (China), EMC Japan K.K. (Japan), Hankook EMC Computer Systems Chusik House, Hong Kong Branch (South Korea), EMC Corporation (New Zealand Branch) (New Zealand), EMC Computer Systems (South Asia) Pte Ltd (Philippines), EMC Information Systems N.V. (Belgium), EMC Czech Republic s.r.o. (Czech Republic), EMC Computer Systems Danmark A/S (Denmark), EMC Computer-Systems OY (Finland), EMC Computer Systems France S.A. (France), EMC Deutschland GmbH (Germany), Information Systems EMC Greece S.A. (Greece), EMC Hungary Trading and Servicing Ltd. (Hungary), EMC Computer-Systems Ireland Ltd. (Ireland), EMC Computer Storage Systems (Sales and Services) Ltd. (Israel), EMC Computer Systems Italia S.p.A (Italy), EMC Computer Systems (Benelux) B.V. (Netherlands),

THE ABOVE PASS THROUGH PROVISION IS FOR FOLLOWING PRODUCTS ONLY:

Basic Package		
AX/WX Concurrent licenses	456-100-474	APPLICATIONXTENDER SERVER - 2500 CC USER
	456-100-473	APPLICATIONXTENDER SERVER - 1000 CC USER
	456-100-472	APPLICATIONXTENDER SERVER - 500 CC USER
	456-100-475	APPLICATIONXTENDER SERVER - 5000 CC USER
	456-100-471	APPLICATIONXTENDER SERVER - 250 CC USER
	456-100-470	APPLICATIONXTENDER SERVER - 100 CC USER
	456-100-469	APPLICATIONXTENDER SERVER - 75 CC USER
	456-100-468	APPLICATIONXTENDER SERVER - 50 CC USER
	456-100-467	APPLICATIONXTENDER SERVER - 25 CC USER
	456-100-466	APPLICATIONXTENDER SERVER - 10 CC USER
	456-100-465	APPLICATIONXTENDER SERVER - 5 CC USER
	456-100-463	APPLICATIONXTENDER SERVER - 1 CC USER
	456-100-464	APPLICATIONXTENDER SERVER - 3 CC USER
	456-100-462	APPLICATIONXTENDER SERVER 500-999 ADD-ON - QTY 10
	456-100-461	APPLICATIONXTENDER SERVER 250-499 ADD-ON - QTY 5
	456-100-460	APPLICATIONXTENDER SERVER 100-250 ADD-ON - QTY 5
	456-100-459	APPLICATIONXTENDER SERVER 75-99 ADD-ON - QTY 5
	456-100-458	APPLICATIONXTENDER SERVER 50-74 ADD-ON - QTY 5
	456-100-457	APPLICATIONXTENDER SERVER 25-49 ADD-ON - QTY 5
AX Image Capture	456-100-425	APPLICATIONXTENDER IMAGE CAPTURE SERVER
AX SDK	456-100-451	APPXTENDER SDK, CDK AND WEB SERVICES DOC KIT
	456-100-402	APPLICATIONXTENDER WEB SERVICES

Deluxe Package		
AX/ERMX/WX Concurrent Licenses	456-100-474	APPLICATIONXTENDER SERVER - 2500 CC USER
	456-100-473	APPLICATIONXTENDER SERVER - 1000 CC USER
	456-100-472	APPLICATIONXTENDER SERVER - 500 CC USER
	456-100-475	APPLICATIONXTENDER SERVER - 5000 CC USER
	456-100-471	APPLICATIONXTENDER SERVER - 250 CC USER
	456-100-470	APPLICATIONXTENDER SERVER - 100 CC USER
	456-100-469	APPLICATIONXTENDER SERVER - 75 CC USER
	456-100-468	APPLICATIONXTENDER SERVER - 50 CC USER
	456-100-467	APPLICATIONXTENDER SERVER - 25 CC USER
	456-100-466	APPLICATIONXTENDER SERVER - 10 CC USER
	456-100-465	APPLICATIONXTENDER SERVER - 5 CC USER
	456-100-463	APPLICATIONXTENDER SERVER - 1 CC USER
	456-100-464	APPLICATIONXTENDER SERVER - 3 CC USER
	456-100-462	APPLICATIONXTENDER SERVER 500-999 ADD-ON - QTY 10
	456-100-461	APPLICATIONXTENDER SERVER 250-499 ADD-ON - QTY 5
	456-100-460	APPLICATIONXTENDER SERVER 100-250 ADD-ON - QTY 5
	456-100-459	APPLICATIONXTENDER SERVER 75-99 ADD-ON - QTY 5
	456-100-458	APPLICATIONXTENDER SERVER 50-74 ADD-ON - QTY 5
	456-100-457	APPLICATIONXTENDER SERVER 25-49 ADD-ON - QTY 5
ERMX Server with PDF	456-100-439	APPXTENDER REPORTS MANAGEMENT SERVER
	456-100-392	APPLICATIONXTENDER REPORTS MGMT PDF
AX Image Capture	456-100-425	APPLICATIONXTENDER IMAGE CAPTURE SERVER
AX SDK	456-100-451	APPXTENDER SDK, CDK AND WEB SERVICES DOC KIT
	456-100-402	APPLICATIONXTENDER WEB SERVICES
OCR Network Server	456-100-427	APPXTENDER OCR SERVER
AX Media Distribution	456-100-386	APPLICATIONXTENDER MEDIA DISTRIBUTION LICENSE
	456-100-426	APPTENDER MEDIA DIST REINTEGRATION WIZARD
EMC Captiva Quickscan Pro for AX	456-100-376	EMC Captiva Quickscan Pro for ApplicationXtender
X Dx	MISC-DOCX-SW	xDoc
Premium Package		
AX/ERMX/WX Concurrent Licenses	456-100-474	APPLICATIONXTENDER SERVER - 2500 CC USER
	456-100-473	APPLICATIONXTENDER SERVER - 1000 CC USER
	456-100-472	APPLICATIONXTENDER SERVER - 500 CC USER
	456-100-475	APPLICATIONXTENDER SERVER - 5000 CC USER
	456-100-471	APPLICATIONXTENDER SERVER - 250 CC USER
	456-100-470	APPLICATIONXTENDER SERVER - 100 CC USER

	456-100-469	APPLICATIONXTENDER SERVER - 75 CC USER
	456-100-468	APPLICATIONXTENDER SERVER - 50 CC USER
	456-100-467	APPLICATIONXTENDER SERVER - 25 CC USER
	456-100-466	APPLICATIONXTENDER SERVER - 10 CC USER
	456-100-465	APPLICATIONXTENDER SERVER - 5 CC USER
	456-100-463	APPLICATIONXTENDER SERVER - 1 CC USER
	456-100-464	APPLICATIONXTENDER SERVER - 3 CC USER
	456-100-462	APPLICATIONXTENDER SERVER 500-999 ADD-ON - QTY 10
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AX SDK	456-100-451	APPXTENDER SDK, CDK AND WEB SERVICES DOC KIT
	456-100-402	APPLICATIONXTENDER WEB SERVICES
OCR Network Server	456-100-427	APPXTENDER OCR SERVER
AX Media Distribution	456-100-386	APPLICATIONXTENDER MEDIA DISTRIBUTION LICENSE
	456-100-426	APPTENDER MEDIA DIST REINTEGRATION WIZARD
EMC Captiva Quickscan Pro for AX	456-100-376	EMC Captiva Quickscan Pro for ApplicationXtender
X-Doc	MISC-DOCX-SW	xDoc
WFX Server	456-100-452	APPXTENDER WORKFLOW SERVER
	456-100-453	APPXTENDER WORKFLOW PROCESS BUILDER
WFX Concurrent Licenses	456-100-407	APPXTENDER WORKFLOW SERVER - 5 CC USERS
	456-100-408	APPXTENDER WORKFLOW SERVER - 10 CC USERS
	456-100-409	APPXTENDER WORKFLOW SERVER - 25 CC USERS
	456-100-410	APPXTENDER WORKFLOW SERVER - 100 CC USERS
	456-100-411	APPXTENDER WORKFLOW SERVER - 500 CC USERS
	457-100-073	APPLICATIONXTENDER WORKFLOW ACCOUNTS PAYABLE
	457-100-072	WORKFLOWXTENDER AP STARTER PK 5 USER
	457-100-074	WORKFLOWXTENDER AP STARTER PK 10 USER
AX Doc Routing	456-100-417	APPLICATIONXTENDER DOCUMENT ROUTING - 50 USERS
	456-100-418	APPLICATIONXTENDER DOCUMENT ROUTING - 100 USERS
	456-100-419	APPLICATIONXTENDER DOCUMENT ROUTING - 250 USERS
	456-100-420	APPLICATIONXTENDER DOCUMENT ROUTING - 500 USERS

PASS-THROUGH PROVISIONS
ORACLE CORPORATION

END USER TERMS FOR THE GOLDEN GATE PRODUCT

For the purposes of these end user terms, **"Software"** means the Oracle/GoldenGate licensed software.

1. Client is granted a non-exclusive, non-transferable, revocable license to install and execute the Software. Client may only use the Software to capture data from, or deliver data to, a Cerner product, through the standard interfaces exposed by Oracle Corporation ("Oracle") for such capture and delivery. To the extent Oracle/GoldenGate delivers with the Software the software of third parties ("Third Party Software"), such third Party Software is subject to separate terms and conditions included with, or contained in the setup installation segments of, such Third Party Software.

2. Client acknowledges that the Software and its structure, organization and source code constitute valuable trade secrets of Oracle. All Software, documentation and intellectual property rights therein are the exclusive property of Oracle.

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4. Client may not export or re-export the Software without the appropriate United States or foreign government licenses.

5. Oracle and its suppliers disclaim all express and implied warranties regarding the Software.

6. Oracle disclaims all liability.

7. Oracle is named as an intended third party beneficiary of these End-User Terms, with the right to enforce its terms directly against Client.

8. Should Client install the Software itself, Client is required to purchase training and installation services.

SENSAGE, INC.

PASS-THROUGH PROVISIONS

1. **Definitions.**

SenSage: means SenSage, Inc.

Agreement: means this End User License Agreement which consists of this Agreement, any attachments and any and all Order Forms executed by SenSage and Licensee which reference this Agreement.

Documentation: means any technical specification documentation generally made available by SenSage to its customers with regard to the Software.

Licensee: means the customer and end user of the Software identified in the applicable Order Form.

Order Form: means the SenSage purchase agreement under which the Software licenses and related services were purchased by Licensee.

Software: means the SenSage software products in object code form specified in an Order Form. "Software" shall also include any Updates and/or Upgrades to the same Software product provided to or purchased by Licensee under this Agreement. Unless otherwise noted, the Software and Documentation are referred to collectively herein as "Software".

2. **License**.

2.1 Grant of License. Subject to all of the terms and conditions of this Agreement, SenSage grants Licensee a non-transferable, non-sublicensable, non-exclusive license to use the Software, but only in accordance with (i) the Documentation, (ii) this Agreement and (iii) any term, user, central processing unit ("cpu"), computer, field of use or other restrictions set forth in the applicable Order Form.

2.2 Installation and Copies: Licensee may copy and install on Licensee's computers for use only by Licensee's employees as many copies of the Software as is designated in the applicable Order Form. Licensee may also make a reasonable number of copies of the Software for non-production development purposes, back-up, disaster recovery and archival purposes.

2.3 License Restrictions. Licensee shall not (and shall not allow any third party to):

(a) decompile, disassemble, or otherwise reverse engineer the Software or attempt to reconstruct or discover any source code, underlying ideas, algorithms, file formats or programming interfaces of the Software by any means whatsoever (except and only to the extent that applicable law prohibits or restricts reverse engineering restrictions);

(b) distribute, sell, sublicense, rent, lease or use the Software (or any portion thereof) for time sharing, hosting, service provider or like purposes;

(c) remove any product identification, proprietary, copyright or other notices contained in the Software;

(d) modify any part of the Software, create a derivative work of any part of the Software, or incorporate the Software into or with other software, except to the extent expressly authorized in writing by SenSage; or

(e) publicly disseminate performance information or analysis (including, without limitation, benchmarks) from any source relating to the Software.

3. **Ownership.** Notwithstanding anything to the contrary contained herein (except for the limited license rights expressly provided herein), SenSage and its suppliers have and will retain all rights, title and interest in and to the Software (including, without limitation, all patent rights, copyrights, trademarks, service marks, related goodwill, and confidential and proprietary information) and all modifications to, and derivative works based upon, the Software.

4. **Payment.** All payments shall be made in U.S. dollars within thirty (30) days of Licensee's receipt of the applicable invoice, unless otherwise specified in writing by SenSage. Licensee shall be

responsible for all taxes, withholdings, duties and levies arising from the order (excluding taxes based on the net income of SenSage). Any late payments shall be subject to a service charge equal to 1.5% per month of the amount due or the maximum amount allowed by law, whichever is less.

5. Term of Agreement.

5.1 Term. This Agreement is effective as of the Effective Date and expires on the day that the term of license for all Software licensed hereunder has expired (the "Term").

5.2 Termination. Either party may terminate this Agreement (including all related Order Forms) if the other party: (a) fails to cure any material breach of this Agreement within thirty (30) days after written notice of such breach; (b) ceases operation without a successor; (c) or seeks protection under any bankruptcy, receivership, trust deed, creditors arrangement, composition or comparable proceeding, or if any such proceeding is instituted against such party (and not dismissed within sixty (60) days)). Termination is not an exclusive remedy and the exercise by either party of any remedy under this Agreement will be without prejudice to any other remedies it may have under this Agreement, by law, or otherwise.

5.2 Survival. Upon any expiration or termination of this Agreement, Licensee shall cease any and all use of the Software and destroy all copies thereof and so certify to SenSage in writing. Sections 2.4 (License Restrictions), 3 (Ownership), 4 (Payment), 5 (Term of Agreement), 6.3 (Disclaimer of Warranties), 9 (Limitation of Remedies and Damages), 11 (Confidential Information) and 12 (General) shall survive any termination or expiration of this Agreement.

6. Limited Warranty and Disclaimer.

6.1 Limited Warranty. SenSage warrants to Licensee that for a period of ninety (90) days from the Effective Date (the "Warranty Period"), the Software shall operate in substantial conformity with the Documentation. SenSage does not warrant that Licensee's use of the Software will be uninterrupted or error-free. SenSage's sole liability (and Licensee's exclusive remedy) for any breach of this warranty shall be, in SenSage's sole discretion, to use commercially reasonable efforts to provide Licensee with an error-correction or work-around which corrects the reported non-conformity, or if SenSage determines such remedies to be impracticable within a reasonable period of time, to refund the license fee paid for the Software. SenSage shall have no obligation with respect to a warranty claim unless notified of such claim within the Warranty Period.

6.2 Exclusions. The above warranty shall not apply: (i) if the Software is used with hardware or software not specified in the Documentation; (ii) if any modifications are made to the Software by Licensee or any third party; (iii) to defects in the Software due to accident, abuse or improper use by Licensee; or (iv) to any third-party code provided with the Software or code provided on a no charge or evaluation basis.

6.3 Disclaimer. THIS SECTION 6 IS A LIMITED WARRANTY, AND SETS FORTH THE ONLY WARRANTIES MADE BY SENSAGE. NEITHER SENSAGE NOR ITS SUPPLIERS MAKES ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NONINFRINGEMENT. LICENSEE MAY HAVE OTHER STATUTORY RIGHTS. HOWEVER, TO THE FULL EXTENT PERMITTED BY LAW, THE DURATION OF STATUTORILY REQUIRED WARRANTIES, IF ANY, SHALL BE LIMITED TO THE LIMITED WARRANTY PERIOD.

7. Support & Maintenance. Licensee shall be entitled to the level of Support & Maintenances specified and paid for by Licensee in the applicable Order Form. Support shall be provided subject to the Support & Maintenance Terms attached hereto and incorporated into this Agreement by this reference.

8. Professional Services. SenSage shall provide the number of person-days of professional

consulting services ("Professional Services") purchased in the applicable Order Form. The parties acknowledge that the scope of the Professional Services provided hereunder consists solely of: (i) assistance with Software installation, deployment, and usage; and/or (ii) development and/or delivery of additional related SenSage copyrighted software or code. Licensee shall have a license right to use anything delivered as part of the Professional Services subject to the terms of its license to use the Software, but SenSage shall retain all right, title and interest in and to any such work product, code or Software and any derivative, enhancement or modification thereof created by SenSage (or its agents).

9. Limitation of Remedies and Damages.

9.1 NEITHER PARTY SHALL BE LIABLE FOR ANY LOSS OF USE, LOST DATA, INTERRUPTION OF BUSINESS, OR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND (INCLUDING LOST PROFITS), REGARDLESS OF THE FORM OF ACTION, WHETHER IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHERWISE, EVEN IF INFORMED OF THE POSSIBILITY OF SUCH DAMAGES IN ADVANCE. THIS SECTION 9.1 SHALL NOT APPLY TO LICENSEE WITH RESPECT TO ANY CLAIM ARISING UNDER THE SECTIONS TITLED "LICENSE RESTRICTIONS" OR "CONFIDENTIAL INFORMATION".

9.2 NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT, SENSAGE'S ENTIRE LIABILITY TO LICENSEE UNDER THIS AGREEMENT SHALL NOT EXCEED THE AMOUNT ACTUALLY PAID BY LICENSEE TO SENSAGE UNDER THIS AGREEMENT.

9.3 The parties agree that the limitations specified in this Section 9 will survive and apply even if any limited remedy specified in this Agreement is found to have failed of its essential purpose.

10. Indemnification. SenSage shall indemnify and hold harmless Licensee from and against any claim of infringement of a United States, Canadian, European Union, Japanese or Australian ("Covered Country") patent, Covered Country copyright, or Covered Country trademark or Covered Country trade secret asserted against Licensee by a third party based upon Licensee's authorized use of the Software, provided that SenSage shall have received from Licensee: (i) prompt notice of such claim (but in any event notice in sufficient time for SenSage to respond without prejudice); (ii) the exclusive right to control and direct the investigation, defense, and/or settlement of such claim; and (iii) all reasonable necessary cooperation of Licensee. If Licensee's use of any of the Software is, or in SenSage's opinion is likely to be, enjoined due to the type of infringement specified above, or if required by settlement, SenSage may, in its sole discretion: (a) substitute for the Software substantially functionally similar programs and documentation; (b) procure for Licensee the right to continue using the Software; or if (a) and (b) are commercially impracticable, (c) terminate the Agreement and refund the license fee paid by Licensee as reduced to reflect a five (5) year straight-line depreciation from the applicable license purchase date. The foregoing indemnification obligation of SenSage shall not apply: (1) if the Software is modified by any party other than SenSage, but solely to the extent the alleged infringement is caused by such modification; (2) the Software is combined with other non-SenSage products or process not authorized by SenSage, but solely to the extent the alleged infringement is caused by such combination; (3) to any unauthorized use of the Software; or (4) to any third-party code contained within the Software. THIS SECTION 10 SETS FORTH SENSAGE'S SOLE LIABILITY AND LICENSEE'S SOLE AND EXCLUSIVE REMEDY WITH RESPECT TO ANY CLAIM OF INTELLECTUAL PROPERTY INFRINGEMENT.

11. Confidential Information. Each party agrees that all code, inventions, know-how, business, technical and financial information it obtains ("Receiving Party") from the disclosing party ("Disclosing Party") constitute the confidential property of the Disclosing Party ("Confidential Information"), provided that it is identified as confidential at the time of disclosure or should be reasonably known by the Receiving Party to be Confidential Information due to the nature of the information disclosed and the circumstances surrounding the disclosure. Any software, documentation or technical information provided by SenSage (or its agents) shall be deemed Confidential Information of SenSage without any marking or further designation. Except as

expressly authorized herein, the Receiving Party will hold in confidence and not use or disclose any Confidential Information. The Receiving Party's nondisclosure obligation shall not apply to information which the Receiving Party can document: (i) was rightfully in its possession or known to it prior to receipt of the Confidential Information; (ii) is or has become public knowledge through no fault of the Receiving Party; (iii) is rightfully obtained by the Receiving Party from a third party without breach of any confidentiality obligation; (iv) is independently developed by employees of the Receiving Party who had no access to such information; or (v) is required to be disclosed pursuant to a regulation, law or court order (but only to the minimum extent required to comply with such regulation or order and with advance notice to the Disclosing Party). The Receiving Party acknowledges that disclosure of Confidential Information would cause substantial harm to the Disclosing Party that could not be remedied by the payment of damages alone and therefore that upon any such disclosure by the Receiving Party the Disclosing Party shall be entitled to appropriate equitable relief in addition to whatever remedies it might have at law.

12. General.

12.1 Assignment. This Agreement will bind and inure to the benefit of each party's permitted successors and assigns. SenSage may assign this Agreement to any affiliate or to any assignee of all or substantially all of SenSage's assets (whether pursuant to a merger, change of control or otherwise). Licensee may not assign or transfer this Agreement, in whole or in part, without SenSage's written consent. Any attempt to transfer or assign this Agreement without such written consent will be null and void.

12.2 Severability. If any provision of this Agreement shall be adjudged by any court of competent jurisdiction to be unenforceable or invalid, that provision shall be limited to the minimum extent necessary so that this Agreement shall otherwise remain in effect.

12.3 Governing Law; Jurisdiction and Venue. This Agreement shall be governed by the laws of the State of California and the United States without regard to conflicts of laws provisions thereof, and without regard to the United Nations Convention on the International Sale of Goods. Unless waived by SenSage in its sole discretion, the jurisdiction and venue for actions related to the subject matter hereof shall be the California state and United States federal courts located in San Francisco, California, and both parties hereby submit to the personal jurisdiction of such courts.

12.4 Attorneys' Fees and Costs. The prevailing party in any action to enforce this Agreement will be entitled to recover its attorneys' fees and costs in connection with such action.

12.5 Notices and Reports. Any notice or report hereunder shall be in writing to the notice address set forth above and shall be deemed given: (i) upon receipt if by personal delivery; (ii) upon receipt if sent by certified or registered U.S. mail (return receipt requested); or (iii) one day after it is sent if by next day delivery by a major commercial delivery service.

12.6 Amendments; Waivers. No supplement, modification, or amendment of this Agreement shall be binding, unless executed in writing by a duly authorized representative of each party to this Agreement. No waiver will be implied from conduct or failure to enforce or exercise rights under this Agreement, nor will any waiver be effective unless in a writing signed by a duly authorized representative on behalf of the party claimed to have waived. No provision of any purchase order or other business form employed by Licensee will supersede the terms and conditions of this Agreement, and any such document relating to this Agreement shall be for administrative purposes only and shall have no legal effect.

12.7 Entire Agreement. This Agreement is the complete and exclusive statement of the mutual understanding of the parties and supersedes and cancels all previous written and oral agreements and communications relating to the subject matter of this Agreement.

12.8 Audit Rights. Upon SenSage's written request, Licensee shall furnish SenSage with a signed certification certifying that the Software is being used pursuant to the terms of this Agreement including any copy and user limitations. With prior reasonable notice, SenSage may audit the copies of the Software in use by Licensee provided such audit is during regular business hours; Licensee is responsible for such audit costs only in the event the audit reveals a discrepancy, of five percent (5%) or greater, on the part of

Licensee.

12.9 Independent Contractors. The parties to this Agreement are independent contractors. There is no relationship of partnership, joint venture, employment, franchise or agency created hereby between the parties. Neither party will have the power to bind the other or incur obligations on the other party's behalf without the other party's prior written consent.

12.10 Force Majeure. Neither party shall be liable to the other for any delay or failure to perform any obligation under this Agreement (except for a failure to pay fees) if the delay or failure is due to unforeseen events, which occur after the signing of this Agreement and which are beyond the reasonable control of the parties, such as strikes, blockade, war, terrorism, riots, natural disasters, refusal of license by the government or other governmental agencies, in so far as such an event prevents or delays the affected party from fulfilling its obligations and such party is not able to prevent or remove the force majeure at reasonable cost.

12.11 Government End-Users. As defined in U.S. Federal Acquisition Regulations (FAR), the Software and documentation licensed in this Agreement are deemed to be "commercial items" and "commercial computer software" and "commercial computer software documentation." Consistent with applicable FAR sections, any use, modification, reproduction, release, performance, display, or disclosure of such commercial software or commercial software documentation by the U.S. government shall be governed solely by the terms of this Agreement and shall be prohibited except to the extent expressly permitted by the terms of this Agreement. Further, Licensee represents and warrants that it is not a governmental entity or agency nor a quasi-governmental entity or agency.

12.12 Third-Party Code. If designated in the Documentation, the Software may contain or be provided with certain third-party code (including code which may be made available in source code form). Ownership, use, warranty and other rights and terms with respect to any such designated code shall be as expressly set forth in the Documentation.

12.13 Export Compliance. Licensee acknowledges that the Software is subject to export restrictions by the United States government and import restrictions by certain foreign governments. Licensee shall not and shall not allow any third-party to remove or export from the United States or allow the export or re-export of any part of the Software or any direct product thereof: (i) into (or to a national or resident of) Cuba, Iran, Iraq, Libya, North Korea, Serbia, Sudan, Syria or Taliban Occupied Afghanistan; (ii) to anyone on the U.S. Commerce Department's Table of Denial Orders or U.S. Treasury Department's list of Specially Designated Nationals; (iii) to any country to which such export or re-export is restricted or prohibited, or as to which the United States government or any agency thereof requires an export license or other governmental approval at the time of export or re-export without first obtaining such license or approval; or (iv) otherwise in violation of any export or import restrictions, laws or regulations of any United States or foreign agency or authority. Licensee agrees to the foregoing and warrants that it is not located in, under the control of, or a national or resident of any such prohibited country or on any such prohibited party list. The Software is further restricted from being used for the design or development of nuclear, chemical, or biological weapons or missile technology without the prior permission of the United States government.

PASS-THROUGH PROVISIONS
MERGE HEALTHCARE

END-USER LICENSE AGREEMENT

The products that are the subject of the Client agreement ("***Underlying Agreement***") to which this *End-User License Agreement* (the "***EULA***") is attached contain software, hardware and/or services provided by Merge Healthcare Solutions Inc. ("***Merge Healthcare***"). Client and its affiliates (which may also be referred to as "***End-User***") acknowledges the restrictions, limitations, disclaimers and other provisions set forth below in this EULA.

1. License Term. The term of End-User's license for the Merge Healthcare software shall be for the term set forth in the Underlying Agreement or an applicable order thereunder. In no event, however, shall End-User's license of the Merge Healthcare software continue after termination of the Underlying Agreement. Upon any termination of this EULA or of the Underlying Agreement, licenses for all Merge Healthcare software are immediately revoked and End-User shall immediately cease use of all Merge Healthcare software.

2. License Restrictions. End-User's license of the Merge Healthcare software is a non-exclusive, non-sublicensable, non-transferable, personal license that is limited End-User's right to install, execute and use the Merge Healthcare software, in object code form only, solely for End-User's internal business purposes and solely in connection with and subject to the license restrictions set forth in this EULA, as further limited by the Underlying Agreement. The Merge Healthcare software may only be accessed and used by End-User and only at End-User's location set forth in the Underlying Agreement and for the term set forth in the Underlying Agreement or an applicable order thereunder, however in no event shall End-User's license of the Merge Healthcare software continue after termination of the Underlying Agreement. End-User's use of the Merge Healthcare software is further restricted as are set forth in the Underlying Agreement or Orders placed thereunder, including the number of users; locations at which the Merge Healthcare software may be used; and the number of Procedures performed annually with the Merge Healthcare software. In the event that the Merge Healthcare software is used in excess of the foregoing restrictions, then End-User shall be liable for additional license fees to be determined at Merge Healthcare's then-prevailing rates. For purposes hereof, unless otherwise defined in the Underlying Agreement, "***Procedure***" shall mean, as applicable for the particular Merge Healthcare software application, each of the following managed by the software: unique captured study having a unique DICOM study instance UID; unique exam code with one or more procedure codes in an approved status; completed clinical report.

   Merge Healthcare and its suppliers reserve any and all rights, implied or otherwise, which are not expressly granted to End-User hereunder, and retain all rights, title and interest in and to the software. Except to the extent expressly permitted herein or in the Sales Order, End-User shall not:

   - Permit any parent, subsidiary, affiliated entity or other third party to access or use the Merge Healthcare software, or to use the Merge Healthcare software to perform consulting or training services for a third party;
   - Except as specifically licensed and with appropriate and applicable incremental fees to Merge Healthcare for increases in the annual study volume resulting therefrom, sell, lease, share, loan, encumber, license, sublicense, distribute or transfer the Merge Healthcare software to third parties, otherwise permit the use of or access to the Merge Healthcare Product by any third party, nor in any manner use the Merge Healthcare Product to provide hosting, application service provider, service bureau, time sharing, outsourcing or other services to third parties, nor allow the Merge Healthcare Product to be used in any commercial time share arrangement;
   - Translate, reverse engineer, decompile or disassemble or otherwise attempt to derive the source code of the Merge Healthcare software, except and only to the extent that the foregoing restriction is prohibited by applicable law. If the immediately foregoing provision is prohibited by applicable law, End-User shall provide Merge Healthcare with a detailed prior written notice of any such intention to reverse engineer the Merge Healthcare software and shall provide Merge Healthcare with a right of first refusal to perform such work at rates equal to those proposed by a recognized third-party software services provider for such work.;
   - Use any component of the Merge Healthcare software (including components that have been provided by third party licensors of Merge Healthcare) on a standalone basis;
   - Modify, adapt, create derivative works based on the Merge Healthcare software (but, for the avoidance of doubt, End-User may interface the Merge Healthcare software with other End-User systems and prepare report formats for End-User's own internal business purposes); and/or
   - Use the Merge Healthcare software for any unlawful purpose or in any manner not in accordance with this Agreement.

3. Disclaimer of Warranties. END-USER ACKNOWLEDGES THAT THE MERGE HEALTHCARE SOFTWARE IS PROVIDED TO END-USER WITHOUT WARRANTIES FROM MERGE HEALTHCARE. MERGE HEALTHCARE MAKES AND END-USER RECEIVES NO EXPRESS OR IMPLIED WARRANTIES OF ANY KIND WITH RESPECT TO THE MERGE HEALTHCARE SOFTWARE OR ANY OTHER ANY PRODUCT, OR SERVICE PROVIDED BY MERGE HEALTHCARE. MERGE HEALTHCARE SPECIFICALLY DISCLAIMS AND EXCLUDES ANY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT.

4. Limitation of Damages and Liability. UNDER NO CIRCUMSTANCES SHALL MERGE HEALTHCARE, ITS SUPPLIERS, OR ANY MERGE HEALTHCARE AFFILIATED COMPANY, BE LIABLE OR RESPONSIBLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, WHETHER FORESEEABLE OR UNFORESEEABLE, WHICH END-USER MAY INCUR, EXPERIENCE OR CLAIM (INCLUDING, BUT NOT LIMITED TO, CLAIMS FOR LOSS OF DATA, GOODWILL, PROFITS, INTERRUPTION IN USE OR AVAILABILITY OF DATA, LOST BUSINESS OR LOST OPPORTUNITY) ARISING OUT OF ANY BREACH OF WARRANTY, BREACH OF CONTRACT, MISREPRESENTATION, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, ON ACCOUNT OF ENTERING INTO OR RELYING ON THE UNDERLYING AGREEMENT OR THIS EULA, EVEN IF MERGE HEALTHCARE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES AND NOTWITHSTANDING THE FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY. IN NO EVENT WILL MERGE HEALTHCARE HAVE ANY MONETARY LIABILITY TO END-USER OR TO ANY PARTY MAKING A CLAIM ATTRIBUTABLE TO END-USER ENTERING INTO OR RELYING ON THE UNDERLYING AGREEMENT OR THIS EULA, FOR ANY DAMAGES ARISING FROM OR RELATED TO THE UNDERLYING AGREEMENT OR THIS EULA, REGARDLESS OF WHETHER SUCH LIABILITY IS BASED IN CONTRACT OR IN TORT OR UNDER ANY OTHER LEGAL THEORY (INCLUDING STRICT LIABILITY AND NEGLIGENCE).

5. Medical Responsibility; Indemnification. Anything in this Agreement to the contrary notwithstanding, End-User acknowledges and agrees that Merge Healthcare is not engaged in the practice of medicine, and is not determining appropriate medical use of any of the Merge Healthcare software. Medical treatment and diagnostic decisions, including those arising from the analysis of images, are the responsibility of End-User and its professional healthcare providers. End-User shall indemnify and hold Merge Healthcare and its affiliated companies harmless, and, if requested by Merge Healthcare, defend Merge Healthcare, from all liability, judgments, settlements, losses, expenses and costs resulting from any claim brought by a third party to the extent such claim is based upon or arises out of any of the following: (a) Use of the Merge Healthcare software by End-User (and any user authorized by End-User) other than as authorized under this Agreement; (b) any unlawful or negligent or willful acts or omissions of End-User (and any user authorized by End-User); or (c) any breach of this EULA or the Underlying Agreement by End-User (and any user authorized by End-User).

6. End-User Acknowledgement. End-User acknowledges that the Merge Healthcare software is not intended to replace the skill and judgment of a qualified medical practitioner and should only be used by professionals who have been appropriately trained. End-User shall be responsible for the total security and privacy of the Merge Healthcare software configuration and data (including Protected Health Information) and for taking measures necessary to avoid security breaches (including hacker attacks) of the Merge Healthcare software and system into which it is integrated. Merge Healthcare does not represent or warrant that the Merge Healthcare software and system into which it is integrated will meet End-User's needs; will operate in the combinations that End-User may select for use or with all non-Merge Healthcare software used by End-User; or will operate in a manner that is uninterrupted or error-free. Merge Healthcare does not represent or warrant that all Merge Healthcare software errors will be corrected.

7. Ownership. The Merge Healthcare software is being licensed (not sold) to End-User. End-User acquires only the right to use the Merge Healthcare software in accordance with this EULA as further limited by the Underlying Agreement and does not acquire any rights of ownership nor any implied right of any kind. The Merge Healthcare software and its documentation, and all modifications thereto, and all intellectual property rights therein, are owned by Merge Healthcare and all intellectual property rights in and to the Merge Healthcare software are reserved by Merge Healthcare and/or its suppliers, except as expressly provided for herein. Merge Healthcare shall have all right, title or interest in and to all derivative works based on the Merge Healthcare software. End-User shall not alter, remove or obscure any copyright or other proprietary notices on or in the Merge Healthcare software or documentation.

Mortara Warranty Statement

This Agreement is the entire agreement between you, the End User and Mortara Instrument, Inc. (hereinafter referred to as "Mortara") relating to the Mortara products (hereinafter referred to as the "Products"). The terms of this Agreement shall prevail over any conflicting or additional terms of any order, acknowledgement, click-through agreement, or similar communication between the parties during the term of this Agreement. No modification to this Agreement will be binding, unless in writing and signed on paper by a duly authorized representative of each party.

IF YOU DO NOT AGREE TO THE TERMS OF THIS AGREEMENT, DO NOT USE THE PRODUCTS. PROMPTLY RETURN THEM TO MORTARA.

Mortara hereby warrants that Products, excluding the Stress and Holter products shall be free from defects in material and workmanship under normal use, service and maintenance for a period of twenty-four (24) months from the date of installation of such Product from Mortara or an authorized distributor or representative of Mortara. Stress and Holter products shall have a warranty period of twelve (12) months from such date of installation. Normal use, service and maintenance mean operation and maintenance in accordance with appropriate instructions and/or information guides. This Warranty does not apply to damage to the Products caused by any or all of the following circumstances or conditions:

(a) Freight damage;
(b) Parts and/or accessories of the Products not obtained from or approved by Mortara;
(c) Misapplication, misuse, abuse and/or failure to follow the Product instructions sheets and/or information guides;
(d) Accident or disaster affecting the Products;
(e) Alternations or modifications to the Products not authorized by Mortara.

THE REMEDY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT WITHOUT CHARGE FOR MATERIALS, OF ANY PRODUCTS FOUND UPON EXAMINATION BY MORTARA TO HAVE BEEN DEFECTIVE. ALL LABOR CHARGES INCURRED FOR THE REPAIR OF PRODUCTS WITHIN THE WARRANTY PERIOD ARE THE SOLE RESPONSIBILITY OF MORTARA This remedy shall be conditioned upon receipt of notice by Mortara of any alleged defects after discovery thereof within the warranty period. Mortara's obligations under the foregoing warranty will further be conditioned upon the assumption by the End User of the Products (i) of all carrier charges with respect to any Products returned to Mortara's principal place of business or any other place as specifically designated by Mortara or an authorized distributor or representative of Mortara, and (ii) all risk of loss in transit. It is expressly agreed that the liability of Mortara is limited and that Mortara does not function as an insurer.

Title and Completeness. Mortara warrants that it has clean, marketable and unencumbered title to all Products.

Non-Infringement Warranty. Mortara warrants that the Products and End User's use of the Products in accordance with the documentation will not constitute an infringement or other violation of any patent, trademark, copyright, trade secret or other property right. Mortara will indemnify, defend, and hold harmless the End User Indemnitees from and against all Damages arising out of any claim that the Product(s) or use of the Product(s) constitutes an infringement of any patent, trademark or copyright of any country or the misappropriation of any trade secret or other property right. If an injunction is obtained against End Users use of the Products by reason of an infringement, the End User's sole and exclusive remedy shall be, at the expense of Mortara, either to (a) procure for End User the right to continue using the Products; (b) replace or modify the Products with Products of substantially equivalent functionality so that they become non-infringing; or at the option of End User (c) to grant the End User a refund for the infringing Products.

EXCLUDED FROM THE LIMITED WARRANTIES SET FORTH ABOVE ARE CONSUMABLE ITEMS SUCH AS PAPER, BATTERIES, ELECTRODES, PATIENT CABLES, LEAD WIRES AND MAGNETIC STORAGE MEDIUMS.

EXCEPT FOR MORTARA'S INDEMNIFICATION OBLIGATIONS, IN NO EVENT, INCLUDING THE CLAIM FOR NEGLIGENCE, SHALL MORTARA BE LIABLE FOR INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES, OR FOR ANY OTHER LOSS, DAMAGE OR EXPENSE OF ANY KIND, INCLUDING LOSS OF PROFITS, WHETHER UNDER TORT, NEGLIGENCE OR STRICT LIABILITY THEORIES OF LAW, OR OTHERWISE. THE WARRANTIES ARE

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Indemnification. Mortara will indemnify, defend, and hold harmless End User and its directors, officers, agents, employees and licensees (each, an "End User Indemnitee") from and against all claims, damages, costs, expenses, fees incurred by End User as a result of intellectual property infringement by Mortara and reasonable attorney fees (collectively "Damages") arising out of a claim by a third party against an End User Indemnitee for (i) injury to persons or loss or damage to property to the extent resulting from any intentional or negligent act or omission of Mortara, and (ii) violations of applicable laws by Mortara.

LIGHTHOUSE CONTENT
PASS-THROUGH PROVISIONS

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BUSINESS OBJECTS AMERICAS
PASS-THROUGH PROVISIONS

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GENERAL: This Agreement shall be governed by the laws of California, excluding choice of law principles. The United Nations Convention on Contracts for the Sale of Goods shall not apply to this Agreement. Any modification to the Agreement terms shall be subject to BOA's prior written approval.

GOVERNMENT USE: The Software and accompanying documentation are deemed to be "commercial computer software" and "commercial computer software documentation," respectively, pursuant to DFAR Section 227.7202 and FAR Section 12.212, as applicable. Any use, modification, reproduction release, performance, display or disclosure of the Software and accompanying documentation by the U.S. Government shall be governed solely by this Agreement and shall be prohibited except to the extent expressly permitted by the terms of this Agreement.

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MPages Development Toolkit

The provisions set forth below apply to the MPages Licensed Software and MPages Toolkit) licensed under this Cerner System Schedule.

1. Definitions. For purposes of this Attachment X, these terms have the following meanings:

1.1 "**Customized Data Presentation Component**" means any data presentation component(s) developed solely by Client using the MPages Toolkit.

1.2 "**Intellectual Property Rights**" means any and all now known or hereafter known tangible and intangible (a) rights associated with works of authorship throughout the universe, including copyrights, moral rights, and mask-works, (b) trademark, servicemark, trade dress and trade name rights and similar rights, (c) trade secret rights, (d) patents, designs, algorithms and other industrial property rights, and (e) all other intellectual and industrial property rights (of every kind and nature throughout the universe and however designated (including logos, "rental" rights and rights to remuneration)), whether arising by operation of law, contract, license, or otherwise, and all registrations, initial applications, renewals, extensions, continuations, continuations-in-part, divisions or reissues hereof now or hereafter in force (including any rights in any of the foregoing).

1.3 "**MPages Toolkit**" means the commercially available toolkit with the MPages trademark that is delivered with the MPages Licensed Software.

1.4 "**Work Product**" means any customized or custom computer software programs, documentation, techniques, methodologies, inventions, analysis, frameworks, software, or procedures and other embodiments of Intellectual Property Rights developed, conceived or introduced by Cerner in the course of or as the result of Cerner performing services, whether acting alone or in conjunction with Client or its employees, affiliates or others.

2. License

2.1 Notwithstanding the terms and conditions of the Agreement, Cerner hereby grants to Client a limited, non-exclusive, non-transferable license to use, reproduce and internally distribute the MPages Toolkit, in object code form only, solely to develop, build, operate and support the Customized Data Presentation Component, for Client's internal use in the United States.

2.2 This license grant does not permit Client to use the MPages Toolkit to create or use applications that write to Cerner databases.

2.3 The functional scope of the Customized Data Presentation Component and Client's license to the MPages Toolkit are further limited by the Product Descriptions.

2.4 Cerner also grants to Client a non-exclusive, non-transferable license to use the Work Product supplied to Client by Cerner for Client's own internal purposes solely in conjunction with the System, and for no other purpose whatsoever.

3. Ownership of Intellectual Property Rights

3.1 Client acknowledges that Cerner is the sole and exclusive owner of all Intellectual Property Rights in the MPages Toolkit, Work Product and any related documentation.

3.2 Subject to Cerner's ownership of the MPages Toolkit and the exception in Section 3.4, Client is the sole and exclusive owner of all Intellectual Property Rights in the Customized Data Presentation Component.

3.3 Client is authorized to distribute the Customized Data Presentation Component only through collaborations sponsored by Cerner and on the terms defined by Cerner.

3.4 Nothing in this Schedule shall preclude Client or Cerner from retaining ownership (without the limitations of Section 3.3) in any embodiments of Intellectual Property Rights that existed prior to the development of a Customized Data Presentation Component.

4. General

4.1 Client assumes all responsibility for the Customized Data Presentation Component.

4.2 Client acknowledges and agrees that Cerner will not Support, certify or localize any Customized Data Presentation Component.

END USER LICENSE AGREEMENT ("EULA")

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2. TERMINATION. This Agreement is effective until terminated. You may terminate the Agreement at any time by destroying all copies of the Software including any Software installed on Hardware or client hardware, and media and documentation and by providing Imprivata with written notice. The Agreement will terminate immediately without notice from Imprivata if you fail to comply with any provision of this Agreement. Upon termination, you must destroy all copies of the Software including any Software installed on Hardware or client hardware, and media and documentation. The provisions regarding Confidentiality and your Indemnity of Imprivata will survive termination of this Agreement indefinitely.

3. U.S. GOVERNMENT RESTRICTED RIGHTS. The Software is a "commercial item," as that term is defined in 48 C.F.R. 2.101 (Oct. 1995), consisting in part of "commercial computer software" and "commercial computer software documentation," as such terms are used in 48 C.F.R. 12.212 (Sept. 1995). Consistent with 48 C.F.R. 12,212 and 48 C.F.R. 227.7202-1 through 227.7202-4 (June 1995), all U.S. Government End Users acquire the Software with only those rights set forth herein. Contractor/Manufacturer is: Imprivata, Inc., 10 Maguire Road, Suite 232, Lexington, MA 02421-3120 U.S.A.

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indemnify and hold Imprivata harmless from and against claims, losses, costs, or liability, due to your breach of this Section.

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you to return the Software, including any Software installed on client hardware, media and documentation and upon receipt thereof, Imprivata shall reimburse you for the price originally paid by you therefore, reduced by five year straight line depreciation and this Agreement shall terminate. Upon Imprivata's fulfillment of the alternatives set out in this section, Imprivata shall be relieved of any further obligation or liability to you as a result of any such infringement or misappropriation. THIS SECTION STATES Imprivata'S ENTIRE LIABILITY TO YOU AND YOUR SOLE REMEDY FOR ANY INFRINGEMENT CLAIMS CONCERNING THE SOFTWARE.

8. HIGH RISK ACTIVITIES. The Software is not fault-tolerant and is not developed, intended for use or even for evaluation or trial as on-line control or monitor in hazardous environments requiring fail-safe performance, such as in the operation of nuclear facilities, aircraft navigation or control systems, air traffic control, direct life support machines or weapons systems, in which the failure of the Software could lead to death, personal injury, or severe physical or environmental damages ("High Risk Activities"). Imprivata specifically exclude any express or implied warranty of fitness for High Risk Activities.

9. EQUITABLE RELIEF. It is agreed that because of the proprietary nature of the Software, Imprivata's remedies at law for a breach by you of your obligations under this License will be inadequate and that Imprivata shall, in the event of such breach, be entitled to, in addition to any other remedy available to it, equitable relief, including injunctive relief, without the posting of any bond and in addition to all other remedies provided under this Agreement or available at law.

10. GOVERNING LAW AND VENUE. This agreement and the rights and obligations of the parties will be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts. You hereby submit to the exclusive jurisdiction of the federal and state courts located in Suffolk County, Massachusetts in connection with any dispute arising out of or relating to this Agreement and waive any objection to such venue. The United Nations Convention on Contracts for the International Sale of Goods is specifically excluded from application hereunder.

11. INTEGRATION. This Agreement is the entire agreement between you and Imprivata relating to the Software and supersedes all prior or contemporaneous oral or written communications, proposals and representations with respect to its subject matter. No modification to this Agreement will be binding, unless in writing and signed by a duly authorized representative of each party.

12. QUESTIONS. Should you have any questions, or if you desire to contact Imprivata for any reason, please contact IMPRIVATA, INC., 10 Maguire Road, Suite 232, Lexington, MA 02421-3120 U.S.A.

ATTACHMENT C

RELATED CONTRACTOR SOFTWARE PRODUCT DESCRIPTION

RELATED CONTRACTOR SOFTWARE PRODUCT DESCRIPTION

The following CONTRACTOR licensed software solution descriptions are attached:

Phase 1 System Existing System Software Licenses	CONTRACTOR Solution Code	Software Product Name
PowerChart	• PS-20576 • PV-20570 • CA-22480	• Power Orders • Clinical Data Repository • PowerNote
CareNet	• PS-22719 • PS-22732 • CA-20344 • CA-22700	• Care Documentation • MAR • PowerPlan • CareCompass
Access Management	• CP-20735 • CP-20740	• Cerner Registration Management • Cerner Scheduling Management
PathNet	• PA-20070 • PA-20075 • PA-20080 • PA-22214 (Described in PA-20080)	• General Laboratory • Microbiology • Anatomic Pathology • CAP SNOMED III (International for Pathology)
PharmNet	• PH-20160 • PH-20170 • PH-25201	• Inpatient Pharmacy • Outpatient Pharmacy • Departmental Clinical Supply Chain for Pharmacy
RadNet	• RA-20135	• Radiology Management
Health Information Management	• MR-20400	• Cerner Health Information Management
Supply Chain	• PO-20200	• Materials Management
Open Engine	• OE-20850 • OE-22850 • OE-22870 (Described in OE-22850-22890)	• Open Engine • Open Engine Communications Services • Asynchronous Communications Services
Open Port	• IF-29560	• TCPIP
Open Port Interfaces	• IF-29010 • IF-29050 • IF-29055 • IF-29230 • IF-29720 • IF-29275 • IF-29522	• ADT/Demographics Incoming • Results Incoming(Discrete Data Elements) • Results Incoming(Displayable Text) • Orders Outgoing(with statuses) • Automed Drug Packaging Interface • Billing Outgoing Batch

Phase 1 System Existing System Software Licenses	CONTRACTOR Solution Code	Software Product Name
	• IF-29562 • IF-29665 • MD-TC02 (No Description) • IF-29650 • IF-29655	• Purchase Order Acknowledgment Inbound (855) • Purchase Order Outbound (850) • PC Encoder Interface • Telcor QML Point of Care • Unidirectional Device Interface • Bidirectional Device Interface
CareAware Multi-Media	• QC-1000 (Described in xx-12345 CPDI SD) • 50240 • MM-22271 • MM-22270 • MM-22720 • MM-22276	• CPDI Server Concurrent Connections (50-74) (0050310) • eSignature • Worklist Manager (Modality Worklist) (PACS) • CareAware MultiMedia-DICOM (PACS) • Cerner Provision Workstation (PACS) • CAMM Image Distribution (PACS)
PowerInsight Explorer	• PI-20611	• PowerInsight Explorer
Telemedicine – iNet Virtual	• IC-20393	• Telemedicine – iNet Virtual

Phase 1 New System Software Licenses	CONTRACTOR Solution Code	Software Product Name
P2 Sentinel Enterprise	• CTP-P2S-ENT	• P2 Sentinel Enterprise
724 Access – Downtime Viewer	• CTP-T1-724-DTV (Described in CTP-T1-724-RO REP)	• 724 Access – Downtime Viewer
Open Port	• IF-29720	• AutoMed Drug Packaging Interface

Subscription-Based Phase 1 Application Software Modules	CONTRACTOR Solution Code	Software Product Name
CPT Codes	• KS-22092 – CPT Codes	• CPT Codes
Ambulatory Content Package (KS26982)	• (KS26982) KS-26965 • (KS26982) KS-26960 • (KS26970) KS-26970 • (KS26970) KS-26953	• Medisource Foundation for Ambulatory • PowerNote for Ambulatory • CMT Ambulatory • Executable Knowledge Foundation Ambulatory

Phase 1 Existing Third Party Software	CONTRACTOR Solution Code	Software Product Name
ApplicationXtender Server	• 456-003-002 (See xx-12345 CPDI SD)	• ApplicationXtender Server
CPDI-AX License	• 30751 (Described in xx-12345 CPDI SD)	• CPDI-AX License
Integrated Full Station	• 60960 (See MM-22720 and MM-22270)	• Integrated Full Station
PACS Merge Broker	• 36975 (See MM-22720 and MM-22270) • 26247 (See MM-22720 and MM-22270) • 24472 (See MM-22720 and MM-22270)	• Cerner Provision PACS Broker • Port Broker System • Cedara OPT URS Server/Broker
Phase 1 New Third Party Software	**CONTRACTOR Solution Code**	**Software Product Name**
Golden Gate License for 724DT Perpetual Tier – 0-500 Beds	• GG-T1-724DT (See CTP-T1-724-RO REP)	• Golden Gate License for 724DT Perpetual Tier – 0-500 Beds
P2Sentinel – Sensage Clinical Enterprise 12 Core – 1 Collector	• SEN-CE-12 (See CTP-P2S-ENT)	• P2Sentinel – Sensage Clinical Enterprise 12 Core – 1 Collector
Merge Port Software Integrator's Kit	• SW-0030-246-0001-4	• Merge Port Software Integrators Kit

Phase 2 System Application Software Modules	CONTRACTOR Solution Code	Software Product Name
CareAware MultiMedia	• CTESIG-FAC-(See ATG SVC ESIG) • MM-22260	• Cerner eSignature Facility License • Digital Objects
Power Point of Care	• PH-22780	• Point of Care Medication Administration
PharmNet	• PH-20170 • PH-20160	• Outpatient Pharmacy • Inpatient Pharmacy
Cerner Cardiovascular	• CV-22520	• Powerchart ECG
Patient Accounting	• PF-20450	• Patient Accounting
Women's Health	• WH-102220A	• Powerchart Maternity
Open Port Interfaces	• IF-29200 • IF-29130	• Remittance Incoming • Abstracted Data Incoming

Phase 2 System Application Software Modules	CONTRACTOR Solution Code	Software Product Name
	• IF-29306 • IF-29342 • IF-29343 • IF-29970 • IF-29220	• General Ledger Outgoing • Electronic Healthcare Claims Out - Institutional • Electronic Healthcare Claims Out - Professional • Pyxis Medstation • ADT Demographics Outgoing
CareNet	• CA-22346A	• Advanced Care Documentation

Phase 2 Third Party Software	CONTRACTOR Solution Code	Software Product Name
ApplicationXtender Server	• 456-100-469 (See xx-12345 CPDI SD)	• ApplicationXtender Server
ApplicationXtender Web Services	• 456-100-402	• ApplicationXtender Web Services
AX to CAMM	• 456-100-645_51-100(See xx-12345 CPDI SD)	• AX to CAMM
ApplicationXtender Reports Management Server	• 456-100-439 (See xx-12345 CPDI SD)	• ApplicationXtender Reports Management Server
ApplicationXtender Reports Management PDF	• 456-100-392 (See xx-12345 CPDI SD)	• ApplicationXtender Reports Management PDF
Mortara ECG Viewer Site License (00057725)	• MORT-VIEW (Described in CV-22520)	• Motara ECG Viewer Site License (00057725)
Lexmark Document Distributor	• 43C-0097-CRE-SG	• Lexmark Document Distributor

Phase 2 Application Service Providers	CONTRACTOR Solution Code	Software Product Name
St. John Sepsis	• CE-10300-PKG	• St. John Sepsis
Chart Search	• CE-10200-PKG	• Chart Search

Phase 2 Transaction Services	CONTRACTOR Solution Code	Software Product Name
Eligibility and Benefits Verification	• RC-20325-TRANS • TSEDI-ELIG-BILL (See RC-20325-TRANS) • RC-20331-TRANS	• Eligibility and Benefits Verification • Eligibility and Benefits Monthly Overage Rate • Address Validation

Phase 3 System Application Software Modules	CONTRACTOR Solution Code	Software Product Name
PowerInsight Explorer	• PH-20611 (Described in PI-20754)	• PowerInsight Explorer

Subscription-Based Phase 3 Application Software Modules	CONTRACTOR Solution Code	Software Product Name
Lighthouse: Falls Prevention	• LH-20107	• Lighthouse: Falls Prevention
Lighthouse: Delirium	• LH-20152	• Lighthouse: Delirium
Lighthouse: Restraints	• LH-20169	• Lighthouse: Restraints
Lighthouse: Pressure Ulcer Prevention	• LH-20106	• Lighthouse: Pressure Ulcer Prevention
Lighthouse: Glycemic Control	• LH-20136	• Lighthouse: Glycemic Control
Lighthouse: Sepsis	• LH-20142	• Lighthouse: Sepsis
Lighthouse: Emergent Stroke and TIA Management with eSubmission	• LH-20177	• Lighthouse: Emergent Stroke and TIA Management with eSubmission
Lighthouse: Anticoagulation Management	• LH-20150	• Lighthouse: Anticoagulation Management
Lighthouse: Activity Intolerance and Impaired Mobility	• LH-20127	• Lighthouse: Activity Intolerance and Impaired Mobility

Phase 3 Third Party Software	Solution Code	Software Product Name
SAP Business Objects Runtime License for PowerInsight	• PI-20701	• SAP Business Objects Runtime License for PowerInsight

Optional Systems Application Software Module	Solution Code	Software Product Name
PharmNet	• PH-25201	• Clinically Driven Supply Chain for Pharmacy
Open Port Interfaces	• IF-29562 • IF-29522 • IF-29524 • IF-29526	• Purchase Order Outbound (850) • Purchase Order Acknowledgement Inbound (855) • Advanced Shipment Inbound (856) • Electronic Invoice Inbound (810)
RadNet	• RA-22625	• Mammography Management
iAware	• IW-20450 • IW-20200	• CareAware Infusion Management • CareAware iAware Platform
CareAware iBus	• CI-201000 • CI-200800	• CareAware iBus for POC Medication Administration • CareAware iBus for Bedside Medical

Optional Systems Application Software Module	Solution Code	Software Product Name
	• CI-200855 • CW-CAVLINK (See CI-200855)	Devices • CareAware AlertLink • Cerner CareAware VitalsLink
MPages Development Kit	• PS-22700	• Mpages Development Kit
Digital Dictation	• RA-22252 • RA-22254	• Integrated Digital Dictation Integration Software • Integrated Digital Dictation
Open Port Interfaces	• IF-29687	• Temporary Bedside Device Storage (iBus)

Optional System Third Party Software	Solution Code	Software Product Name
iAccess – Single Sign On	• CTP-IATK-USER	• OneSign SSPW Management • OneSign SSO

Optional Subscriptions	Solution Code	Software Product Name
iBus	• IF-29665	• Cerner Device Manager Library

The solutions set forth in this Agreement may be defined by a Solution Description. Where applicable, such descriptions are referenced by solution to a Solution Description code on the applicable attachment and can also be viewed at http://www.cerner.com/clientresources/solutiondescriptionlookup.

See Attached: Solution Descriptions

ATTACHMENT C

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PathNet	• PA-20070 • PA-20075 • PA-20080 • PA-22214 (Described in PA-20080)	• General Laboratory • Microbiology • Anatomic Pathology • CAP SNOMED III (International for Pathology)
PharmNet	• PH-20160 • PH-20170 • PH-25201	• Inpatient Pharmacy • Outpatient Pharmacy • Departmental Clinical Supply Chain for Pharmacy
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RadNet	• RA-22625	• Mammography Management
iAware	• IW-20450 • IW-20200	• CareAware Infusion Management • CareAware iAware Platform
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See Attached: Solution Descriptions

PowerChart: PowerOrders

Description

PowerOrders® is a major *PowerChart*® offering that coordinates order management and communication across all licensed, hospital-based facilities. *PowerOrders* forms the basis for Cerner's computerized provider order entry (CPOE) solution. As such, *PowerOrders* was designed with the physician workflow in mind, addressing the role's critical information and ordering needs. Along with physicians, other care providers including nurses, clerks and other clinicians are able to support order entry, review, validation, interdepartmental communication, inquiry, and reporting of clinical orders.

A comprehensive security matrix supports management and use of the system. Health personnel, depending on their security level and appropriate interfaces from non-Cerner departmental systems, can place orders for any department. Order inquiries are secured in the same manner.

PowerOrders includes the following components:

- Order Management
- Order Processing
- Order Inquiry
- Electronic Signature
- Charge Capture
- Security
- Foundations

Client Benefits

CPOE has been shown to enhance patient safety and quality, reduce costs and eliminate variance.

- Enhance Patient Safety and Quality
  - A unified closed loop medication management process is enabled when *PowerOrders* is licensed with Cerner's *Inpatient Pharmacy* (PH-20160) and *Medication Administration (MAR)* (PS-22732). Accuracy is improved and errors are prevented by unifying the physician, pharmacist and nurse in a single process.
  - Quality of care is improved through robust point-of-care decision support that provide clinical alerts for potential negative events, conflicts or reminders for wellness-oriented procedures, such as smoking cessation.
  - Paper-based problems are eliminated, including illegibility, communication breakdowns, incomplete information and time delays.
- Improve standardization and regulatory compliance
  - Access at the point of ordering to various types of information, such as order sets incorporating evidence-based clinical protocols and best practice care management guidelines, policies, and patient education materials leads to improved compliance with standards.
- Increase efficiency and save money
  - Efficient order entry is made possible through client-defined order sets with optional and required items. Configurable order screens and panels improve ease of use for unique clinician groups.

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PowerChart: PowerOrders

- Redundant or duplicate orders are reduced with a single facility-wide system.
- Lengths of stay are reduced due to the elimination of errors.
- Assistance is provided for selecting cost-efficient treatment alternatives.
- The system can be configured to eliminate time-consuming and unnecessary activities.
- Billing accuracy is improved. Charges can be captured and sent at any point in the order process: at the time of ordering, upon receipt, upon collection, or when performed.
- Accounts receivable and cash flow are improved through the use of electronic signature. Orders automatically can be routed to the appropriate individuals or roles. Multiple-signature requirements are supported.

- Coordinate care
  - *PowerOrders* enable effective real-time communication across the entire care team; eliminate unnecessary call-backs; and reduce uncertainty about the status of orders or tasks.

Major Features

- *Order Management* – Orders are accepted for all departments from any PC in the health system or facility, including remote PCs, from any individual with the proper security. With an intuitive user interface designed for physicians and other clinicians, users can manage multidepartmental orders, medication orders, order sets, and recurring orders. *PowerOrders* supports critiquing of orders at the time of order creation, providing patient-centered alerts and real-time quality improvement. Conflict checking for drug-allergy, drug-drug, drug-food, and food-allergy interactions and for duplicates is performed at the time of order entry via *MediSource Foundation* (which requires separate licensure).
- Some highlighted ordering features include:
  - Ability to utilize consolidated order entry window.
  - Ability to do online medication reconciliation at the time of admission, transfer and discharge.
  - Single phase order sets allow the physician to quickly place a series of orders associated with a particular patient condition, diagnosis or problem. For example, rather than repeatedly placing the same lab, medication, and activity orders on a number of patients following surgery, order sets can be established for a specific patient population.
  - Personal single phase plans of care can be created based on personal treatment preferences. These plans may be saved and reused across patients.
  - A merge view enables the clinician to perform proactive duplicate checking of a single phase order set against all active orders.
  - Visual indicators permit an order to be associated with other orders for efficient administration of medications.
  - Drop Down Plan Order Sentences let clinicians choose order sentences and

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PowerChart: PowerOrders

quickly select order details. This is required to customize the orders/order sets based on patient need.

- Order favorites support physicians to efficiently organize their most frequently used orders and order sets. Using this feature, physicians can save a prestructured order set and quickly select it from their favorites while placing orders.

- Diagnoses (ICD-9-CM) codes can be linked to orders at the time of order entry.

- When a medication or test is selected, the system offers common ways to order the item, thus allowing quick and easy order entry. Simple navigation features allow clinicians to identify missing information in the order details.

- *Executable Knowledge*® (which requires separate licensure) enables embedding knowledge, evidence and best practices from a variety of industry-leading sources.

- Reference text and URL links, used to support the viewing of evidence, policies, and procedures, can be associated with an orderable.

- A Dose Range Checking component establishes minimum and maximum dose guidelines for the safe administration of medications, so that medication orders can be screened based upon age ranges, routes of administration, single, daily and therapy doses, and other patient-specific modifiers, including renal status. This function provides an alert to clinicians when ordering medications considered outside the safe range for the patient condition. In those cases where the clinician decides to override the alert, the reason is captured.

- Life-Time Cumulative Dosing. A small group of drugs are stored in the body for long periods of time, which can become toxic and dangerous as they continue to accumulate over time. This feature calculates previous medication dosing, and maintains a history of cumulative dosing to prevent adverse effects created when excessive doses are administered over the patient's lifetime. Cerner provides this capability for only specific drugs that have lifetime limits.

- Cumulative dosing therapy checking (planned capability) can enable clinicians to check doses across multiple orders. For example: a patient has orders for Acetaminophen, Percocet and Darvocet-N-100. Cumulative dosing therapy function can check the cumulative dose of acetaminophen across these orders and alert if it is above a daily range.

- Standardized dosing assists in converting difficult-to-administer doses that cannot be accurately measured to doses that match hospital standards. For example, if a medication is ordered for 21.3 mg, based on client-defined parameters, the dose could be standardized by the system to 22mg.

- Tapered dosing allows the clinician to order decreasing/increasing doses of a drug during a single order-entry conversation. This permits tapering the dose over time until the patient no

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longer requires the medication. The feature provides improved accuracy with less effort and no need for nearly identical orders on a daily basis.

- Dose Calculator incorporates patient parameters when determining normalized dose calculation. The dose calculator resides within the ordering conversation so that the clinician can process dose calculations during the ordering process. A preference can be set so that the dose calculator automatically evokes when a normalized dose is entered. For example, the clinician can enter the dose as 5 mg per kilogram and the system automatically will calculate and display a 100 mg dose if the patient's weight is 20 kilograms.

- Weight-based dosing allows for the optimization of medication dosing in accordance with a patient's weight or body surface area (BSA) to ensure safe and effective dosing of medications in pediatric population, or when particularly toxic medications are being ordered.

- *PowerOrders* permits modifying an order without requiring the cancellation of the entire order for the purpose of changing one or more order parameters. Modifications to orders can be made by accessing the order, selecting "Modify," and changing only the details that require revision. The system clearly indicates that a modification has occurred and maintains a single order ID. The original order details, as well as any subsequent modification details (with time and date stamp), are stored in the order history and accessible by any user with the appropriate security clearance for review. Modified details immediately are reflected throughout the system and are available on a real-time basis to all involved clinicians.

- Modifying an order set or protocol prior to a patient's actual visit is supported. The clinician may make changes to a standard group of orders and save changes to individualize patient care prior to placing the orders into an active status. The changes are initiated upon patient arrival.

- *Order Processing* – Order status updates are supported, and via the PowerChart *Clinical Data Repository* (PS-20570), departmental results and foreign system results can be viewed. User-defined requisitions, procedure preparations, consent forms, and labels can be printed at appropriate locations, with licensure of the appropriate software, services, and hardware. Order sheets can be printed at user-defined intervals.

- *Order Inquiry* – Several formats are available to inquire about orders. Inquiry formats are intuitive and designed to meet the varying needs of multiple health professionals.

- Orders can be routed automatically for online review by nurses and physicians.

- *Prescription writing* - Provides users with the tools to facilitate the Prescription Process. The prescription process is defined as the process of selecting an appropriate generic or brand-name medication, checking for potential medication interactions and/or side effects, and finally producing a written prescription that can then be

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handed to a patient or automatically faxed to a retail pharmacy. The writing of any prescription is reduced to as little as two mouse or pen-based clicks.

- *Electronic Signature* – Physicians who prefer electronic queueing and validation of orders are supported. Certain orders can be queued to the attending physician for cosignature, if necessary, before release to the department.

- Order screens and order pick lists can be defined based on medical specialty, department, nursing unit, patient needs, procedure, and any other user-defined designations. Screen views can be defined by location, position, or user.

- *Security* – A comprehensive security system addresses the individual user, procedure, department, or service. Individual security is defined to order, validate, co-sign, perform, verify, and inquire. At the procedure level, order cosignature, nursing validation, inquiry, verification, and performance security levels are defined. Individuals can be restricted to viewing information only on those patients in their assigned locations.

- *Charge Capture*-- This function provides the ability to generate a charge on an order and to credit the charge if the order is cancelled. Your organization can define at what point in the life of the order that the charge drops. Charging based on charting administrations is supported at both the dose and the bulk item dispensed. Clinicians easily can retrieve online charge information using the charge viewer.

- *Foundations* – In addition to the features inherent within *PowerOrders*, *Foundations* functionality also is included. *Foundations* refer to Cerner's definition of those common processes or tasks that are shared across clinical and administrative domains and applications, technical areas, and project or production tasks. *Foundations* is included in all major Cerner licensed software solutions and includes *Technical Components (Technical Environment Management, Security Management, User Management,* and so on), *Functional Components* (for example, *Person Management, Order Management,* and *Result Processing),* and *Operational Components (Operation/System Management, System Integration,* and so on). The majority of the componentry applies to all Cerner solutions, though a few specific components may not be applicable to every solution line. Refer to the *Foundations* Solution Description for more information

Cerner Millennium Integration Benefits

Benefits of using *PowerOrders* in a Cerner Millennium® environment include the following:

- Orders tailored to the department with licensing of the appropriate Cerner departmental systems, with order status updates as a by-product of order processing by these systems.

- Duplicate checking according to the departmental settings of other Cerner departmental systems.

- Elimination of paper requisitions and worklists, faxed or hand-delivered orders, and transcription of orders to multiple documents with licensing of the appropriate Cerner departmental systems.

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PowerChart: PowerOrders

- Data management and operational functions established for sites having multiple Cerner systems.
- Common reference tables provided for other Cerner systems.
- Organizations can build from existing *PowerOrders* functionality to address more complex and sophisticated order management needs.
    - With *PowerPlan*™ (CA-20344), hospital-based institutions can facilitate comprehensive multidisciplinary planning, outcomes management and coordination of care for patients.
    - Organizations can manage more sophisticated and complex medication ordering needs to include knowledge-driven medication ordering, patient-specific medication ordering and time zero scheduling.

Cerner Professional License

Cerner Professional License grants clients the right to utilize design and configuration tools, including Cerner Bedrock™ and Reference Data Domain Sync (RDDS) where applicable. These services simplify and expedite the design, build and maintenance process throughout the lifecycle of a Cerner solution. Clients can reduce implementation time and eliminate variance by automating processes with Cerner Professional License.

Discern Explorer

Discern Explorer® uses full-featured, fourth-generation programming language patterned after Structured Query Language (SQL) to maintain and extract data from both *Cerner Millennium* and client-developed databases. All *Cerner Millennium* applications use *Discern Explorer* to select from, insert into, update into and delete from the *Millennium* database. *Discern Explorer* can also be used to extract data to download to other applications. Individuals with little computer experience can use *Discern Explorer* to generate simple queries and reports, or computer professionals can use it to perform more complex and sophisticated programs.

Discern Expert

Discern Expert® is an event-driven, rules-based decision support capability. This sophisticated functionality is offered within a rules logic model and user interface design that simplifies the everyday use and management of critical decision support.

Availability

Cerner Millennium Release 2000, version 2000.01

Software Prerequisites

Clinical Data Repository (PS-20570) and Executable Knowledge for Regulatory Standards (KS-26725), and either MediSource Foundation (Enterprisewide) (KS-22004) or MediSource Foundation (By net, per facility) (KS-22005) are required. Adverse drug events are reduced through clinicians' advisement of drug-drug, drug-allergy, and drug dosage recommendations via MediSource Foundation (Enterprisewide) (KS-22004) or MediSource Foundation (By net, per facility) (KS-22053). MediSource Foundation also provides dose-range checking content that audits the reasonableness and safety of drug dosing corresponding with patient parameters such as age and weight. Further, MediSource Foundation includes adult and pediatric order sentences, drug-disease contraindications and drug images. RXBuild and content support the rapid generation of prescriptions and drug orders.

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PowerChart: PowerOrders

System Resource Considerations

The CPU processing cycle capacity required for *PowerOrders* is measured in terms of the number of orders placed per day for the system or facilities who are licensed to use this solution. Other contributing factors are whether electronic signature will be used and the requirement mix between Cerner-based departmental or facility-wide systems versus non-Cerner (foreign) system interfaces.

Technical Environment Requirements

Refer to www.cerner.com and navigate to Home→ Solutions & Services→ Cerner Technologies for information about the technical environment.

Cerner also offers our solutions in a shared environment for certain markets, and these offerings require some degree of standardization and adherence to Cerner recommended workflows and content.

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

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PowerChart: Clinical Data Repository

Description

Clinical Data Repository is a highly interactive, graphical user interface-based clinical workstation offering within PowerChart® that presents diagnoses and clinical events in an intuitive display. It provides a cross-disciplinary, person-focused view of clinical information resident in PowerChart.

Clinical Data Repository provides access to information in the form of result data and documents from both interfaced foreign systems and Cerner's clinical systems, including the following: The *CareNet® Acute Care Management System*, the *Cerner™ Cardiovascular Information System*, the *FirstNet® Emergency Medicine Information System*, the *Cerner Critical Care System*, the *PathNet® Laboratory Information System*, the *PharmNet® Pharmacy Information System*, the *PowerChart® Office Management System*, the *Health Information Management System*, the *RadNet® Radiology Information System*, and the *SurgiNet® Surgery Information System*. When *Clinical Data Repository* is used in conjunction with appropriate third-party systems, images and waveforms also are accessible with licensing of the corresponding interfaces. Foreign data, or pointers to data stored in external systems, is resident in PowerChart.

Client Benefits

- Real-time access to cross-disciplinary patient results and information supports timely clinician decision-making and health planning, promoting optimum outcomes for patients, providers, and plans.
- Improved access to person/patient records from any location at any time and by multiple users decreases workflow bottlenecks that may occur with the paper chart.
- With the licensure of *ProFile®* MR-20400, online electronic signature reduces the number of incomplete charts, decreasing the number of days to submit a bill and thus improving cash flow.
- Coordination/identification of persons/patients at any/all locations throughout the facilities that are licensed to use this solution is improved.
- Duplicate testing, caused by the unavailability of outpatient results during inpatient encounters (or the reverse, inpatient results to outpatient clinicians), is reduced.
- Online, real-time access via *Clinical Data Repository* eliminates the need to wait hours or days for paper reports, improving the timeliness of decision-making and reducing risk and costs.
- Time and material costs associated with printing, copying, and distributing paper reports are reduced or eliminated.
- Using real-time electronic reporting increases outpatient service volumes.
- Time spent by ancillary service department staff answering telephone calls for new or STAT results is decreased.
- Earlier detection of negative patient trends is possible due to the availability of results from all settings of care.
- JCAHO patient confidentiality guidelines are met.
- A common nomenclature (dictionary) for comparing results and performance measures across the facilities that are licensed to use this solution is created.
- Referral physician satisfaction is improved by enabling up-to-the-minute updates of patient status.

CERNER All Together

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PowerChart: Clinical Data Repository

- Quality of care is improved through the implementation of clinical alerts for impending negative events or trends and of reminders for wellness-oriented procedures, such as immunizations, physicals, and mammograms, with *Discern Expert*®.
- Greater numbers of remote or affiliated clinicians can be accommodated on the system, with the additional availability of thin client solutions.

Major Features

- An advanced graphical user interface is employed to facilitate navigation through information and functions.
- Information is conveniently displayed as icons along a timeline in the IntelliStrip Automated Interactive Record.
- Access to person-focused clinical information is provided, with multiple presentation formats, including documents, flowsheets, and graphical records.
- *Clinical Data Repository* supports the identification and tracking of patient-provider relationships.
- An organizer tool within *Clinical Data Repository* supports access to patient lists and Inbox functions. Types of patient lists supported include patient-provider relationship (PPR), census/location, scheduled, personal, and group patient lists.
    - PPR patient lists are used to group patients in relation to a specific provider's role. Providers can create lists of all patients with whom they have established a clinical relationship.
    - Census/location lists are used to group patients by their physical locations. Census/location lists are automatically updated when patients are admitted, registered, transferred, or discharged from a defined area via the *Registration Management* (CP-20735) product within CapStone or an interface to a foreign patient management system.
    - The scheduled patient list, provided when the CapStone *Scheduling Management* (CP-20740) solution is licensed, displays those patients who are scheduled to see a particular provider for the defined time period.
    - Personal patient lists can be used to group patients by a common, user-identified feature. Personal patient lists are updated and maintained by the individual clinician.
    - A group list enables a clinician to list patients in his or her patient list tab that have patient-provider relationships established with a different provider in the group.
    - Inbox functions include support for personal telephone messages; support for e-mail messages and *Discern Expert* alerts when used with third-party, MAPI-compliant e-mail systems, including notification of abnormal results; notification of documents to be signed or endorsed and results to be endorsed; and, with licensing of the PowerChart *PowerOrders* (PS-20576) offering, lists of orders to be reviewed/completed and signed.
- Security-controlled, multi-site access to clinical notes is supported.

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PowerChart: Clinical Data Repository

- Automated viewing, modification, and annotation of clinical notes entered through a transcription interface are supported, with automatic capture of the date/time and ID of the provider making the entry. With licensure of *ProFile* (MR-20400) electronic signature is supported.
- For any note that has been verified, addendum and correction logic is fully supported. Corrections are indicated via a "strike through" feature.
- Document/note sorting allows display by hierarchy, date, type of note, and provider type.
- A health-oriented overview contains clinical demographics, which include family, surgical, social, and health history; a problem list; and allergies.
- The *Immunization Schedule* provides a dynamic patient immunization schedule based on documented immunizations and a Center of Disease Control (CDC) reference schedule. Beyond the standard medication documentation data elements, it supports the capture of Vaccine Information Sheet (VIS) date, Vaccine For Children (VFC) status, administration notes and travel destination (when applicable). The clinician can reschedule or permanently remove a vaccine series from the patient schedule.
- The *Pediatric Growth Chart* provides a graphic view of a child's trend in growth. The growth charts available include the Center for Disease Control (CDC) standard height and length for age, weight for age, body mass index (BMI), weight for length and head circumference for age (0 - 36 months). Additional features provided in the growth chart include documentation and plotting of bone age, mid-parental height (MPH), and annotations. Exact percentile and z-scores are calculated on documented measurements and displayed to the clinician in either a detailed view or a table view. In addition to these calculations, the clinician can calculate growth velocity between multiple, user selected, measurements. Custom specialty growth charts also can be added by the organization.
- Flowsheet views for results and orders are supported, with visual parameters such as column widths, event sets, and time ranges definable by site, location, service, position, or user.
- Text and discrete data can be displayed within a flowsheet. Documents and images can be viewed from the flowsheet in a unified view.
- The navigator menu provides one-click direct access to any section within the flowsheet, along with the ability to hide undesired sections and thus reduce visual distractions.
- Flexible time-scale and display rules in the flowsheet enable the user to scan large amounts of data and then drill down into areas of interest.
- A customizable page is provided that can display, via a summary tab with multiple sub tabs, any information resident in the patient's electronic chart, such as clinical demographic data, flowsheet data, documents, current orders, and a problem list.
- Desktop management is enhanced for clinicians loosely affiliated with the health organization because no application code is located on the end-user's desktop computer.
- *Foundations* – In addition to the features inherent within *Clinical Data Repository*, *Foundations* functionality is also included. *Foundations* refers to Cerner's definition of those common processes or tasks that are shared across clinical and administrative domains and applications, technical areas, and project or

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PowerChart: Clinical Data Repository

production tasks. *Foundations* is included in all major Cerner licensed software solutions and includes *Technical Components (Technical Environment Management, Security Management, User Management,* and so on), *Functional Components* (for example, *Person Management, Order Management,* and *Result Processing),* and *Operational Components (Operation/System Management, System Integration,* and so on). The majority of the componentry applies to all Cerner solutions, though a few specific components may not be applicable to every solution line. Refer to the *Foundations* Solution Description for more information.

Cerner Millennium Integration Benefits

Benefits of using *Clinical Data Repository* in Cerner's Millennium® environment include the following:

- Provides a cross-disciplinary view into an active electronic medical record when used with CareNet, FirstNet, Cerner Critical Care, PathNet, PharmNet, PowerChart Office, Health Information Management, RadNet, and SurgiNet.

Cerner Professional License

Cerner Professional License grants clients the right to utilize design and configuration tools, including Cerner Bedrock™ and Reference Data Domain Sync (RDDS) where applicable. These services simplify and expedite the design, build and maintenance process throughout the lifecycle of a Cerner solution. Clients can reduce implementation time and eliminate variance by automating processes with Cerner Professional License.

Discern Explorer

Discern Explorer® uses full-featured, fourth-generation programming language patterned after Structured Query Language (SQL) to maintain and extract data from both *Cerner Millennium* and client-developed databases. All *Cerner Millennium* applications use *Discern Explorer* to select from, insert into, update into and delete from the *Millennium* database. *Discern Explorer* can also be used to extract data to download to other applications. Individuals with little computer experience can use *Discern Explorer* to generate simple queries and reports, or computer professionals can use it to perform more complex and sophisticated programs.

Discern Expert

Discern Expert® is an event-driven, rules-based decision support capability. This sophisticated functionality is offered within a rules logic model and user interface design that simplifies the everyday use and management of critical decision support.

Availability

Cerner Millennium 2000, version 2000.01

Technical Environment Requirements

Refer to www.cerner.com and navigate to Home→ Solutions & Services→ Cerner Technologies for information about the technical environment.

Cerner also offers our solutions in a shared environment for certain markets, and these offerings require some degree of standardization and adherence to Cerner recommended workflows and content.

Related Solutions

With the licensing of *Enterprise Master Person Index* (CP-20746), advanced identity logic is deployed to maintain the integrity of person data introduced to the *Clinical Data Repository.* A sophisticated person search capability manages data quality and provides a method for linking individual patient records to form a comprehensive facility-wide (based on the facilities

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PowerChart: Clinical Data Repository

that are licensed to use this solution) view of the patient.

The following Cerner software solution(s) significantly extend the functionality of this solution: *PowerOrders* (PS-20576), *Care Documentation* (PS-22719), *ProFile* (MR-20400), and *Cerner ProVision® Document Imaging* (QC-1000).

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through our website at www.cerner.com.

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PowerChart: PowerNote

Description

PowerNote™ is a PowerChart® supporting offering that automates the creation of a clinical note relating to care delivery in the patient care setting. *PowerNote* is the Cerner® tool for structured clinical documentation.

With *PowerNote*, the user documents and manages a clinical encounter using the front-end PowerNote application and symptom-focused, content templates called *Care Designs*. Each Care Design contains all likely findings or actions that might apply to a specific encounter. The user selects from a selection list to document symptoms, diagnoses, treatments and orders, moving easily from one to the next with a simple mouse click.

Organizations receive a starter kit of Care Designs content upon licensing PowerNote, and also have the capability to build their own customized Care Designs. For additional Care Designs content applied more broadly to specific clinical domains, additional Care Designs content licenses are available.

Upon completion, a textual note is automatically generated. In addition, the individual elements of the note are stored in fully structured, codified form for future use in research or analysis.

Client Benefits

- Clinicians can easily and efficiently build grammatically correct textual notes by selecting from a series of keyword lists, each list driven by the previous selection. This includes smart pick lists that enable the support of easy documentation entry in a structured clinical interview situation.
- Accuracy, completeness, and consistency in care documentation are promoted through the use of standard outlines, while the configuration feature supports institution- or locale-specific standards. The outline for note entry and the elements to be collected can be defined and modified by the client organization.
- Patient care can be improved and care processes can be standardized as users are presented with options consistent with best clinical practices.
- Expenses are reduced as the need for transcription and dictation management is reduced.
- Redundant tasks are eliminated as orders and prescriptions automatically are documented when they are placed, eliminating deficiencies and ensuring an accurate record.
- Immediacy of access to information is enabled as the text note is placed in the patient's electronic medical record, where it is instantly accessible by all authorized users of the patient chart. The note is preserved both as a structured data record and as a text note. The structured representation is stored in a database and can be used for outcomes analysis or research.

Major Features

- Documentation within *PowerNote* is based upon a medical entities dictionary called *Cerner Knowledge Index* (functionality that is included with the prerequisite solutions for *PowerNote*). Codified data entered via *PowerNote* can be translated and linked with external professional vocabularies, such as Unified Medical Language System (UMLS), SNOMED, ICD-9-CM, and CPT, using *Cerner Knowledge Index*, with the ability to cross-reference and update the links as the external nomenclatures evolve.
- Complex, text-oriented information (such as "patient reports chest pain, described as crushing, with radiation to the left arm and

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PowerChart: PowerNote

exacerbated by exercise") can be entered into the structured conversation, in the same context as simple numeric results such as blood pressure.

- Personal "macros" and "pre-completed notes" can be created by each *PowerNote* user or by the institution, for customized or more efficient documentation. In addition, previously documented information can be copied from an earlier note, ensuring more accurate and less time-consuming histories.
- *PowerNote* documentation originates with a structured template called a Care Design, or encounter pathway. Each Care Design contains all likely findings and actions for a symptom or type of document. The contents of the Care Design change dynamically to reflect appropriate choices based on patient age or sex.
- Textual information can be inserted into the structured note at any point by typing or speech recognition.
- The *PowerNote* user can select from appropriate diagnoses built into the Care Design. The related ICD-9 code is automatically linked to the visit to ensure accurate billing.
- *PowerNote* features an integrated *E & M assistant,* which analyzes the structured document, using the latest CMS (formerly HCFA) guidelines, to suggest an appropriate Evaluation and Management level of visit. This level of visit is generated as a byproduct of the documentation.
- A complete set of maintenance tools, including the easy-to-use graphical Knowledge Editor application, is available to create or customize Care Designs or to meet the specialized needs of an institution.
- With *Discern Expert* the clinician will be automatically alerted to potential patient safety or resource utilization issues at the point of care.

Cerner Professional License

Cerner Professional License grants clients the right to utilize design and configuration tools, including Cerner Bedrock™ and Reference Data Domain Sync (RDDS) where applicable. These services simplify and expedite the design, build and maintenance process throughout the lifecycle of a Cerner solution. Clients can reduce implementation time and eliminate variance by automating processes with Cerner Professional License.

Availability

Cerner Millennium® Release 2000, version 2000.01

Special Licensing Considerations

This solution is priced based on a perpetual license.

This license does not include the content of *Cerner Knowledge Index* such as the UMLS Meta-Thesaurus or professional vocabularies, which is included with the licensing of appropriate major offering that is a prerequisite to *PowerNote*.

The license also includes a basic set of Care Designs, appropriate to the venue. The starter kit for PowerChart's *PowerNote* (PS-22480) includes the starter kit of Care Designs for hospital acute care, while PowerNote for PowerChart Office (with the licensure of *Clinical Office with PowerNote* PV-20230) includes a starter kit of Care Designs for the physician office.

Software Prerequisites

PowerChart's *Clinical Data Repository* (PS-20570) is required.

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PowerChart: PowerNote

Technical Environment Requirements

Refer to www.cerner.com and navigate to Home→ Solutions & Services→ Cerner Technologies for information about the technical environment.

Cerner also offers our solutions in a shared environment for certain markets, and these offerings require some degree of standardization and adherence to Cerner recommended workflows and content.

Related Solutions

In addition to the basic starter kits, for an additional license, Cerner plans to offer pre-built, domain-specific Care Designs/content. This will significantly extend the functionality of *PowerNote* (PS-22480). Cerner-supplied Care Designs are implemented through a simple install process and are ready for use immediately. Customization of Cerner Care Designs, or development of new custom Care Designs, requires support from Cerner or special training for content authors.

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through our website at www.cerner.com.

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CareNet: Care Documentation

Description

Care Documentation is a CareNet® supporting offering designed to automate discrete data documentation related to care delivery anywhere within a health system. *Care Documentation* is a generalist suite of applications not specific to a particular care setting, through which direct care providers document patient care activities. All information that clinicians enter into *Care Documentation* is available to all appropriate locations in the computer-based health record. This includes information obtained from the delivery of care documented in such forms as textual documents, vital signs, assessments, height, and weight.

When used with Cerner® clinical systems, such as CareNet, FirstNet®, INet® for Critical Care, PathNet®, PharmNet®, PowerChart®, Health Information Management, RadNet®, and SurgiNet®, the information provided by the areas employing these systems is accessible automatically and transparently to the care team member via the graphical results viewer within *Clinical Data Repository* (PS-20570). The PowerChart viewer provides a cross-departmental, cross-disciplinary, person-focused view of clinical information with the ability to view, endorse, and correct documentation.

Client Benefits

- Efficiency is improved by eliminating redundant charting among care team members. In addition, charting by exception enables faster and more consistent documentation.
- Communication and care coordination are enhanced as the user can chart from any location once and view the chart anywhere that it is appropriate or needed.
- Documentation quality is improved as pertinent results are integrated into the documentation process. In addition, required fields and prompts improve charting standards to meet JCAHO guidelines.
- Financial performance is improved as billings are increased through better clinical documentation support and costs associated with the printing, storage, and distribution of multiple paper forms are reduced.
- Costs associated with transcription or other data entry processes by clerical personnel can be reduced as tools allow clinicians to directly enter their own documentation.
- Clinician satisfaction is improved by access to up-to-the-minute updates of patient status.
- Quality of care is improved through the implementation of clinical alerts for impending negative events or trends and of reminders for wellness-oriented procedures, such as immunizations, physicals, and mammograms, with *Discern Expert* included in licensing of PowerChart.

Major Features

- Flowsheet charting capability is supported, with views definable by site, location, service, position, or user for visual parameters including column widths, event sets, and time.
  - Discrete data can be entered and displayed in the flowsheet. The navigator menu on the flowsheet displays labels only for sections containing patient data. When a label is selected, the flowsheet scrolls to where that label's data is displayed. Nonadjacent data labels can be selected by the clinician for adjacent display in the flowsheet.
- Form charting, available through *PowerForms*, can reduce or simplify forms maintenance. *PowerForms* represent Cerner's flexible, client-

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CareNet: Care Documentation

defined forms generator, which can be configured to present and collect data elements that meet a wide variety of care documentation requirements, from initial assessments to simple vital signs or height and weight. *PowerForms* are object-oriented, enabling components of one form to be reused in other similar forms.

- The I&O2G is a record of a patient's fluid intake and output for a specified time period. Shift totals, daily totals and fluid balance are automatically accumulated as volumes are documented. The discrete amounts of each event can be viewed along with a graphical view of totals and fluid balances

- Task List creates a dynamic to do list for the end user either for a single patient or for all patients assigned to that care provider.

- *Clinical Notes* provides the ability to create and/or edit textual notes. Text template and 'smart templates', which extract patient-specific data from the clinical repository and import into the document being created, can be used to facilitate document creation.

  - The application supports a basic word processor or has an option to use a Microsoft® Word-based word processor (called *Advanced Clinical Notes*).

  - Any voice recognition solutions that can be used as add-in's for Microsoft Word can be used in conjunction with *Advanced Clinical Notes*.

- Date/time and ID of the provider entering or editing online documentation are logged automatically.

- *Care Documentation* also utilizes customized reference ranges, based on patient age and gender, for discrete data like vital signs or height and weight. This improves the quality of patient care by alerting the care giver when documented data is out of range for their patient.

Cerner Millennium Integration Benefits

Benefits of using *Care Documentation* in the *Cerner Millennium*® environment include multiple benefits that apply broadly across the care organization. An example is in the following:

- Data entered in Cerner's *FirstNet* Emergency Medicine Information System is available for review and automated form fill-in, reducing redundant date entry.

Data entered into *Care Documentation* also is available to other Cerner systems reducing redundant data entry requirements in those systems.

Availability

Cerner Millennium 2000, version 2000.01

Special Licensing Considerations

- Additional documentation functionality for medication administration can be obtained by licensing *Medication Administration Record* (PS-22732).

- Microsoft® Word 2000 or higher is required (configured by Cerner as sublicensed software or licensed separately by the client) for *Advanced Clinical Notes*.

- Clients can license medical spell-check software separately. Version required will vary based on the word processing solutions being implemented.

Software Prerequisites

Clinical Data Repository (PS-20570) is required.

CareCompass (PS-22700) is required.

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CareNet: Care Documentation

System Resource Considerations

The CPU, memory, and disk requirements for *Care Documentation* are measured in terms of the number of patient admissions and discharges, the retention time of patient encounters, the number of orderable procedures, the retention time of patient order records, and the number of users. Additional requirements may be based on the number of medical device interfaces.

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution: *Medication Administration Record* (PS-22732), *PowerNote* (PS-22480), *Cerner Health Information Management* (MR-20400), and *Inpatient Pharmacy* (PH-20160).

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through www.cerner.com.

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CareNet: Medication Administration Record (MAR)

Description

The electronic *Medication Administration Record (MAR),* also known as eMAR, is a CareNet® supporting offering designed to automate the documentation of medications administered to a patient. The process of documenting the administrations can be accomplished any one of three ways within the system. The first is via the electronic medication administration record; this tool mimics a paper MAR, in that pending medications are noted as well as previously administered medications. This creates a view that includes historical, present and future medication history for the patient. The second mechanism that can be utilized to document the administration of medications is a task list for a single patient, multiple-patients or the Patient Activity List (PAL). This tool enables the caregiver to see only those items that are due to be given at a particular time, along with any PRN (as needed) or continuous medications. Thirdly, the eMAR serves as the foundation for licensing Cerner® PowerPOC solutions, a related but separate set of offerings that provide mobile access to the eMAR via either cart-based or handheld devices. Together this solution is designed to automate the documentation of medication administration and other care activities, incorporating barcode verification of the "Five Rights", data review and collection, and medical device integration at the patient bedside, promoting improved patient safety.

Client Benefits

- Streamlines medication management activities via the generation of activity-specific/patient-specific task lists, enabling the caregiver to see only those items that are due at a particular time, as well as any PRN medications and continuous IV fluids.
- Promotes efficient operations and workflow by providing consistent control and standardized documentation.
    - Request for patient pain response can be generated automatically based on documentation of PRN pain medication. This prompts the nurse to complete the patient evaluation intervention.
    - Other pertinent clinical information can be captured along with the medication, such as an apical pulse with a digoxin administration.
- Provides clinicians the ability to record and collect patient information (pre- and post-administration observations) at the bedside as part of normal workflow seamlessly, as a by-product of the care process.
- Provides the option to charge for medications at administration versus at the time of dispensing.
    - Provides greater accuracy for medication administration and charges.
    - Captures charges earlier, improving cash flow and accelerating the claims process.
    - Promotes efficiency and timesaving by eliminating manual activities associated with the billing process (credits).
- Provides accurate, up-to-the-second views of medication administration history with real-time/non-interface access to patient data (such as allergies) and order information (new orders, order modifications, orders discontinuation).
- Provides three very important checks of the medication order, promoting a closed loop system:
    - The physician at the time of order entry receives alerts about any potential interactions or duplications in therapy,

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CareNet: Medication Administration Record (MAR)

with the license of *PowerOrders®* (PS-20576)

- The pharmacist at the time of order verification/dispensing receives those same alerts again, and with the licensure of *Inpatient Pharmacy* (PH-20160).

- The nurse verifies that the above processes were completed.

Major Features

- Electronic Medication Administration Record
  - Ability to view medication administration related tasks via adjustable time frames.
  - Visual icons for alert notification, such as pharmacy verification and nurse review.
  - View historical as well as current and future administration events.
  - View clinical information along with administration such as apical pulse with a digoxin dose or patient pain response associated with PRN analgesics.
  - Information about who administered the medication is viewable with the results.
- Task List
  - Visual icons for alert notification, such as pharmacy verification and nurse review.
  - Supports quick charting of the medications via single click documentation.

Cerner Millennium Integration Benefits

Benefits of using electronic *Medication Administration Record* in Cerner's Millennium environment include the following:

- Data entered in Cerner's *Clinical Data Repository* (PS-20570), with the applicable license, is available for viewing in all Cerner applications.
- Data entered in the electronic medication administration record can be used to automatically update the intake and output record in *Care Documentation* (PS-22719), with the applicable license.

Availability

Cerner Millennium® 2000, Version 2000.01

Software Prerequisites

Clinical Data Repository (PS-20570) or *Inpatient Pharmacy* (PH-20160) is required.

Technical Environment Requirements

Refer to www.cerner.com and navigate to Home→ Solutions & Services→ Cerner Technologies for information about the technical environment.

Cerner also offers our solutions in a shared environment for certain markets, and these offerings require some degree of standardization and adherence to Cerner recommended workflows and content.

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution: *Care Documentation* (PS-22719), and the *PowerPOC* solutions (*CareAdmin* PH-22772, *CareMobile* PH-22773, and *CareGuard* PH-22774).

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CareNet: Medication Administration Record (MAR)

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

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General Availability

Multisystem Option

CERNER

PowerPlan

Description

PowerPlan is a major offering designed to facilitate comprehensive multidisciplinary planning, outcomes management and coordination of care for the patient in the acute care setting. *PowerPlan* provides clinicians with the ability to individualize diagnosis and problem-driven plans of care, including multidisciplinary clinical pathways and care protocols.

Leveraging Cerner's unified Millennium Architecture and *PowerOrders*, which requires separate licensure, *PowerPlan* provides a centralized location for each member of the care delivery team to manage the plan of care. The solution is used to initiate orders for all departments and direct care providers, specifying in detail to all caregivers what is expected of each of them for every patient assignment.

PowerPlan supports diagnosis-based, as well as the NANDA, methodology for nursing and multidisciplinary care planning. Problem/ clinical diagnosis-based plan suggestions provide appropriate plan options based on documented problems.

Within the plan, the ability to include expected outcomes and interventions provides further flexibility to individualize the plan to meet patient-specific needs.

Centralized outcome activity review and documentation enables the members of the care team to view patient progression against all expected outcomes defined in the plan as well as capture variance documentation. Access to rationale and supporting evidence is available to the clinician throughout plan management.

Links to third party nursing content as well as locally defined best practice can be associated with any component within the plan of care.

PowerPlan (CA-20344) leverages Cerner's reporting functionality, embedded in the majority of Cerner's major offerings, to provide customized plan and management reporting.

PowerPlan can be licensed facility-wide for all licensed inpatient facilities via licensure of *PowerPlan* CA-20344. Alternatively, *PowerPlan* can be licensed for use in a single department, such as the emergency department or critical care area via licensure of *Departmental PowerPlan* (ER-22344 or IC-22344 respectively).

Client Benefits

- Diagnosis or problem-driven plan selection provides the ability to promote appropriate, optimal and evidence-based best clinical practice. .
- Improved compliance and outcomes can be achieved. Managers and caregivers can analyze and understand the causes of variation, and implement the necessary changes to eliminate it.

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- PowerPlan supports evidence-based nursing practice by providing links to supporting content at the point of entry and throughout plan management.
- Length of stay can be reduced and the timeliness of care delivery improved through the formulation and timely adjustment of plans of care and real-time updates to all care team members.
- Care team coordination is optimized as the all members of the team utilized a centralized set of information and expectations.

Major Features

- Time zero functionality provides the ability to anchor an order to a time zero component. Additional orders are then offset from the anchor at defined time intervals. When a clinician changes the anchor order time, the related orders will sequence as ordered.
- A *PowerPlan* accommodates multi-phase plans of care, allowing clinicians to manage groups of orders over time and encounters as well as concurrently (for example: pain, mobility, and infection) to meet the changing needs of the patient.
- PowerPlan offers a flexible structure to support various planning methodologies and content.
- Plans may be defined to address medical diagnoses, problems, as well as surgical and other procedures.
- Reference text and evidence may be defined at the plan level with hyperlinks to external and internal reference databases supporting the viewing of evidence, policies, and procedures, *Executable Knowledge*® (which requires separate licensure) enables embedding knowledge, evidence and best practices from a variety of industry-leading sources.
- *PowerPlan* leverages *Discern Expert* (which requires separate licensure) rules to enable clinician alerts related to the pre-defined plans of care.
- Interdisciplinary plans of care are constructed via a simple build tool. These plans are defined for nursing care, physician care, and for care delivered by an interdisciplinary team.
- Discharge plan goals allow the clinician the ability to identify and record goals within the plan of care, defining expectations for patient progression. The clinician then is able to track progress toward discharge by monitoring goals.
- Outcome activity displayed with *PowerPlan* provides the status of activity across all active plans indicating the patient's progression. Evaluation performed by the system provides visual cues about the patient's progress within the plan.
- Outcome variance tracking allows the clinician to record the reasons identified for patient variance from the expected path, as well as actions taken to address the variance. These reasons and actions can be reviewed for trends, enhancing ongoing quality improvement planning.
- *PowerPlan* plans of care can be merged with existing orders to facilitate simultaneous viewing of orders while constructing new plans.
- Personal single phase plans of care can be created based on personal treatment preferences. These plans may be saved and reused across patients.
- Modifying an order set or plan of care prior to a patient's actual visit is supported. The

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clinician may make changes to a standard group of orders and save changes to individualize patient care prior to placing the orders into an active status. The changes are initiated upon patient arrival.

- *PowerPlan* components can be managed as a group for efficient rescheduling and discontinuation.
- Any number of plans may be associated with a single patient.
- PAL & Task lists are populated from *PowerPlan* for single and multiple disciplines.
- Drop Down Plan Order Sentences allow clinicians to choose order sentences and to quickly select order details.

"Net" Affiliations

Cerner CareNet, FirstNet, and Critical Care.

Documentation is a by-product of orders being placed from a pathway. PowerChart's *Care Documentation* (PS-22719) is the foundation for charting and is available to all care providers. For the Emergency Department, documentation forms and flowsheets are available via *Emergency Department Care Management* (ER-20280). *PowerPlan* may utilize these same documentation forms and flowsheets to gather data on patients.

Laboratory, radiology and pharmacy orders placed within *PowerPlan* are available within *PathNet*, *RadNet*, and *PharmNet*, respectively.

When used with *PowerInsight*, plan analysis, trending, and management reporting may be performed utilizing information captured through *PowerPlan*.

Special Licensing Considerations

This solution is priced as a license.

Software Prerequisites

Care Documentation (PS-22719) and *PowerOrders* (PS-20576) are required.

For FirstNet, *Emergency Department Care Management* (ER-20280) is required. For the critical care area, either (*INet MD* IC-22344 or *PowerOrders* PS-20576, or *Care Documentation* (PS-22719) or INet (IC-20389) is required,

Availability

Cerner Millennium Production Release 2004.01.

Technical Environment Requirements

Refer to the *Understanding Cerner Millennium Technical and Support Requirements* document for information on the technical environment.

System Resource Considerations

The CPU processing cycle capacity required for *PowerPlan* is determined by the organization's volume, retention, and reliability.

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

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CareNet: CareCompass

Description

CareCompass is an innovative, interdisciplinary workflow solution that guides the collaborative care team in the organization, prioritization and planning of patient care - giving the right information at the right time.

The solution provides clinicians a face-up view of critical patient information, patient status and activity data with both a single patient and multi-patient context in order to proactively manage patient care.

Client Benefits

- Provides a summary driven workflow to enhance patient care and clinician awareness of patient information
- Care Delivery teams can provide informed decisions quicker by receiving real-time data about patients plan of care.
- Clinicians no longer need to remember all of the steps in the care-plan, now they can rely on the technology to provide them with the relevant information
- Increases efficiency and effectiveness of patient care by having access to, critical results, order notification and patient risks.
- Increases effective communication and collaboration across all disciplines
- Captures patient information once and leverages the information everywhere
- Tells the patient story allowing for safer handoffs between care providers

Major Features

- View detailed information about individual patient while maintaining contextual awareness of other patients' status.
- Provides a comprehensive view of patient care plans
- Provides both a multi-patient dashboard view as well as an individual patient view
- Visually rich display of critical results and new orders
- Upfront display of patient risks and isolation
- Care team information is easily accessible
- Intuitive view of patient activities and access to documentation
- Hovering capability allows for the display of additional information
- Provides a patient summary
- Ability to view patient activities at both a multi-patient timeline view as well as an individual patient level

Availability

Cerner Millennium® 2007.19 or higher code version

Software Prerequisites

PowerChart® Clinical Data Repository (PS-20570) and *Care Documentation* (PS-22719) or *Advanced Care Documentation* (CA-22346)

and

*MPages® Development Kit (*PS-22700) or *MPages Runtime License* (PS-22760)

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CareNet: CareCompass

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Access Management: Cerner Registration Management

Description

Cerner® Registration Management is a major offering that automates the workflow and process of registration, admitting, transfers, and discharges in hospitals. *Cerner Registration Management* creates the encounter and a Master Person Identifier (MPI) that become the basis for coordinating the person's movement across an integrated or disparate health system.

The quality of the data in the community database is only as reliable as the least robust registration system. Erroneous information collected from an incomplete registration can affect healthcare delivery to that individual. Since the registration process serves as the critical gateway into the clinical operations of the organization, it is essential that the information concerning the patient is current and complete.

Cerner Registration Management addresses the challenge of implementing a model that assures consistency across the community by providing a common registration system for hospitals licensed across the IDN, flexing to meet the data requirement needs of the particular domain of care.

Client Benefits

- The quality and consistency of registration data are improved by using a common system across the facility that is still flexible enough to meet the needs of individual care domains.
- Client-defined screens and required data fields enable the end user to complete registration processes expeditiously.
- Resource utilization is improved by expediting the registration and patient movement processes throughout the health system.
- Employer and community-based outreach strategies can be developed by loading demographic profiles on community segments before these individuals seek health services.
- Well-targeted health promotion programs can be developed based on the demographic profiles of communities.

Major Features

- Visit registration can be performed through a common system function, regardless of the visit type.
- Registration screens and the flow of screens are designed by the client.
- The registration architecture supports medical record number and financial number check digits, special field validation, and data default values.
- Separate registration is available for newborns, which defaults much of the mother's information.
- Complementary functions are available to perform transfers, bed swapping, wait listing, leaves of absence, registration cancellations, and discharge cancellations.
- Patient discharge captures the discharge date and time, disposition, and date and time of death (if applicable).
- An alternate level of care can be captured.
- Bed borrowing and lending functionality is supported.
- An online alert for 72-hour Medicare encounters notifies the user before creating a new encounter within that time period.

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Access Management: Cerner Registration Management

- A custom online alert for active encounters prevents duplicate encounter entries.
- An online alert can be activated for duplicate social security numbers found within the database.
- A library of interfield rules (field edits), which can be customized and extended by the client, is provided to improve the quality of data collected and the speed and usability of data collection.
- Encounters can be grouped into episodes for tracking and reporting purposes.
- The centralized Master Person Identifier (MPI) allows easy identification of individuals using flexible search criteria.
- Inquiries are provided that include person/patient demographics and location history, with searches for patients by name, facility, medical record number, and other fields that the organization captures in its registration process.
- User-defined inquiries flex based on user security.
- The creation of relationships between persons in the database provides the foundation for advanced reporting capabilities based on those relationships.
- Robust standard reports, including current and historical reports, and flexible reporting options are provided.
- The capture and storage of UB-92 billing form data items are supported.
- Customizable questionnaire logic is available within the registration process. This can be used to meet Medicare secondary payer requirements.
- The capture and storage of admission diagnostic codes (CPT and ICD-9) aid in the preliminary verification of health plan-related requirements as well as concurrent and retrospective case management activities.
- Bed management functions supported include the following:
    - The notification of vacated beds and status updates
    - The use of a bed board for the entire healthcare facility or specific locations
    - The capability to filter entire facilities to a view of available, assigned, dirty, for multiple patients, for male patients, for female patients, and so on
    - The ability to temporarily open or close locations
- Transfers and discharges automatically update bed status and bed availability statistics.
- Staff physician demographics, including facility-specific identifiers, multiple addresses, telephone and beeper numbers, and fax numbers, are readily accessible.
- Staff physician sign-in/sign-out functions make it easy to track physicians.
- Switchboard operators can determine if a physician is available for paging.
- Information can be captured on physicians who are not on staff (usually referring or family physicians) for the purpose of mailing clinical and nonclinical documents.

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Access Management: Cerner Registration Management

- The format of documents can vary by site. These documents include, but are not limited to, face sheets, ADT notices, wristbands, and ID cards.
- Complete online Help is available, and field-level Help can be added by the client to enforce site-specific policies.
- Integration with *Cerner Scheduling Management (CP-20740)* within *Cerner Registration Management* can enable complete front-end data and process integration, providing the health facility with a variety of options for redesigning these business processes.
- Bidirectional interfaces to patient accounting systems are supported, with appropriate licensing.
- Bidirectional interfaces to decision support systems for summary-level analysis can also be supported, with appropriate licensing.
- Documents can be generated based on visit type and printed in the appropriate location.
- Bar codes can be supported and printed on reports, wristbands, embossed cards, and so on. Additional service fees may apply for bar-code customization.
- In addition to the features inherent within *Cerner Registration Management*, *Foundations* functionality is also included. *Foundations* refers to Cerner's definition of those common processes or tasks that are shared across clinical and administrative domains and applications, technical areas, and project or production tasks. *Foundations* is included in all major Cerner licensed software solutions and includes *Technical Components (Technical Environment Management, Security Management, User Management*, and so on), *Functional Components* (for example, *Person Management, Order Management*, and *Result Processing*), and *Operational Components (Operation/System Management, System Integration*, and so on). The majority of the componentry applies to all Cerner solutions, though a few specific components may not be applicable to every solution line. Refer to the *Foundations* Solution Description for more information.

Software Prerequisites

The following are required with *Cerner Registration Management*: Demographic Outgoing (IF-29220) and Notification & Acknowledgement (278 N) Interface (IF-29409).

Cerner Millennium Integration Benefits

Benefits of using *Cerner Registration Management* in a *Cerner Millennium®* environment include the following:

- Real-time updates of patient demographics are directly available to all departments, clinics, and home care agencies licensing a Cerner system.
- Conditions, either existing or entered at the time of admission, registration, or referral, can trigger *Discern Expert®* rules within other Cerner systems based on an admission, registration, transfer, or discharge event. For example, the admission or registration of a patient with a bad debt history can trigger a notification for a financial review.
- Patient census information can be accessed on a real-time basis from other Cerner departments.
- A common *Cerner Millennium* architecture, providing a single person database, is included.
- A single provider database for all Cerner clinical systems allows easy update and maintenance.

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Access Management: Cerner Registration Management

- Common reference tables are provided for other Cerner systems.

Cerner Professional License

Cerner Professional License grants clients the right to utilize design and configuration tools, including *Cerner Bedrock™* and Reference Data Domain Sync (RDDS) where applicable. These services simplify and expedite the design, build and maintenance process throughout the lifecycle of a Cerner solution. Clients can reduce implementation time and eliminate variance by automating processes with Cerner Professional License.

Discern Explorer

Discern Explorer® uses full-featured, fourth-generation programming language patterned after Structured Query Language (SQL) to maintain and extract data from both *Cerner Millennium®* and client-developed databases. All *Cerner Millennium* applications use *Discern Explorer* to select from, insert into, update into and delete from the *Millennium* database. *Discern Explorer* can also be used to extract data to download to other applications. Individuals with little computer experience can use *Discern Explorer* to generate simple queries and reports, or computer professionals can use it to perform more complex and sophisticated programs.

Discern Expert

Discern Expert® is an event-driven, rules-based decision support capability. This sophisticated functionality is offered within a rules logic model and user interface design that simplifies the everyday use and management of critical decision support.

Availability

Cerner Millennium, Revision HNAM.2000.01

Technical Environment Requirements

Cerner also offers our solutions in a shared environment for certain markets, and these offerings require some degree of standardization and adherence to Cerner recommended workflows and content.

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution: *Cerner Scheduling Management* (CP-20740), *Cerner Enterprise Master Person Index* (CP-20746).

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

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Access Management: Cerner Scheduling Management

Description

Cerner® Scheduling Management is a major offering that coordinates appointment scheduling across an integrated or disparate health system.

Cerner Scheduling Management is used to establish and maintain person appointments for resources with defined availability. When scheduling appointments, two key elements are considered by the system: the availability of the person and the availability of the appropriate resource booking slots.

Cerner Scheduling Management automates the appointment scheduling process from both centralized and decentralized booking locations within a department, and/or a facility. This setting may consist of one to many physical locations, each united by a common environment. Communicating scheduling requests electronically between booking locations within the facility setting eliminates redundant data entry. In a situation where *Cerner Scheduling Management* is not used throughout the facility, appointment request and reply interfaces can be licensed to enable the Cerner® scheduling system to interact with the foreign scheduling system.

Client Benefits

- Facility-wide coordination of scheduled resources increases patient, provider, and staff satisfaction, as waiting time is significantly reduced.
- Costs are reduced, since coordinated scheduling ensures proper resource utilization.
- Revenues can be increased, because streamlined scheduling increases operational efficiencies and patient throughput, freeing up more time in the day to schedule additional appointments.
- The facility-wide view of the patient/member's calendar supports clinicians' efforts to streamline patient care.
- Tight integration of *Cerner Scheduling Management* with underlying Cerner applications ensures optimum use of resources and promotes patient satisfaction with timely, sequenced care.

Major Features

- Centralized and decentralized appointment booking simultaneously supports one-call and point-of-service scheduling services.
- Resource types maintained include any person, place, or thing that has limited availability.
- Resource-specific appointment durations are supported.
- A view into the facility-wide patient/member schedule is offered at either a calendar level or an integrated, detailed level.
- The first available day when the requested resources are free can be identified.
- One-time appointment booking is provided.
- Appointments can be scheduled manually via an online, electronic "appointment book."
- Appointments can be checked in and out from the appointment book.
- The system provides a user-defined maximum future appointment date and a user-defined number of days in the past that an appointment can be scheduled.
- Distinct patient arrival, recovery, setup, and cleanup appointment durations can be defined.

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Access Management: Cerner Scheduling Management

- Cancellation or rescheduling of existing appointments is supported.
- Complete online Help is available.
- Electronic appointment booking, cancellations, and reschedule requests from an order or from other booking locations are organized into online worklists based on user-defined routing variables.
- Client-defined scheduling business rules support the accurate booking of resources. This enables the organization to set up various criteria around multiple resources to predefine resource utilization patterns.
- For each scheduled procedure, the system can track a wide range of appointment details, including a reason for scheduling the appointment, ICD-9-CM codes, free-text appointment comments, a notification message, special instructions, transport codes, referring locations, and other user-defined attributes.
- Resource availability is kept in sync in all Cerner applications across all facilities.
- Real-time solicit resource availability checking is provided among all Cerner scheduling applications.
- Printing of appointment reminders, cancellation notices, reschedule notices, and missed appointment notices in a user-defined format is supported.
- Series and dependent multiple-step appointment booking is provided.
- An automatic notification to the requester can be generated once an appointment is booked from a scheduling request.
- Suggested "first available" appointment times are provided, based upon the multiple resources required for the appointment. Several appointments may be suggested within a predefined time range or visit.
- Appointments for nonperson events can be booked for a resource.
- Duplicate appointment warnings are generated during appointment booking.
- Resource-specific beginning offsets can be defined to best use resource time.
- Resource default schedule templates can contain booking slots that are "released" depending on the number of days from the current date.
- Procedure-to-procedure interactions can be defined and maintained.
- A provider's view of the scheduled patients list can be maintained.
- Scheduling data level security is available for 26 different levels of authorization.
- User-defined appointment retention and recovery times are supported.
- An appointment can be requested either by placing an order to be passed to a scheduling request list or by requesting an appointment from the *Cerner Scheduling Management* offering.
- Surgical case numbers can be created, and historical and recent procedure durations evaluated, with licensing of SurgiNet®.
- Appointments for procedures from both Cerner and non-Cerner service areas can be scheduled.

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Access Management: Cerner Scheduling Management

- Patient appointments that are scheduled by a foreign system can be communicated to *Cerner Scheduling Management*, with licensing of the appropriate interface.

- In addition to the features inherent within *Cerner Scheduling Management, Foundations* functionality is also included. *Foundations* refer to Cerner's definition of those common processes or tasks that are shared across clinical and administrative domains and applications, technical areas, and project or production tasks. *Foundations* is included in all major Cerner licensed software solutions and includes *Technical Components (Technical Environment Management, Security Management, User Management,* and so on), *Functional Components* (for example, *Person Management, Order Management,* and *Result Processing),* and *Operational Components (Operation/System Management, System Integration,* and so on). The majority of the componentry applies to all Cerner solutions, though a few specific components may not be applicable to every solution line. Refer to the *Foundations* Product Description for more information.

Cerner Millennium Integration Benefits

Benefits of using *Cerner Scheduling Management* in Cerner's Millennium® environment include the following:

- The integration of Cerner scheduling applications is supported across disparate facilities. For example, patient appointments for Cerner Cardiovascular, SurgiNet®, and RadNet® orders can be scheduled, with licensing of these Cerner systems.

- The integration of *Cerner Scheduling Management* with the PowerChart® *PowerOrders®* (PS-20576) offering, or the PowerChart Office *Clinical Office With PowerNote®* (PV-20230) offering can enable the creation of orders based on the confirmation or check-in of appointments.

Cerner Professional License

Cerner Professional License grants clients the right to utilize design and configuration tools, including *Cerner Bedrock™* and Reference Data Domain Sync (RDDS) where applicable. These services simplify and expedite the design, build and maintenance process throughout the lifecycle of a Cerner solution. Clients can reduce implementation time and eliminate variance by automating processes with Cerner Professional License.

Discern Explorer

Discern Explorer® uses full-featured, fourth-generation programming language patterned after Structured Query Language (SQL) to maintain and extract data from both *Cerner Millennium®* and client-developed databases. All *Cerner Millennium* applications use *Discern Explorer* to select from, insert into, update into and delete from the *Millennium* database. *Discern Explorer* can also be used to extract data to download to other applications. Individuals with little computer experience can use *Discern Explorer* to generate simple queries and reports, or computer professionals can use it to perform more complex and sophisticated programs.

Discern Expert

Discern Expert® is an event-driven, rules-based decision support capability. This sophisticated functionality is offered within a rules logic model and user interface design that simplifies the everyday use and management of critical decision support.

Availability

Cerner Millennium 2000, Version 2000.01

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Access Management: Cerner Scheduling Management

System Resource Considerations

The amount of disk space required is based on the number of facility visits to be maintained. The number of appointments per person and the total number of resources for which schedules are maintained can be derived from the number of facility visits. Procedures that are not scheduled for a specific resource at a specific time, but that must be available for inquiry along with scheduled procedures, must be taken into account when determining the number of appointments per person.

Technical Environment Requirements

Cerner also offers our solutions in a shared environment for certain markets, and these offerings require some degree of standardization and adherence to Cerner recommended workflows and content.

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution: *Cerner Registration Management* (CP-20735), *Cerner Enterprise Master Person Index* (CP-20746), and *Cerner Eligibility Management* (CP-20751) or *Benefits Management* (CP-20752).

Software Prerequisites

The following are required with *Cerner Scheduling Management*: *ADT's Demographic Incoming* (IF-29010) is required only when Client does not have *Cerner Registration Management*.

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through our website at www.cerner.com.

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PathNet: General Laboratory

Description

General Laboratory is a major PathNet® offering that provides online ordering of procedures, specimen management, and result review and verification for assays assigned to specific workbenches and automated instruments in the general laboratory sections. These sections include chemistry, hematology, urinalysis, coagulation, serology/immunology, toxicology, and blood gases. Additionally, via Cerner's embedded *Foundations* functionality which automates shared processes and tasks, *General Laboratory* supports departmental patient registration, departmental order entry and inquiry, workload reporting, departmental charting, charge capture and reporting, operations management, system management, environment management, and security. Long-term storage of results online also is supported. This flexible offering is tailored to satisfy unique organizational and departmental workflow requirements with ease.

General Laboratory automates all aspects of the specimen collection and storage processes relative to the performance of laboratory procedures. Collection labels and collection lists containing the detailed information required by the organization are generated. The *Specimen Management* component automatically reschedules missed collections and immediately prints labels for STAT collections. All collections are *netted*, or consolidated, into the fewest number of specimen labels required to perform the ordered procedures, minimizing phlebotomies. The specimen tracking capability within *PathNet* documents each stage of specimen transfer, from initial collection through transport, testing, storage, retrieval, and final disposal.

Procedures are assigned to a specific instrument or workbench automatically based on the patient or received location and can be routed to backup instruments easily, if necessary.

All result entry functions are fully integrated with interfaced instruments. Result entry functions provide the technologist with a streamlined process for reviewing and verifying results received from an interfaced instrument. *General Laboratory* also provides the ability to track and monitor repeat results. Autoverification parameters can be identified, allowing the system to review and verify results based on departmental operating procedures. The technologist can then review those results flagged for special attention. The result entry functions can display previous results and other pertinent procedure information. The result entry window can filter the display to a single test site (workbench or instrument) or provide a view of multiple procedures that cross test sites. Specialized functions are available for performing WBC differentials and other counted procedures.

The flexible result entry functions within *General Laboratory* accommodate seven different result types: numeric, alpha, calculation, free-text, textual, date, and interpretation. Numeric result formats are mapped according to instrument or methodology specifications, and alpha result options per assay can be limited to a subset of an alpha response library. Numeric result types can be converted to alpha result types, and alpha result types can be converted to numeric, when appropriate. Calculations are performed automatically. Interpretations are generated when their components are performed or verified. Delta checking is available for all numeric assays and can be based on an absolute value or a percentage of change. Delta checking criteria can be identified by test site and assay, as well as by result range.

Personalized worksheets can be generated for the manual bench areas. Result entry functions support the entry of results based on a user-defined worksheet. In addition, you can also manually download the worklist to an instrument for cases where an instrument does not accept downloaded accession numbers through a host/query Medical

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PathNet: General Laboratory

Device Interface (MDI) or where the instrument device cannot read accession number bar-codes.

Quality control (QC) is an integral part of *General Laboratory*. Control materials are identified in *General Laboratory* and customized QC rules are assigned to assays based on the instrument or methodology. New lot numbers can be added, allowing a smooth and easy transition from one lot number to the next. QC results are received from an interfaced instrument for review and verification by the technologist. QC also can be included on user-defined worksheets and entered manually. The technologist is immediately notified of outlier results and QC rule failures. The technologist is then required to take immediate corrective action with supporting documentation. Detailed Levey-Jennings charts and summary reports for a specified time period (such as monthly) can be produced on demand or automatically on a periodic basis. QC statistics can be calculated automatically, or the supervisor can request that statistics be calculated based on an ad hoc date range. These statistics can be included on a QC statistics report or a cross-test site statistics report. Online review of QC results is provided for both a primary and secondary reviewer.

The quality control component of *General Laboratory* also provides functionality for patient-based QC. Based on analyte and instrument, truncation limits are identified, as well as the number of results to be averaged. The average becomes a QC value and is compared to specified QC rules. Other QC functionality such as online graphing and statistical reporting can be applied.

General Laboratory allows the selection of one or more specimens to be performed on multiple instruments for QC purposes and method validation. The results are then compared across instruments with percentage difference and SDI calculations, as well as Deming's regression analysis.

The Clinical Validation component of *General Laboratory* provides functionality that routes selected results for additional review before being released. Clinical Validation automatically evaluates each result against the defined review criteria to determine if the result requires secondary review and approval. Results that qualify for review are routed to one or more review queues where one or more people review and approve the results.

Online inquiries and reports eliminate lengthy searches for paper worksheets and reports, while providing supervisors with a quick way to monitor the progress of testing. Exception and corrected results are clearly flagged and extracted into reports for daily review.

Laboratory Management (LM) is an integral part of *General Laboratory*. LM is a sophisticated tool set that provides online views to statistics for supporting management processes, including turnaround time analysis, volume statistics, utilization, and revenue reporting. When viewing information, each user has the ability to select and customize the presentation based on his or her security. The information in these views is current because of real-time, clinical event-driven data feeds. "Stoplight coding" can be deployed in these views to highlight data in user-defined colors and assist in pinpointing the reason(s) for the unfavorable variance.

Client Benefits

- Saves money while improving the quality of patient care by ensuring immediate access to patient results throughout the organization
- Streamlines processing with sophisticated specimen and container routing and tracking – from remote collection through transport, testing and into storage

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PathNet: General Laboratory

- Automates the workflow within the laboratory, improving efficiency, accuracy, and quality of service
- Shortens the user learning curve via intuitive, customized screens; a graphical user interface; and online Help features that are consistent across functions
- Increases revenue opportunities by accurately capturing all procedure charges and charging events
- Improves quality of patient care through the use of customized reference ranges based on patient age, gender, and species, allowing your laboratory to validate clinical results using ranges most appropriate for the patient population.
- Lowers operational costs for management systems by providing an integrated application to management data.

Major Features

- *General Laboratory* offers a proven solution for organizations composed of multiple facilities or for those undergoing consolidation.
- Bar-coded collection lists and specimen labels are created.
- Multiple different result entry formats are accommodated.
- Specialized functions for performing differential counts are included.
- Calculations and interpretations are performed automatically based on component test results.
- A dilution factor can be entered and a result calculated. The dilution factor is stored for future reference.
- *General Laboratory* automatically expedites the reporting of STAT and critical test results.
- Reports can be transmitted automatically to printers or fax machines at remote locations, such as physician offices.
- Automatic result verification based on user-defined criteria is supported.
- *General Laboratory* provides for point-of-care result entry.
- Quality control material lot numbers are managed by the system.
- Online tracking, checking, and reporting of quality control results are provided.
- User-defined, Westgard-based quality control rules are supported.
- Users are notified immediately when quality control is out of range.
- Immediate corrective action and documentation are required for outlier quality control values.
- Detail or summary quality control reports are produced automatically on a periodic basis.
- Functionality is provided to support method validation.
- Patient-based quality control is supported.
- Secondary review and validation of results is available.
- Upon verification of results, billing transactions are created, workload credit is captured, and clinical reports are produced.



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PathNet: General Laboratory

- User-defined online management reports (views) with numerous selections for filters and display criteria are available.

- In addition to the features inherent within *PathNet, Foundations* functionality is also included. *Foundations* refers to Cerner's definition of those common processes or tasks that are shared across clinical and administrative domains and applications, technical areas, and project or production tasks. *Foundations* is included in all major Cerner licensed software solutions and includes *Technical Components (Technical Environment Management, Security Management, User Management,* and so on), *Functional Components* (for example, *Person Management, Order Management,* and *Result Processing),* and *Operational Components (Operation/System Management, System Integration,* and so on). The majority of the componentry applies to all Cerner solutions, though a few specific components may not be applicable to every solution line. Refer to the *Foundations* Solution Description for more information.

Cerner Millennium Integration Benefits

Benefits of using *General Laboratory* in a Cerner Millennium® environment include the following:

- When the *Inpatient Pharmacy* (PH-20160) solution within PharmNet® is used in conjunction with *General Laboratory*, calculations, such as creatinine clearance, and actual values, such as drug levels, are displayed within *Inpatient Pharmacy*.

- Integration with the *Radiology Management* (RA-20135) solution within RadNet® mutually benefits pathologists and radiologists, both of whom need access to related data from the same case, such as a sonogram and an AFP level.

- Orders are processed more efficiently and quickly throughout the entire organization when the *PowerOrders® (PS-20576)* solution within the PowerChart® offering is used in conjunction with *General Laboratory*.

Cerner Professional License

The Cerner Professional License provides each licensed client the right to utilize design and configuration tools, including Cerner Bedrock™ and Reference Data Domain Sync (RDDS) where applicable. These services simplify and expedite the design, build and maintenance process throughout the lifecycle of a Cerner solution. Clients can reduce implementation time and eliminate variance by automating processes with the Cerner Professional License.

Discern Explorer

Discern Explorer® uses full-featured, fourth-generation programming language patterned after Structured Query Language (SQL) to maintain and extract data from both *Cerner Millennium®* and client-developed databases. All *Cerner Millennium* applications use *Discern Explorer* to select from, insert into, update into and delete from the *Millennium* database. *Discern Explorer* can also be used to extract data to download to other applications. Individuals with little computer experience can use *Discern Explorer* to generate simple queries and reports, or computer professionals can use it to perform more complex and sophisticated programs.

Discern Expert

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PathNet: General Laboratory

Special Licensing Considerations

Cerner also offers our solutions in a shared environment for certain markets, and these offerings require some degree of standardization and adherence to Cerner recommended workflows and content.

Availability

Cerner Millennium, Revision HNAM.2000.01

Related Solutions

The following Cerner software solutions significantly extend the functionality of this solution:

Laboratory Clinical Record (PA-22930)

Clinical Data Repository (PS-20570)

Outreach Service (PA-22205)

Laboratory Imaging (PA-22240)

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through our website at *www.cerner.com*.

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PathNet: Microbiology

Description

Microbiology is a major PathNet® offering that provides for online ordering of procedures, specimen management, and result review and verification for orders assigned to specific workbenches in the microbiology sections. These sections include bacteriology, virology, mycology, mycobacteriology, and parasitology. In addition, via Cerner's embedded *Foundations* functionality that automates shared processes and tasks, *Microbiology* supports departmental patient registration, departmental order entry and inquiry, workload reporting, departmental charting, charge capture and reporting, operations management, system management, environment management, and security. Long-term storage of results online also is supported. This flexible offering is easily tailored to satisfy unique organizational and departmental workflow requirements.

Microbiology automates all aspects of the specimen collection and storage processes relative to the performance of laboratory procedures. The specimen tracking capability within PathNet documents each stage of specimen transfer, from initial collection through transport, testing, storage, retrieval, and final disposal.

In *Microbiology,* bar-coded specimen and media labels increase the accuracy and speed of login and setup. At the workbench, the bar-coded media labels can be scanned, quickly loading the patient data for result entry. Alternatively, personalized worklists can be generated online and worked through in result entry functions to ensure all orders are updated in a timely manner.

The paper documentation previously required in the microbiology lab is replaced with a convenient electronic workcard. The electronic workcard provides online organism work-up with the ability to record culture information, including growth, biochemical observations, and susceptibility results. The electronic workcard also is used to send reports, order additional tests and susceptibilities, and assign identifiers for use with automated instruments. Every action taken during the workup of a culture can be stored in the system and retrieved when needed. During result entry, workload and billing are captured automatically for cultures, susceptibilities, reports, and biochemical tests. Correlation of reported organisms can also be monitored, with notification of the user and the ability to add a footnote to the report on correlation failure.

Scripted workups provide an online algorithm for organism identification and culture workup. Scripts can order biochemicals and susceptibilities, change organism names, add comments, and issue reports automatically for the microbiologist. Along with providing microbiologists with a means of rapid result entry, scripts also produced consistency in organism identification and reporting.

Microbiology can issue automatically large volumes of preliminary and final reports with its automatic "no growth" reporting capabilities. Based on culture type, the system selects the appropriate textual response and appends the correct time period to the preliminary or final reports for a batch of cultures.

Lot numbers for components such as media, biochemical, and susceptibilities can be recorded by bench in Microbiology. These lot numbers are associated with activities in result entry so that the exactly lot used for testing is always known. In addition, the expiration date for any lot entered in the system will be monitored during result entry and activity on expired lots will be prevented.

Quality Control is functionality offered by *Microbiology* to monitor components utilized in microbiology procedure testing to ensure that the information generated by the laboratory is accurate, reliable, and reproducible. QC tasks for components are automatically generated, based on a defined schedule. These components include media, biochemicals, and susceptibilities. The system does

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PathNet: Microbiology

not allow you to utilize a component or to release patient results for a component unless the QC for the component lot is complete and in-control. In addition, detailed QC reports for a specified time period can be produced on demand or automatically on a periodic basis. QC statistics can be calculated automatically, or requested based on an ad hoc date range. Online review of QC results is provided for both a primary and secondary reviewer

Online inquiries and reports eliminate lengthy searches for paper worksheets and reports, while providing supervisors with a quick way to manage and review the daily activities in the laboratory. A suite of reports is available for monitoring, abnormal findings, corrections, organism correlation issues, and routine results, as well as pending orders and tasks. A second suite of reports pulls historical information for generation of antibiograms, statistics, and historical order information often used by the laboratory and the infection control department. A variety of filters and sorts allow all reports to be streamlined to show only the desired information. In addition, reports used routinely can be printed on a daily bases and reports needed on an ad hoc bases can be quickly generated.

The Clinical Validation component of *Microbiology* provides functionality that routes selected results for additional review before being released. Clinical Validation automatically evaluates each result against the defined review criteria to determine if the result requires secondary review and approval. Results that qualify for review are routed to one or more review queues where one or more people review and approve the results.

Laboratory Management (LM) is an integral part of *Microbiology*. LM is a sophisticated tool set that provides online views to statistics for supporting management processes, including turnaround time analysis, volume statistics, utilization, and revenue reporting. When viewing information, each user has the ability to select and customize the presentation based on his or her security. The information in these views is current because of real-time, clinical event-driven data feeds. "Stoplight coding" can be deployed in these views to highlight data in user-defined colors and assist in pinpointing the reason(s) for the unfavorable variance.

Client Benefits

- Saves money while improving the quality of patient care by ensuring immediate access to patient results throughout the organization
- Streamlines specimen log-in and culture setup with bar-coded specimen and media labels
- Automates the workflow within the microbiology department, improving efficiency, accuracy and quality of service
- Shortens the user learning curve via intuitive, customized screens; a graphical user interface; and online Help features that are consistent across functions
- Increases accuracy through automatic discrepancy and correlation checking at the time of result entry
- Increases revenue opportunities by accurately capturing all procedure charges and charging events
- Lowers operational costs for management systems by providing an integrated application to management data

Major Features

- Duplicate order checking and order validation are provided based on specimen source.
- Comprehensive specimen tracking and routing capabilities are included.

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PathNet: Microbiology

- User-defined media labels with bar codes are included.
- An electronic workcard with online algorithms for organism workup is employed for paperless result entry.
- *Microbiology* enables extensive batch reporting, including automatic "no growth" reporting.
- Cross-encounter microbiology result inquiry on active and historical results is supported.
- *Microbiology* automatically expedites the reporting of STAT and critical test results.
- Reports can be transmitted automatically to printers or fax machines at remote locations, such as physician offices.
- Procedure charges and workload statistics are captured automatically.
- Interfaces to automated ID and susceptibility instruments and blood culture analyzers are supported, via *Unidirectional Device Interface* (IF-29650) and *Bidirectional Device Interface* (IF-29655).
- Antibiogram, epidemiology, and infection control candidate reports are included.
- Management reports for review of abnormal, corrected, and routine results.
- Correlation and discrepancy checking between direct smears and preliminary and final culture reports is supported.
- Possible nosocomial infection and previous positive culture alerts
- Secondary review and validation of results is available.
- Lot recording and maintenance for all components used in testing.
- Online tracking, checking, and reporting of quality control results are provided.
- User-defined, Westgard-based quality control rules are supported.
- Users are notified immediately when quality control is out of range.
- Immediate corrective action and documentation are required for outlier quality control values.
- Detail or summary quality control reports are produced automatically on a periodic basis.
- Upon verification of results, billing transactions are created, workload credit is captured, and clinical reports are produced.
- User-defined online management reports (views) with numerous selections for filters and display criteria are available.
- In addition to the features inherent within *Microbiology, Foundations* functionality is also included. *Foundations* refers to Cerner's definition of those common processes or tasks that are shared across clinical and administrative domains and applications, technical areas, and project or production tasks. *Foundations* is included in all major Cerner licensed software solutions and includes *Technical Components (Technical Environment Management, Security Management, User Management,* and so on), *Functional Components* (for example, *Person Management, Order Management,* and *Result Processing),* and *Operational Components (Operation/System Management, System Integration,* and so on). The majority of the componentry applies to all Cerner solutions, though a few specific components may not be



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PathNet: Microbiology

applicable to every solution line. Refer to the *Foundations* Solution Description for more information.

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Discern Explorer

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Discern Expert

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Availability

Cerner Millennium, Revision HNAM.2000.01

System Resource Considerations

The CPU, memory, and disk requirements for *Microbiology* are measured in terms of the number of patient admissions and discharges, the number of orderable procedures, and the number of users. Additional requirements may be based on the number of medical device interfaces.

Special Licensing Considerations

Cerner also offers our solutions in a shared environment for certain markets, and these offerings require some degree of standardization and adherence to Cerner recommended workflows and content.

Related Solutions

The following Cerner software solutions significantly extend the functionality of this solution:

Laboratory Clinical Record (PA-22930)

Clinical Data Repository (PS-20570)

Outreach Service (PA-22205)

Laboratory Imaging (PA-22240)

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

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PathNet: Anatomic Pathology

Description

Anatomic Pathology is a major PathNet® offering for storing and reporting pathology information that accommodates the clinical disciplines of surgical pathology, autopsy, cytology, and bone marrow. *Anatomic Pathology* streamlines specimen accessioning and processing while providing patient history review, pathology text entry, support for diagnostic coding using the College of American Pathologists (CAP) SNOMED database, report generation, case review and sign-out, and case retrieval for research or teaching purposes. Via Cerner's embedded *Foundations* functionality that automates shared processes and tasks, *Anatomic Pathology* also includes support for departmental patient registration, departmental order entry and inquiry, workload reporting, departmental charting, charge capture and reporting, operations management, system management, environment management, and security. This flexible offering is easily tailored to satisfy unique organizational and departmental workflow requirements.

Anatomic Pathology supports streamlined ordering, specimen receipt, and specimen processing. Codes can be defined for documenting and reporting the acceptability or inadequacy of specimens upon receipt. Bar-coded collection and specimen labels ensure accuracy. All label formats, including slide labels, are user-definable. By assigning accession prefixes, the system manages many aspects of processing, such as specimen/block/slide identification schemes. As specimens are processed, workload and billing information is captured automatically.

An integrated word processor within *Anatomic Pathology* allows quick entry of templates, supports automatic population of predefined templates with results from other laboratory departments and the entry of predefined text. Access to additional pertinent patient information, such as other open cases or pathology history is readily available and selected text can be copied into the current report. Additionally, transcription using Microsoft Word version 7.0 is supported.

Pathologists can review, edit, and sign out cases online with an electronic signature. User preferences can be defined for display of cases for review. While reviewing and finalizing reports, additional data is accessible, such as patient history, other open cases, diagnostic codes, billing information, and the patient's other clinical findings from *Microbiology* (PA-20075) or *General Laboratory* (PA-20070) offering or from Cerner's *Radiology Management* (RA-20135) solution within RadNet®.

The preliminary or draft copy of the user-defined pathology report can include previous diagnoses from other pathology cases for the patient. Results from other laboratory sections, such as hematology, can be incorporated into the pathology report. Reports can be automatically expedited to local printers or faxed to remote sites. Long-term storage of data, with easy online access to historical information, also is provided.

Inventory management is available to organize and store the inventory for anatomic pathology specimens, blocks, and slides. You can check inventory in to storage locations, check inventory out for further studies or consultations, and discard inventory after a specified time frame.

Laboratory Management (LM) is an integral part of *Anatomic Pathology*. LM is a sophisticated tool set that provides online views to statistics for supporting management processes, including turnaround time analysis, volume statistics, utilization, and revenue reporting.

When viewing information, each user has the ability to select and customize the presentation based on his or her security. The information in these views is current because of real-time, clinical event-driven data feeds. "Stoplight coding" can be deployed in

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PathNet: Anatomic Pathology

these views to highlight data in user-defined colors and assist in pinpointing the reason(s) for the unfavorable variance.

Client Benefits

- Saves money while improving the quality of patient care by ensuring immediate access to case information and reports throughout the organization
- Provides integrated quality assurance including system selected cases for correlation studies, facilitating regulatory compliance
- Increases quality of care with automated discrepancy and variance checking for cytology results and the generation of cytology quality assurance reports
- Improves diagnostic outcomes through follow-up notifications to physicians and/or patients based on case diagnosis
- Automates the workflow within the pathology department, improving efficiency, accuracy and quality of service
- Shortens the user learning curve via intuitive, customized screens; a graphical user interface; and online Help features that are consistent across all Cerner applications
- Increases revenue opportunities by accurately capturing all procedure charges and charging events
- Lowers operational costs for management systems by providing an integrated application to management data.

Major Features

- System or manual assignment of accession numbers is supported.
- User-defined label formats with bar codes are included.
- *Anatomic Pathology* tracks block and slide identifiers for each case.
- The number of pieces of tissue and the type of fixative for each block is tracked.
- Specialized worksheets are available for each processing area.
- Flexible charting and reporting formats are provided.
- *Anatomic Pathology* provides electronic signature capabilities that are based on security and in compliance with the signature requirements in FDA regulation 21 CFR Part 11.
- Results from other clinical disciplines, can be automatically included into a pathology report to speed result entry and reduce transcription errors.
- Digital images can be captured from the gross and microscopic examinations and stored within the pathology report when the optional *Image Management for Pathology* (PA-22245) solution is licensed, thus providing an integrated solution for pathology imaging. Images are associated at the case or report level and can be viewed on image-enabled reports and inquiries.
- Results from other clinical disciplines, such as from *Microbiology* (PA-20075) or *General Laboratory* (PA-20070) within PathNet® or *Radiology Management* (RA-20135) within RadNet®, can be viewed while entering or signing reports. These results can be selectively copied into the text of the pathology report if desired.

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PathNet: Anatomic Pathology

- Integration with the *Laboratory Clinical Record* (PA-22930) solution within PathNet or the *Clinical Data Repository* (PS-20570) offering within PowerChart® provides immediate, direct access to the patient's other clinical findings from foreign systems via the pathology report entry and sign-out functions.
- Full access to previous patient history is available, including support for historical uploads of previous report data from foreign pathology systems.
- Cytologists' daily slide screening workload can be monitored.
- Follow-up patient tracking for abnormal results is provided.
- CAP SNOMED codes can be assigned automatically or manually, with licensing of *CAP SNOMED INTERNATIONAL (III) for Pathology* (PA-22214).
- Reports can be transmitted automatically to printers or fax machines at remote locations, such as physician offices.
- *Anatomic Pathology* supports the identification of cases for instruction, conferences, or tissue committees.
- Cases can be retrieved by SNOMED codes, user-defined codes, teaching and conference indicators, and free-text phrases.
- Inventory can be managed at the specimen, block, and slide level.
- In addition to the features inherent within *Anatomic Pathology, Foundations* functionality is also included. *Foundations* refers to Cerner's definition of those common processes or tasks that are shared across clinical and administrative domains and applications, technical areas, and project or production tasks. *Foundations* is included in all major Cerner licensed software solutions and includes *Technical Components (Technical Environment Management, Security Management, User Management,* and so on), *Functional Components* (for example, *Person Management, Order Management,* and *Result Processing),* and *Operational Components (Operation/System Management, System Integration,* and so on). The majority of the componentry applies to all Cerner solutions, though a few specific components may not be applicable to every solution line. Refer to the *Foundations* Solution Description for more information.
- User-defined online management reports (views) with numerous selections for filters and display criteria are available.

Cerner Millennium Integration Benefits

Benefits of using *Anatomic Pathology* in a Cerner Millennium® environment include the following:

- Integration with the *Radiology Management* (RA-20135) solution within RadNet® mutually benefits pathologists and radiologists, both of whom need access to related patient data, such as a breast biopsy and a mammogram.
- Integration with *PowerOrders* (PS-20576) solution within PowerChart® closes the loop in the care process by documenting clinical events for outcomes analysis and trending with laboratory values.

Cerner Professional License

Cerner Professional License grants clients the right to utilize design and configuration tools, including Cerner Bedrock™ and Reference Data Domain Sync (RDDS) where applicable. These services simplify and expedite the design, build and maintenance

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PathNet: Anatomic Pathology

process throughout the lifecycle of a Cerner solution. Clients can reduce implementation time and eliminate variance by automating processes with Cerner Professional License.

Discern Explorer

Discern Explorer® uses full-featured, fourth-generation programming language patterned after Structured Query Language (SQL) to maintain and extract data from both *Cerner Millennium*® and client-developed databases. All *Cerner Millennium* applications use *Discern Explorer* to select from, insert into, update into and delete from the *Millennium* database. *Discern Explorer* can also be used to extract data to download to other applications. Individuals with little computer experience can use *Discern Explorer* to generate simple queries and reports, or computer professionals can use it to perform more complex and sophisticated programs.

Discern Expert

Discern Expert® is an event-driven, rules-based decision support capability. This sophisticated functionality is offered within a rules logic model and user interface design that simplifies the everyday use and management of critical decision support.

Availability

Cerner Millennium, Revision HNAM.2000.01

Special Licensing Considerations

A special licensing agreement has been established between Cerner and the College of American Pathologists (CAP), allowing Cerner to reproduce, and incorporate the CAP SNOMED INTERNATIONAL database into software developed and distributed by Cerner. The *CAP SNOMED INTERNATIONAL (III) for Pathology* (PA-22214) solution must be licensed by the client to incorporate SNOMED codes within *Anatomic Pathology*. If the electronic version of the full SNOMED dictionary already is licensed by the client from CAP, no additional license is required.

CAP SNOMED INTERNATIONAL (III) for Pathology (PA-22214) is for use only within the department of pathology. Use of the CAP SNOMED INTERNATIONAL database within other clinical areas requires the purchase of additional subscriptions for those areas.

Cerner also offers our solutions in a shared environment for certain markets, and these offerings require some degree of standardization and adherence to Cerner recommended workflows and content.

System Resource Considerations

The CPU, memory, and disk requirements for *Anatomic Pathology* are measured in terms of the number of patient admissions and discharges, the number of orderable procedures, the estimated number of patient results, the number of history files to be converted, and the number of users.

Related Solutions

The following Cerner software solutions significantly extend the functionality of this solution:

Laboratory Clinical Record (PA-22930)

Clinical Data Repository (PS-20570)

Outreach Service (PA-22205)

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and web - based training (WBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through our website at *www.cerner.com*.



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PharmNet: Inpatient Pharmacy

Description

Inpatient Pharmacy is a major PharmNet® offering designed to manage pharmacy operations serving an inpatient population. This solution's unique features make drug ordering and dispensing significantly faster than other system solutions in the marketplace, without compromising a critical aspect of the pharmacy's involvement in patient care – clinical validation. *Inpatient Pharmacy* supports drug-allergy, drug-drug, and drug-food interaction checking, as well as therapeutic duplication screening.

With *Registration Management* (CP-20735) within CapStone or an optional foreign system interface, ADT (admission, transfer, and discharge) and patient demographic information is automatically transmitted to *Inpatient Pharmacy,* eliminating duplicate patient registration within the pharmacy.

Inpatient Pharmacy fully supports the following activities in the pharmacy:

- Departmental Patient Registration
- Pharmacy Order Entry
- Clinical Documentation Management (ClinDoc)
- Decision Support/Clinical Review
- Physician Order Processing
- Dispensing
- Medication Administration Record Processing
- Bar-Code Charge/Credit
- Formulary Management
- Database Tools
- HL7-Compliant Interfaces (optional)
- Foundations

Client Benefits

- Improves quality of care by providing comprehensive, integrated clinical information at the point of clinical decision making
- Clinical documentation (*ClinDoc*), integrated with order entry, saves time and increases the likelihood of documenting all clinical activities. Provides tracking and reporting of all patient outcomes related to such activities
- Automates the medication use management process, streamlining workflow
- Enhances patient safety through advanced clinical intervention tools
- Provides productivity tools that enhance departmental operations using real-time workload statistics, such as orders and clinical tasks
- Supports pharmacoeconomic analysis, by trending intervention types, quantities, recommendation acceptance and potential cost savings/avoidance
- Employs a user-friendly, Microsoft Windows-based design for ease of navigation

Major Features

- *Departmental Patient Registration* is a feature of Cerner's *Foundations,* which is embedded as the underlying foundation of every appropriate major software offering that Cerner develops. It supports the quick entry and modification of patient demographic information by pharmacy personnel. As changes are made either manually or through a foreign system ADT interface, *Departmental Patient Registration* features

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ensure that users have access to the most current patient demographic information.

- *Pharmacy Order Entry* provides the user with several options for selecting medications, such as by brand name, generic name, product identification number (that is, NDC or DIN), or mnemonic. Predefined defaults for order details expedite the medication order entry process. Order sets and IV sets can be used for commonly ordered medication therapy plans, including defaults of the most commonly accepted medications. User-defined order alerts can be displayed during pharmacy order entry and are used to notify pharmacists of certain formulary items that require restricted dispensing or for special instructions. Integration with *Departmental Clinical Supply Chain for Pharmacy* (PH-25201) automates the reorder and inventory control processes, with support for contract item identification, extemporaneous compounding, and inventory tracking capabilities.

- *ClinDoc* provides comprehensive clinical documentation of activities integrated within the medication alerting process. Such documentation can include non-medication parameters such as diseases, allergies or patient conditions. *ClinDoc* automatically captures the identification of the user entering documentation when a clinical audit is encountered. Each *ClinDoc* activity generates a unique document that is assigned at the point of intervention. Clinical activity workload reporting at the user or activity/issue level is provided as well. This can be used to assign specific tasks to clinicians or clinical teams.

- *Decision Support/Clinical Review* enables institutions to define specific criteria for clinical appropriateness of drug therapy. Clinical intervention management for safe medication utilization is achieved through the licensure of *MediSource Foundation* (KS-22004 or KS-22005) or *MediSource Patient Specific* (KS-22001), Cerner Multum's drug database solutions, to perform drug interaction checking and screening for therapeutic duplication at the time of order entry. All messages for alerts and interaction checks are presented in the same window for review, reducing the number of alert windows presented during pharmacy order entry. The supporting *Clinical Documentation Management (ClinDoc)* (PH-22275) solution can be integrated with pharmacy order entry to support clinical conflict analysis and intervention.

- *Physician Order Processing* in PharmNet supports the complete electronic process for medication orders placed in a Cerner or non-Cerner physician order entry system. *Physician Order Processing* for these types of orders received by PharmNet supports pharmacy order verification, decision support, clinical checking, and the use of electronic signatures. Physician orders placed via *PowerOrders®* (PS-20576) also provide pharmacy personnel with the override reason to alerts, when a physician chooses to bypass a medication alert. The pharmacy personnel also have access to the normalized dose used by the physician when ordering weight-based doses (typically in the pediatric setting).

- The *Dispensing* component supports multiple facilities, satellites, and mobile carts, as well as different exchange times for each nursing station. It supports processing of patient charges immediately through order entry and dispensing functions. Dispensing lists are available for an individual patient, single or multiple nursing stations, or the entire organization. The system supports unit dose, traditional fill, pass medication, and floor stock drug distribution methods.

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PharmNet: Inpatient Pharmacy

- *Medication Administration Record (MAR) Processing* supports the documentation of medication administration for scheduled, PRN, IV piggyback, continuous infusion, and one-time orders. Standard MAR reports can be generated by the system for use by nursing personnel in charting the administration of patient medications. Additional MAR formats or customization of the MAR to meet the client's clinical data requirements is available for additional service fees. Integration of *Inpatient Pharmacy* with *Medication Administration Record* (PS-22732) a supporting solution that creates an electronic profile of the patient's medications organized by medication groupings and administration times, offers the highest degree of medication administration documentation.

- *Bar-Code Charge/Credit* simplifies the entry of charges and credits for pharmacy medication orders placed in PharmNet. This form of rapid data entry is accomplished by using bar-code readers to enter the orders that are being charged or credited.

- *Formulary Management* provides a centralized method of support for a single- or multi-institution medication database. *Formulary Management* simplifies monitoring the use of nonformulary items and investigational drugs, assisting with control of the pharmacy's formulary. The system can identify drug categories, such as formulary, nonformulary, and investigational items, for one or more formularies. Order entry defaults can be set for billing codes and formulas, specific commercial products, and formulary products that are defined at the facility/nursing station level. Reports can be requested by therapeutic category to assist in effectively regulating formulary drug use.

- *Database Tools* represent a toolset for building the reference tables that are used by this solution. For example, with these functions, the pharmacy's formulary can be defined, as well as system processing variable settings. *Database Tools* also are used to set up employee records and security.

- *HL7-Compliant Interfaces* to all major suppliers that support HL7-compliant standards, including order entry, patient registration, billing, and laboratory information systems, are optionally available for licensing. For example, PharmNet can be interfaced to many of the automated dispensing devices used in hospital pharmacy departments.

- In addition to the features inherent within *Inpatient Pharmacy, Foundations* functionality is also included. *Foundations* refers to Cerner's definition of those common processes or tasks that are shared across clinical and administrative domains and applications, technical areas, and project or production tasks. *Foundations* is included in all major Cerner licensed software solutions and includes *Technical Components (Technical Environment Management, Security Management, User Management,* and so on), *Functional Components* (for example, *Person Management, Order Management,* and *Result Processing),* and *Operational Components (Operation/System Management, System Integration,* and so on). The majority of the componentry applies to all Cerner solutions, though a few specific components may not be applicable to every solution line. Refer to the *Foundations* Solution Description for more information.

- A *Dose Range Management* component establishes minimum and maximum dose checking guidelines for the safe administration of medication, so that medication orders can be screened for the minimum and maximum values of specific drugs based upon age ranges, routes of administration, single, daily and therapy doses, and other patient-specific modifiers

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PharmNet: Inpatient Pharmacy

including renal status and lifetime therapy limits on specific drugs.

Cerner Millennium Integration Benefits

Benefits of using *Inpatient Pharmacy* in Cerner Millennium's® environment include the following:

- With the *General Laboratory* (PA-20070) offering within PathNet®, physiologic calculations or actual results, such as a creatinine clearance, are displayed in the *Clinical Summary* window of *Inpatient Pharmacy*. Calculations are based on the serum creatinine value from *General Laboratory*. Calculations are patient-specific using standard. Laboratory results from *General Laboratory* can be monitored based on the patient's medication therapy.
- With the *PathNet Microbiology* (PA-20075) offering installed, the online antibiogram feature within *PharmNet* provides pharmacists with information about the susceptibility patterns of microorganisms to antibiotics based on the site of infection.
- With *the Medication Administration Record* (PS-22732), the medication process is truly a closed loop, as direct care providers process medication orders online and transmit them to *Inpatient Pharmacy*, as well as document the administration of medications online. As a feature of this integration, a charge for the medication order can be generated based upon this documentation process. Reporting and monitoring capabilities are expanded to include the actual time of medication administration rather than the scheduled time within *Inpatient Pharmacy*.

Cerner Professional License

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Discern Explorer

Discern Explorer® uses full-featured, fourth-generation programming language patterned after Structured Query Language (SQL) to maintain and extract data from both *Cerner Millennium®* and client-developed databases. All *Cerner Millennium* applications use *Discern Explorer* to select from, insert into, update into and delete from the *Millennium* database. *Discern Explorer* can also be used to extract data to download to other applications. Individuals with little computer experience can use *Discern Explorer* to generate simple queries and reports, or computer professionals can use it to perform more complex and sophisticated programs.

Discern Expert

Discern Expert® is an event-driven, rules-based decision support capability. This sophisticated functionality is offered within a rules logic model and user interface design that simplifies the everyday use and management of critical decision support.

Availability

Cerner Millennium Release 2000, version 2000.01

Software Prerequisites

MediSource Foundation (whose functionality is included in *MediSource Patient Specific* KS-22001; or *MediSource Foundation* facility-wide KS-22004; or *MediSource Foundation* by net KS-22005; or within functionality included in the *Knowledge Catalog* KS-26805 or KS-26806) is required.

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PharmNet: Inpatient Pharmacy

Technical Environment Requirements

Refer to www.cerner.com and navigate to Home→ Solutions & Services→ Cerner Technologies for information about the technical environment.

Cerner also offers our solutions in a shared environment for certain markets, and these offerings require some degree of standardization and adherence to Cerner recommended workflows and content.

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution: *Medication Administration Record* (PS-22732), *Outpatient Pharmacy* (PH-20170), *PowerOrders* (PS-20576), *Registration Management* (CP-20735), *Departmental Clinical Supply Chain for Pharmacy* (PH-25201), *General Laboratory* (PA-20070), *Microbiology* (PA-20075) and *ADE Prevention Alert Foundation Package* (KS-26702).

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through our website at www.cerner.com.

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General Availability

PharmNet

Outpatient Pharmacy

Description

Outpatient Pharmacy is a major PharmNet offering designed to automate the prescription order management process in the retail pharmacy setting. This solution's unique features provide the necessary prescription and clinical information for efficient order entry, refill, and dispensing processes. *Outpatient Pharmacy* supports drug-allergy, drug-drug, and drug-food interaction checking, as well as dose range management. Other features include online claims processing, support for dispensing device interfaces (with appropriate licenses), compound drug support, and reporting capabilities. When *Outpatient Pharmacy* is combined with *Inpatient Pharmacy* (PH-20160), the integrated medication profile provides a single view for both inpatient and retail medication orders.

With licensure of *Registration Management* (CP-20735) within CapStone or an optional foreign system interface, ADT (admission, transfer, and discharge) and patient demographic information is automatically transmitted to *Outpatient Pharmacy,* eliminating duplicate patient registration.

Outpatient Pharmacy fully supports the following activities in the pharmacy:

- *Patient registration*
- *Pharmacy order entry*
- *Dose Range Management*
- *Batch refill and return-to-stock processing*
- *Patient information leaflets*
- *Online claims processing*
- *Compound drug support*
- *Prescription tracking*
- *Clinical management and drug utilization review*
- *Downtime processing*
- *Retail pharmacy reporting*
- *Database tools*
- *HL7-Compliant interfaces (supporting solution)*
- *Foundations*

Client Benefits

- Automates the order entry, dispensing, and refill processes in the retail setting, streamlining workflow
- Enhances the overall financial management of the retail pharmacy, improving cash flow
- Integrates with other Cerner solutions to enable review of medication use across the continuum of care, improving patient safety and quality of care

Major Features

- *Patient Registration* is a feature of Cerner's *Foundations,* which is embedded as the underlying foundation of every major software offering that Cerner develops. It provides the ability to enter demographic, financial, insurance, and clinical information for a specific patient within *Pharmacy Order Entry.* As changes are made either manually or through a foreign system ADT interface, the *Patient Registration* component ensures that users have access to the most current patient demographic information.

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- *Pharmacy Order Entry* provides the user with several options for selecting medications, such as by brand name, generic name, solution identification number (such as NDC), or mnemonic. *Pharmacy Order Entry* supports the selection of therapeutic alternatives and generic substitutions. During order entry, pharmacy personnel have direct access to patient registration information and can easily access and update patient demographics and insurance, employer, and prescriber information. Prescription details and financial information entered by default during the order conversation streamline the processing of prescription orders. Patient profile actions can be performed during order entry and include refill, cancel, copy, modify, discontinue, inquire, request history, request label, void, and transfer. *Pharmacy Order Entry* provides the ability to enter pharmacy products into the database and supports the entry of investigational drugs and nonprescription (that is, over the counter or OTC) items, as well as the processing of compound medication prescriptions. Interaction checking, drug utilization review, and other clinical interventions are fully supported throughout the order entry conversation. Pricing and third-party claims adjudication occurs automatically upon processing of prescriptions. The system provides for the generation of labels, receipts, and counseling information.

- A *Dose Range Management* component establishes minimum and maximum dose checking guidelines for the safe administration of medication, so that medication orders can be screened for the minimum and maximum values of specific drugs based upon age ranges, routes of administration, single, daily and therapy doses, and other patient-specific modifiers including renal status and lifetime therapy limits on specific drugs.

- *Batch Refill and Return-To-Stock Processing* is used for efficient refill and return processing of multiple prescriptions in a batch mode. The batch refill and return function can be performed using bar-code technology. The system enables users to monitor, modify, review, or add adjudication information to prescription orders. To help assess patient medication compliance, refill checks are performed, such as early/late and extra refill notification and prescription expiration.

- *Patient Information Leaflets* can be viewed online, and they print automatically with all new prescriptions. *Patient Information Leaflets* can be printed on demand if needed. Depending upon the language of the patient, these leaflets can be printed in English or Spanish. Cerner Multum, a wholly owned subsidiary of Cerner Corporation, provides the embedded content for the leaflets.

- *Online Claims Processing* is used to perform submission, editing, queueing, and monitoring of third-party prescription claims. The adjudication function also supports resubmission and reversal of claims and provides the ability to send denial overrides and prior authorizations. Pre-adjudication checks can be performed, such as limits on dispense quantity, days supply, price, and OTC medications, which decreases prescription claim submission time and expenses.

- *Compound Drug Support* is provided within *Outpatient Pharmacy*. Users can predefine commonly dispensed compound prescriptions in the database or build compounds during pharmacy order entry. *Compound Drug Support* is designed to enable users to adjudicate compound prescription claims via online claims processing to third-party prescription plans.

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- *Prescription Tracking* provides the ability to track the movement of prescriptions throughout the pharmacy dispensing process. *Prescription Tracking* captures the user, date, and time for certain events in the processing of prescriptions. By capturing this information, workload analysis can be performed. Events such as filling, checking, dispensing, packaging, shipping, delivery, and counseling can be tracked for each prescription and can be defined by the user. This enables users to tailor events specific to the prescription dispensing process for the pharmacy.

- *Clinical Management and Drug Utilization Review* is provided for clinical analysis. Users can quickly and easily view the patient's clinical summary and add/edit demographic, allergy, and problem information. Additionally, users can view current prescription interactions, a summary of clinical results, and a patient's medication profile, as well as monitor lab values. *Clinical Management and Drug Utilization Review* supports documentation of clinical conflict/interaction, intervention, and outcome information, which can then be tracked by the system. With the addition of *Discern Expert* (PH-26105), Cerner's clinical decision support system, rules and alerts can be written to notify users in real time as prescription use problems arise.

- *Downtime Processing* enables the processing and dispensing of prescriptions when the system has experienced an interruption. The downtime process enables users to remain operational until the system responds. This process can be activated or deactivated automatically or via user interaction.

- *Retail Pharmacy Reporting* is used to print various reports for clinical and management usage. Reports can be generated by location, patient name, health plan, payment method, dispense category, user, or physician. Also, these reports can be set up in operations to be run automatically by the system. *Retail Pharmacy Reporting* has the flexibility to run single-transaction or multi-facility reports.

- *Database Tools* provide the backbone of information for *Outpatient Pharmacy* and are used to build the reference tables for this solution. The tools have the flexibility to be customized with site-specific information.

- *HL7-Compliant Interfaces* to all major suppliers that support HL7-compliant standards are optionally available for licensing. For example, *Outpatient Pharmacy* can be interfaced to patient registration and billing systems, as well as automated dispensing devices used in the retail setting.

- In addition to the features inherent within PharmNet, *Foundations* functionality is also included. *Foundations* refers to Cerner's definition of those common processes or tasks that are shared across clinical and administrative domains and applications, technical areas, and project or production tasks. *Foundations* is included in all major Cerner licensed software solutions and includes *Technical Components (Technical Environment Management, Security Management, User Management,* and so on), *Functional Components* (for example, *Person Management, Order Management,* and *Result Processing),* and *Operational Components (Operation/System Management, System Integration,* and so on). The majority of the componentry applies to all Cerner solutions, though a few specific components may not be applicable to every solution line. Refer to the *Foundations* Solution Description for more information.

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Cerner Millennium Integration Benefits

Benefits of using *Outpatient Pharmacy* in Cerner Millennium's environment include the following:

- With *Care Documentation* (PS-22719) and *PowerOrders* (PS-20576) within PowerChart or *Clinical Office With PowerNote* (PV-20230) within PowerChart Office, the medication process is truly a closed loop, since providers can process prescription orders online and transmit them to *Outpatient Pharmacy.* When *Inpatient Pharmacy* is added, practitioners throughout the healthcare facility have online access to an integrated patient medication history for both the inpatient and retail setting.

- With the *General Laboratory* (PA-20070) offering within PathNet, patient-specific physiologic calculations and actual results are available in *Outpatient Pharmacy.* Laboratory results from *General Laboratory* can be monitored based on the patient's medication therapy.

- With the PathNet *Microbiology* (PA-20075) offering installed, the online antibiogram feature within PharmNet provides pharmacists with information about the susceptibility patterns of microorganisms to antibiotics based on the site of infection.

Availability

Cerner Millennium 2000, version 2000.01

Software Prerequisites

One of the following is required: *MediSource Foundation (Retail/Clinic)* (PH-22160), *MediSource Foundation By Net, Per Facility* (KS-22005), *MediSource Foundation Facility-wide)* (KS-22004), *MediSource Patient Specific* (KS-22001) or *Knowledge Catalog* (KS-26801, KS-28802, or KS-26803).

Technical Environment Requirements

Refer to the *Understanding Cerner Millennium Technical and Support Requirements* document for information about the technical environment.

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution: *Inpatient Pharmacy* (PH-20160), *PowerOrders* (PS-20576), *Registration Management* (CP-20735), *Care Documentation* (PS-22719), *Clinical Documentation Management (ClinDoc)* (PH-22275), *Departmental Clinical Supply Chain for PharmNet* (PH-25201), *Discern Expert* (PH-26105), *Discern Explorer* (PH-26140), *General Laboratory* (PA-20070), *Microbiology* (PA-20075), *Clinical Office With PowerNote* (PV-20230), and *Billing & Accounts Receivable* (PF-20450).

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through our website at www.cerner.com or through our sales organization at (816) 201-0054.

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General Availability

Multi-system Option

Departmental Clinical Supply Chain

Description

Departmental Clinical Supply Chain is a supporting financial and operational solution that captures the use of supplies at the point of care and acts as a trigger for a series of events that make up the supply chain process. This product supports inventory management, facilitates departmental charging, and provides management reporting for these functions.

In addition, the Clinical Supply Chain solution provides a powerful tool to analyze supply usage, support product standardization, and ultimately lead to overall cost reductions

Its unique features automate the processes of materials management, allowing departments to plan, more effectively manage, maintain optimal inventories, contain costs, and capture departmental charges. Integrated with Cerner's clinical applications, the solution connects the clinical event to the supply chain , allowing for the management of perpetual inventories and automated replenishment events.

This system supports PAR management, using optional hand held devices, for inventories not designated as perpetual.

Various interfaces are supported, including General Ledger Inventory Transfers, Requisition Outbound, and Requisition Fill Inbound.

Client Benefits

- When implemented with a Cerner clinical application, products consumed are captured during the patient care documentation conversation. A perpetual inventory becomes possible where previously labor would be prohibitive.
- Coupling the clinical event to the supply consumed allows you to evaluate not only what products are being used by how they are being used. This makes standardization and utilization projects efficient to complete.
- Because the clinical and logistic information is maintained together, better reporting is possible. Immediate access is provided to information needed to support strategic logistics. For example, administrators can generate reports based on the length of time an item has remained in inventory. If the product is underutilized, the organization can sell it to another hospital or can return it to the vendor. This practice translates to savings for the organization, as previously untapped supplies can generate revenue or credit toward a new purchase.
- Inventories are automatically updated based on item fill and return documentation, with the licensing of this product for the applicable departments, such as cardiology, emergency, laboratory, pharmacy, radiology and surgery.

Major Features

- Electronic requisitions provide replenishment automation for both stock and nonstock items.

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- System-generated recommended order lists streamline the requisitioning process, including use of thresholds that may be adjusted as the seasons, corresponding caseloads, or other metrics change.
- Inventory control provides the ability to adjust stock levels; transfer and return stock; loan or borrow stock; and manufacture items, trays, sets, and packs.
- Summary or detail reports of departmental transactions can be generated.
- A wide variety of departmental materials management inquiries and reports can be generated, such as ABC, usage, and stock status reports.
- Robust item, manufacturer, and supplies upload tools speed system implementation.
- *Patient Supply Record* ™ – data repository that stores supply usage by patient with cost and charge information.
- Automated replenishment capabilities based on clinical usage
- On-line requisitioning and product catalog for manual ordering and status tracking
- Mobile device support for inventory management and hand-held requisitioning
- Automated charge generation based on supply utilization

Patient Supply Record

The *Patient Supply Record* ™ supports the following capabilities:

- Patient Demographic Data—Age, gender, allergies (optional), history
- Supply and Medication Database —ability to store UPN, manufacturer numbers, cost and sourcing data
- Clinical Information—Diagnosis codes, procedure codes, severity of illness, complications, co-morbidities (from medical records coding)
- Procedure Event Details—Procedure performed, date, time, place and participating clinicians (available from *Point of Use* (PO-20202)and/ or clinical systems

"Net" Affiliations

CVNet, PharmNet, PathNet and SurgiNet

Cemer Millennium Integration Benefits

Benefits of using *Departmental Clinical Supply Chain* in a Cerner Millennium environment include the following:

- The ability to update inventory levels based on events occurring within Cerner clinical systems
- The ability to capture supply cost for procedures, providing accurate cost analysis information
- Increased productivity and data integrity resulting from a consolidated item database and a reduced dependency on interfaces to external systems

Availability

SurgiNet and PharmNet: Currently available

PathNet and CVNet: Planned for future availability in Cerner Millennium.

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Special Licensing Considerations

Par Level Management requires barcode devices, label printers, and related communication infrastructure licensed separately.

Customization of standard interfaces is available on a time and materials basis.

EDI Communications requires OpenEngine or other third-party mapping software.

Software Prerequisites

Software prerequisites vary based on the department(s) for which this product is licensed.

For cardiology, *Cardiac Invasive Lab Management* (CV-20480) or *CVNet for Cardiac Surgery* (CV-20484) is required.

For the pharmacy department, either *Inpatient Pharmacy* (PH-20160) or *Outpatient Pharmacy* (PH-20170) is required.

For the laboratory department, either *General Laboratory* (PA-20070), or *Microbiology* (PA-20075), or *Anatomic Pathology* (PA-20080), or *Blood Bank Transfusion* (PA-20090) is required.

For the radiology department, *Radiology Management – Cerner Millennium* (RA-20135)

For the surgery/ anesthesia department, *Surgical Management* (SU-20310) is required.

Technical Environment Requirements

Refer to the *Understanding HNA Millennium Technical and Support Requirements* document for information about the technical environment.

Communication Materials

Cerner provides comprehensive user documentation for its software products in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

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RadNet: Radiology Management

Description

Radiology Management is the major RadNet® offering designed for managing the workflow and operation of a radiology department. This solution fully automates the following radiology activities:

- Departmental Patient Registration
- Departmental Order Entry and Inquiry
- Radiology Patient Tracking
- Folder/Film Management
- Report Processing
- Radiologist Interpretation
- Quality Management
- Workload Reporting
- Results Reporting
- Charge Capture/Reporting
- Departmental Scheduling Management (RA-22100) (supporting solution)
- *Mammography Management* (RA-22265) (supporting solution)
- Foundations

Client Benefits

- Reduces patient length of stay by ensuring immediate access to patient results throughout the organization
- Monitors and improves productivity with real-time outcomes analysis of clinical and operational data
- Increases revenue opportunities by accurately capturing billing events and supplies
- Decreases costs by tracking repeat analyses, enabling the organization to monitor reasons for repeats
- Decreases costs through accurate image management capabilities, eliminating lost films
- Eliminates costly mistakes while improving patient care with duplicate checking and *Discern Expert®* rules and clinical alerts
- Streamlines patient processing from order entry to the time that the patient is actually returned to his or her room with the *Radiology Patient Tracking* component, saving time and improving care delivery
- Increases operational efficiencies and improves patient safety by decreasing the likelihood of errors via process automation, which is available with an integrated image management option
- Eliminates the need for a paper by providing the tools necessary to support online documentation and access to clinical information.

Major Features

- *Departmental Patient Registration* is a feature of Cerner® *Foundations*, which is embedded as the underlying foundation of every major software offering that Cerner develops. It supports the quick entry and modification of patient demographic information by radiology personnel. As changes are made either manually or through a foreign system ADT interface, *Departmental Patient Registration* features ensure that staff has access to the most current patient demographic information.
- *Departmental Order Entry and Inquiry* functionality is another feature *of RadNet* that



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RadNet: Radiology Management

enables radiology personnel to enter, modify, and review ordered exams, as well as add comments to orders.

- *Radiology Patient Tracking* helps manage the flow of patients through the radiology service, tracking each patient's location and status from arrival to departure. This component also provides a visual indication of excessive patient wait times and an online transportation queue for use by transport personnel.

- *Folder/Image Management* simplifies tracking images as they are being checked in and out of the radiology service. This feature includes inquiry functions for detecting missing folders and delinquent loans, in addition to tracking films that are sent to the radiology service from outside sources. It supports an unlimited number of folder levels and can track *temporary folders* before the images are merged into the patient's existing master/subfolder.

- *Report Processing* supports a full-featured word processor for text entry, integrating text editing functions for reporting of normals, standard phrases, and fill-in-the-blank templates – all designed to streamline the entry of dictated text. Additionally, a unique *sticky note* can be used to communicate with the radiologist about difficult cases.

- *Radiology Desktop* consolidates and integrates all of the tasks associated with the production of a radiology report. This desktop feature provides quick, easy access to the radiologist's queue, optional *Integrated Digital Dictation*. (RA-22252) and also enables the creation of reports using normal templates. Specifically, the *Sign-out* function provides features to review, modify, and approve reports online using an electronic signature. Using the versatility of *Radiology Desktop*, images can be displayed for clinical review, or *Radiology Desktop* alternately can be employed as part of an integrated diagnostic workstation solution, enabling real-time integrated reporting from a single desktop with licensing of the Cerner *ProVision® PACS*

- *Quality Management* provides reporting for quality assurance and correlation purposes. Features are available to generate patient follow-up documents and statistical quality analysis reports. *Technical Comments* functionality enables the user to capture important exam information that would normally be written on the paper requisition. Film analysis functionality helps manage usage by generating reports on wasted and repeat films by reason, examination, film size, technologist, department, section, and room.

- *Workload Reporting* is a feature of *Foundations* that provides basic management reports containing raw counts and the corresponding technical labor units per procedure.

- *Results Reporting* is a feature of *Foundations* that helps manage all aspects of departmental chart generation – from defining the appearance of a chart and controlling the information to be included in a chart to defining precisely who is to receive the chart. These reports optionally can be transmitted to remote printers or facsimile devices.

- *Charge Capture/Reporting* is another *Foundations* feature that involves the generation of charges for exams and of billing reports that record those charges. These generated charges optionally can be transmitted as billing transactions in a variety of ways; for example, *Billing Outgoing (Batch)* (IF-29275) and *Billing Outgoing (Real-Time)* (IF-29280).

- *Departmental Scheduling Management* is offered as an integrated solution option for *Radiology Management*, providing the ability to schedule

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RadNet: Radiology Management

appointments for procedures performed within the radiology service.

- *Mammography Management (RA-22265)* is an optional supporting solution designed for managing the follow-up and tracking of mammography procedures. In addition, *Mammography Management* includes capabilities to assist mammography departments in achieving MQSA (Mammography Quality Standards Act of 1992) compliance.

- In addition to the features inherent within *Radiology Management, Foundations* functionality also is included. *Foundations* refers to Cerner's definition of those common processes or tasks that are shared across clinical and administrative domains and applications, technical areas, and project or production tasks. *Foundations* is included in all major Cerner licensed software solutions and includes *Technical Components (Technical Environment Management, Security Management, User Management*, and so on), *Functional Components* (for example, *Person Management, Order Management*, and *Result Processing),* and *Operational Components (Operation/System Management, System Integration*, and so on). The majority of the componentry applies to all Cerner solutions, though a few specific components may not be applicable to every solution line. Refer to the *Foundations* Solution Description for more information.

Cerner Millennium Integration Benefits

Benefits of using *Radiology Management* in a *Cerner Millennium®* environment include the following:

- Ability to include applicable laboratory values on radiology requisitions with licensing of the *PathNet® Laboratory Information System*

- Ability to view all clinical activity, including laboratory and pathology results, via a flowsheet inquiry within *Radiology Desktop* or *Order Viewer* with licensing of PathNet and other Cerner clinical systems

- The *Imaging Synopsis* leverages the existing MPages® platform to provide single-click access to all relevant EHR data, enhancing the clinical decision making process.

- Nine additional Imaging MPages® views are available to allow content filtering within the page components so that only patient data pertinent to a given venue/condition is pulled. These views include: Imaging Cardiology View, Imaging GI/GU View, Imaging ICU View, Imaging Mammography View, Imaging Neurology View, Imaging Oncology View, Imaging Pediatrics View, Imaging Pulmonary View and Imaging Trauma View.

Cerner Professional License

Cerner Professional License grants clients the right to utilize design and configuration tools, including Cerner Bedrock® and Reference Data Domain Sync (RDDS) where applicable. These services simplify and expedite the design, build and maintenance process throughout the lifecycle of a Cerner® solution. Clients can reduce implementation time and eliminate variance by automating processes with Cerner Professional License.

Discern Explorer

Discern Explorer® uses full-featured, fourth-generation programming language patterned after Structured Query Language (SQL) to maintain and extract data from both *Cerner Millennium* and client-developed databases. All *Cerner Millennium®* applications use *Discern Explorer* to select from, insert into, update into and delete from the *Cerner Millennium* database. *Discern Explorer* can also be

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RadNet: Radiology Management

used to extract data to download to other applications. Individuals with little computer experience can use *Discern Explorer* to generate simple queries and reports, or computer professionals can use it to perform more complex and sophisticated programs.

Discern Expert

Discern Expert® is an event-driven, rules-based decision support capability. This sophisticated functionality is offered within a rules logic model and user interface design that simplifies the everyday use and management of critical decision support.

Software Prerequisites

Either *MPages Runtime License (PS-22760) or MPages Development Toolkit (PS-22700)* are required.

Availability

Cerner Millennium, Revision HNAM.2000.01

System Resource Considerations

The CPU, memory, and disk requirements for *Radiology Management* are measured in terms of the number of patient admissions and discharges, the retention time of patient encounters, the number of orderable procedures, the retention time of patient order records, and the number of users. Additional requirements may be based on the number of interfaces.

Technical Environment Requirements

Cerner also offers our solutions in a shared environment for certain markets, and these offerings require some degree of standardization and adherence to Cerner recommended workflows and content.

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution: *Departmental Scheduling Management* (RA-22100), *Mammography Management* (RA-22265), *Visual Desktop Integration (VDI)* (RA-22266), *CareAware MultiMedia DICOM* (MM-22270)

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

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Health Information Management: Cerner Health Information Management

Description

Cerner® Health Information Management (HIM) is focused on the attainment of productivity gains and management control over all operations performed by medical records personnel. This solution provides an integrated set of functionality committed to the elimination of redundant data entry and the minimization of manual activities. It is designed not only to meet the system needs of traditional, paper-based medical records departmental operations, but also to support the parallel or future migration of paper to electronic media-based medical records via Cerner's *PowerChart®* solution.

The *Cerner HIM solution* fully supports the following activities:

- Patient Data Management
- Workqueue Management
- Patient Care Chart Requests/Delivery
- Documentation Completion
- Coding/Abstracting Management
- Release of Information Management
- Chart Location Tracking
- Foundations

Client Benefits

- Automates key health information management processes, allowing the entire healthcare organization transition to a paperless health records environment while continuing to support paper chart requests and tracking
- Provides the ability to perform records management tasks concurrently with the care process across multiple facilities to improve quality of care and cash flow
- Improves the chart management workflow process through the organization of tasks with workqueues and the identification of bottlenecks in the chart management process
- Improves productivity by eliminating redundant tasks and allowing simultaneous processing
- Provides the necessary tools for process improvement, physician compliance monitoring and reporting, and regulatory and accreditation reporting by automatically collecting event-driven statistics
- Offers staff more time to focus on the quality of charts by implementing exception processing for routine tasks
- Provides an opportunity to improve cash flow by decreasing turnaround times for delivery of key data to financial systems

Major Features

- *Patient Data Management* capabilities, available when the *Cerner Registration Management* (CP-20735) offering also is licensed, allow medical records personnel to enter and retrieve/modify patient demographic data residing in the patient encounter-oriented Master Patient Index (MPI) file. This capability also is possible via an interface to a foreign patient management system.
- *Workqueue Management* provides features designed to define work tasks performed within the health information management department, define upstream events (for example, admissions and discharges) to trigger work orders, and maintain workqueues for accessing patients within the system.

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Health Information Management: Cerner Health Information Management

- *Patient Care Chart Requests/Delivery* manages the automatic notification and delivery of patient charts throughout the hospital and adjoining clinics based on patient registration (via optionally licensed *Cerner Registration Management* or an interface to a foreign patient management system) and patient appointments (via an interface to a foreign scheduling system). Pull lists can be generated according to user preference. Charts can be requested online, validated by HIM, and then loaned and tracked for timely return. When a requested chart is unavailable, it is added to an online work queue where the user can prioritize by type of request, so that it can be forwarded to the next requesting party as soon as it becomes available.

- *Documentation Completion* manages the identification and resolution of patient chart deficiencies, such as incomplete and missing clinical reports and qualitative deficiencies. Drawing from ADT (admission, transfer, and discharge) and clinical order activity event triggers, document tracking can be automatically invoked. Notification of document deficiencies can be sent to the clinician and can be automatically relieved through recognition of electronic document capture and signature events, via licensing of *PowerOrders®* (PS-20576) within PowerChart. Management reports are available for a variety of perspectives, such as pending charts by physician. Physician correspondence also is supported, optionally via facsimile devices.

- *Coding/Abstracting Management* organizes workqueues, and it automatically downloads MPI patient demographics to a user-prescribed, PC-based encoder with licensing of the appropriate interface. It also supports the subsequent upload and capture of classification codes (for example, DRG, ICD-9, or CPT) with licensing of the appropriate sublicensed and licensed software. These codes are permanently captured and can optionally be passed to a billing system via a system interface. Turnaround time metrics capture and reporting features are included. Chart abstracting functionality provides an unlimited number of user-defined fields for discrete data capture. Abstract forms allow for user-designated required fields and conditional fields. Coder can select from working diagnoses and procedures identified and passed in from other Cerner solutions as a basis for initiating the concurrent coding process.

- *Release of Information Management* supports the notation of received requests, validation of authorization for the release of information, historical documentation of the information released, and management of any associated reimbursement receivables.

- *Chart Location Tracking* supports movement tracking and identification of the physical, offline location of paper and/or other media-based (for example, microfilm or microfiche) patient charts. Media labels with bar codes can be generated.

- Document imaging integration, allowing images to be scanned into the database and tracked for deficiencies with licensing of the *Cerner ProVision Document Imaging* solution.

- In addition to the features inherent within *Cerner HIM, Foundations* functionality is also included. *Foundations* refers to Cerner's definition of those common processes or tasks that are shared across clinical and administrative domains and applications, technical areas, and project or production tasks. *Foundations* is included in all major Cerner licensed software solutions and includes *Technical Components (Technical Environment Management, Security Management, User Management,* and so on), *Functional Components* (for example, *Person Management, Order Management,* and *Result Processing*), and *Operational Components*

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Health Information Management: Cerner Health Information Management

(Operation/System Management, System Integration, and so on). The majority of the componentry applies to all Cerner solutions, though a few specific components may not be applicable to every solution line. Refer to the *Foundations* Solution Description for more information.

Cerner Millennium Integration Benefits

Benefits of using *Cerner HIM* in a Cerner Millennium® environment include the following:

- Automated chart analysis requirements, deficiency resolution, and interaction with physician workqueues, with licensing of *Clinical Data Repository* within PowerChart
- Automated chart analysis requirements with licensing of *Clinical Documentation*, *Medical Transcription Management*, and *Cerner ProVision® Document Imaging*, as well as within PowerChart the solutions *Care Documentation* (PS-22719) and *PowerOrders®* (PS-20576)
- Central MPI and ADT events that trigger documentation requirements from *Cerner Registration Management*
- Document deficiency aging, with optional notification to physicians for electronic signature when PowerChart is licensed.
- Upstream coding can be initiated by selecting codes entered through applications during the care process.
- Support for utilization management, quality assurance, and cost analysis activities with the *Open Management Foundation* (OMF)

Cerner Professional License

Cerner Professional License grants clients the right to utilize design and configuration tools, including *Cerner Bedrock™* and Reference Data Domain Sync (RDDS) where applicable. These services simplify and expedite the design, build and maintenance process throughout the lifecycle of a Cerner solution. Clients can reduce implementation time and eliminate variance by automating processes with Cerner Professional License.

Discern Explorer

Discern Explore®r uses full-featured, fourth-generation programming language patterned after Structured Query Language (SQL) to maintain and extract data from both *Cerner Millennium®* and client-developed databases. All *Cerner Millennium* applications use *Discern Explorer* to select from, insert into, update into and delete from the *Millennium* database. *Discern Explorer* can also be used to extract data to download to other applications. Individuals with little computer experience can use *Discern Explorer* to generate simple queries and reports, or computer professionals can use it to perform more complex and sophisticated programs.

Discern Expert

Discern Expert® is an event-driven, rules-based decision support capability. This sophisticated functionality is offered within a rules logic model and user interface design that simplifies the everyday use and management of critical decision support.

Availability

Cerner Millennium, Revision HNAM.2000.01

Software Prerequisites

The following solutions are required with *Cerner Health Information Management*: *Cerner Registration Management* (CP-20735) **OR** *ADTs/Demographics Incoming* (IF-29010) **AND**

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Health Information Management: Cerner Health Information Management

Cerner Patient Accounting (PF-20450) **OR** *Abstracted/Coded Data Outgoing* (IF-29325); *Clinical Documents Medical Document Management* (Transcription) (IF-29083), *PC Encoder Interface* (IF-29665).

Technical Environment Requirements

Cerner also offers our solutions in a shared environment for certain markets, and these offerings require some degree of standardization and adherence to Cerner recommended workflows and content.

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution: *Medical Transcription Management* (MR-20410), *Clinical Data Repository* (PS-20570), and *PowerInsight® Enterprise Data Warehouse* (PI-20617).

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

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General Availability

Supply Chain

CERNER

Materials Management

Description

Materials Management is a comprehensive Supply Chain offering designed to support management of the entire healthcare supply chain, including requisitioning, purchasing, receiving, invoice matching, inventory management, and distribution processes.

Materials Management provides contemporary concepts in resource management, including traditional, stockless, and just-in-time inventory methods; consignment; multisite and multi-entity perpetual inventory management and PAR inventory support.

Materials Management includes the following capabilities:

- Requisitions
- Purchasing
- Receiving
- Inventory Control
- Distribution Management
- Management Reporting

Client Benefits

- Assist in automating the processes around managing supplies.
- Ability to more efficiently manage, and continuously maintain optimal inventories; contain costs; and capture departmental costs.
- End to End supply management capability across the entire health system
- Improved purchasing receiving and distribution capability to manage inventory more efficiently
- Reduced vendor/purchasing administration costs through the use of full EDI capabilities, with licensing of the appropriate interfaces

Major Features

Requisitions support:

- Electronic requisitioning
- Replenishment automation for both stock and nonstock item
- System-generated recommended order lists
- Requisition templates by location

Purchasing component:

- Auto PO creation from requisition
- Multi level on-line approval process
- Online inquiry for purchase orders and requisitions.

Receiving component

- Receipt by exception
- "Blind" receiving

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Inventory Control component:

- Perpetual or PAR managed inventory within locations
- Location and locator support
- Inventory costing by location
- Physical and cycle count capability

Distribution Management component:

- Wireless PAR management
- Wireless Picking

Management Reporting:

- Summary or detail reports, such as ABC, usage, stock status reports
- Full transaction history inquiry

- In addition to the features inherent within *Materials Management*, Foundations functionality is also included. *Foundations* refer to Cerner's definition of those common processes or tasks that are shared across clinical and administrative domains and applications, technical areas, and project or production tasks. *Foundations* is included in all major Cerner licensed software solutions and includes *Technical Components* (*Technical Environment Management, Security Management, User Management*, and so on), *Functional Components* (for example, *Person Management, Order Management, Charge Services and Result Processing*), and *Operational Components* (*Operation/System Management, System Integration*, and so on). The majority of the componentry applies to all Cerner solutions, though a few specific components may not be applicable to every solution line. Refer to the *Foundations* Solution Description for more information.

Cerner Millennium Integration Benefits

Benefits of using *Materials Management* in a Cerner *Millennium* environment include the following:

- The ability to update supply status based on events occurring within licensed Cerner clinical systems
- The ability to manage the logistical needs of Cerner clinical departments where subunit accountability is necessary (such as pharmacy), thereby consolidating redundant purchasing activities without affecting service levels or inventory accuracy

Availability

Cerner Millennium Release 2000, Version 2000.01

Special Licensing Considerations

Par Level Management requires barcode devices, label printers, and related communication infrastructure licensed separately.

Customization of standard interfaces is available on a time and materials basis.

EDI Communications requires OpenEngine or other third-party mapping software.

Technical Environment Requirements

Refer to the *Understanding Cerner Millennium Technical and Support Requirements* document for information about the technical environment.

System Resource Considerations

The amount of system resources required depends on activity volume and the complexity of the installation.

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Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution: *Discern Expert* (PO-26105), *Discern Explorer* (PO-26140), *Surgical Management* (SU-20310), and *Inpatient Pharmacy* (PH-20160).

Communication Materials

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General Availability

Open Port

CERNER

ADTs/Demographics Incoming

Description

ADTs/Demographics Incoming is an Open Port Database Connectivity Server that provides the ability to accept the electronic transmission of various persons' demographic information from a foreign information system into a Cerner system. This transaction-based interface supports the receipt of admission; transfer; update and cancel-registration; financial number change; medical record number change; discharge; and reinstate transactions.

Transactions actually processed and events triggered in the Cerner system vary, depending on the nature of the foreign system, the Cerner system transmitting the information, and the master system controlling the assignment of patient identifiers and demographics.

The amount of data that is stored in the Cerner system also depends on the Cerner solution implemented. For example, with licensure and implementation of *Registration Management* (CP-20735) within the *CapStone,* the maximum amount of data can be stored about a person, including insurance and guarantor information. If the *Person Management* component within Cerner's *Foundations* is implemented for access by an applicable Cerner departmental system, basic data about a person is stored for the purpose of processing an order. *(Foundations* represents embedded functionality included in all of Cerner's major offerings that automate shared processes and tasks.)

Client Benefits

- Eliminates manual re-entry and monitoring of person information in both the Cerner system and the foreign system(s), saving time
- Provides a real-time mechanism to synchronize person demographic information among multiple information systems, increasing the accuracy of data
- Makes updated person data available to all Cerner users in a timely fashion, increasing provider satisfaction and improving quality of care

Major Features

- ADT transactions are controlled by organization, client, type, and location.
- Person- and encounter-level data is supported, including insurance information, guarantor, diagnosis, and clinical observations.
- Encoded ICD/DRG data can be stored and accessed.
- Real-time processing is supported.
- HL7 Universal Interface functionality and configurable options are supported.
- Audit trail and exception reporting is included.

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Availability

For CapStone, CareNet, Cerner Cardiovascular, FirstNet, Cerner Critical Care, PathNet, PharmNet, PowerChart, PowerChart Office, Supply Chain, HIM, RadNet, and SurgiNet and ProFit: Cerner Millennium Release 2000, version 2000.01

Special Licensing Considerations

The *ADTs/Demographics Incoming* license entitles only an incoming connection.

Additional service fees may be quoted as necessary for a Cerner foreign systems specialist to write the necessary scripts and make the required changes to implement the interface according to the mutually agreed-upon specifications.

If the client does not implement all functionality of this solution in the initial installation engagement and later wishes to activate the remaining portion, the client will not be assessed additional license fees; however, additional service fees may be applied for Cerner's efforts to modify the interface.

Software Prerequisites

One or more of the major offerings within the Cerner system(s) using this solution and either an Open Port Technical Protocol (IF-29560 through IF-29625) or an Open Engine Communication Service (OE-22850 through OE-22890) are required.

Technical Environment Requirements

Refer to the *Understanding Cerner Millennium Technical and Support Requirements* document for information about the technical environment.

Communication Materials

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Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through our website at www.cerner.com or through our sales organization at (816) 201-0054.

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General Availability

Open Port

CERNER

Universal Reference Lab – Two Way Workflow

Description

Universal Reference Lab – Two Way Workflow is an Open Port Database Connectivity Server that provides the ability to electronically transmit and receive both laboratory orders and results between the Cerner PathNet system and another laboratory system.

The other laboratory system referred to may be a commercial reference laboratory, a foreign LIS, or another PathNet system. The following links may exist:

- PathNet to/from a commercial reference laboratory, or
- PathNet to/from a foreign LIS, or
- PathNet to/from PathNet

Client Benefits

- Allows a PathNet laboratory to share resources by sending certain tests to another laboratory or by performing tests for another laboratory
- Allows a PathNet laboratory to act as a reference laboratory for another laboratory
- Eliminates the need to complete manual requisitions to accompany the specimens to the reference laboratory
- Supports the ability of the Cerner user to view the reference laboratory generated results online along with PathNet generated results
- Eliminates the need to print hard copies of the reference laboratory results
- Eliminates phone calls to request the results from the reference laboratory

Major Features

- An online notification of incoming specimens to be processed is provided to the reference lab.
- If using batch mode, a hard copy packing slip to accompany specimens is sent to the reference lab.
- Online results are sent from the reference laboratory to PathNet.
- Identification of the performing laboratory is sent with the results.
- If an outbound results interface exists to a foreign system, reference lab generated results are eligible to be sent, also.
- Either real-time or batch mode processing is supported.
- HL7 Universal Interface functionality and configurable options are supported.

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- Audit trail and exception reporting is included.

Supported Interfaces

Some reference laboratory systems that may be interfaced are listed below:

- Quest (Smith Kline)
- Mayo
- ARUP
- LabCorp

Availability

For PathNet: *HNA Millennium,* Revision HNAM.2000.01

Future Directions

In the future, *Universal Reference Lab – Two Way Workflow* will be expanded to include the following feature(s):

- Discrete microbiology results
- Inclusion of guarantor and insurance information

Special Licensing Considerations

The *Universal Reference Lab – Two Way Workflow* license entitles both incoming and outgoing connections.

Professional Services fees will be quoted as necessary for a Cerner foreign systems specialist to write the necessary scripts and make the necessary changes to implement the interface according to the mutually agreed upon specifications.

If the client does not implement all functionality of this product in the initial installation engagement and later wishes to activate the remaining portion, the client will not be assessed additional license fees; however, additional Professional Services **fees will be applied for Cerner's efforts to modify** the interface.

Software Prerequisites

PathNet General Laboratory (PA-20070) is required. Both dial up modem and TCP/IP protocols are supported. Either the Open Port Technical Protocols (IF-29560 or IF-29610) or Open Engine Communication Services (OE-22850 or OE-22875) is required and is included in the pricing package.

Technical Environment Requirements

Refer to the *Understanding HNA Millennium Technical and Support Requirements* document for information on the technical environment.

Communication Materials

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General Availability

Open Port

CERNER

AutoMed FDS Interface

Description

AutoMed FDS Interface is designed as a custom pharmacy device interface that provides a communication link between the AutoMed FDS pharmacy automation system and Cerner's PharmNet Inpatient system.

This unidirectional interface supports the transmission of patient demographic information and pharmacy orders from the Cerner PharmNet Inpatient system to the AutoMed FDS system.

The AutoMed FDS System packages patient specific oral-solid medications for dispensing by pharmacies in extended care facilities or institutional settings.

NOTE: This product is in the early stages of development. It has been described here to assist with budgetary planning. This product description is subject to change.

Client Benefits

- Time savings associated with automating the dispensing process
- Increases accuracy of the drug dispensing process.
- Increases productivity of staff who dispense drugs
- Reduces operating costs
- Provides time savings so pharmacists may spend more time on clinical activities

Major Features

- TCP/IP network protocol is included.
- Real time processing is supported.
- HL7 Universal Interface functionality and configurable options are supported.
- Audit trail and exception reporting is included.

Availability

For PharmNet Inpatient: Planned for future availability in *HNA Millennium*

Special Licensing Considerations

This product is licensed on a "per channel" basis.

The *AutoMed FDS Interface* license entitles only an outgoing connection.

Software Prerequisites

Inpatient Pharmacy (PH-20160) is required.

Technical Environment Requirements

Refer to the *Understanding HNA Millennium Technical and Support Requirements* document for information on the technical environment.

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Communication Materials

Cerner provides user documentation for its software applications in the form of online Help and computer-based training (CBT).

Cerner also provides product-specific brochures, flyers, and other communications in print, as well as product information available through Cerner's World Wide Web page; contact the Marketing Communications Department for more information.

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General Availability

Open Port

CERNER

Purchase Order Acknowledgment Inbound (855)

Description

Purchase Order Acknowledgment Inbound (ANSI X.12 EDI 855) is a supporting supply chain interface offering that provides the ability to accept purchase order acknowledgments inbound from external materials vendors or pharmaceutical wholesalers/distributors.

With the acceptance of purchase order acknowledgments the user will have real-time access to price discrepancies and other relative purchase order data communicated from the external vendor or wholesaler/distributor system.

The interface can be used in conjunction with other EDI supply chain interfaces or as a standalone solution to automate the purchasing process.

Client Benefits

- No manual communication required to resolve vendor/internal system discrepancies
- Eliminate human error involved in the purchase order discrepancy management process
- Streamline the purchase order correction process
- Ensure database accuracy by completing updates based on purchase order comments received
- Reduced overall overhead cost of the purchasing process by streamlining the purchasing process

Major Features

- The EDI ANSI X.12 transaction set 855 is received.
- Automated acceptance of vendor or wholesaler/distributor purchase order comments
- Configurable based on vendor/wholesaler requirements
- Audit trail available for analysis
- Transmission error resolution support

"Net" Affiliations

Supply Chain, PharmNet

Availability

Cerner Millennium 2007 (was released Nov 2006)

Software Prerequisites

PO-20201 Clinical Supply Chain or *PH-25201 Departmental Clinical Supply Chain for Pharmacy* is required.

Technical Environment Requirements

Refer to the *Understanding Cerner Millennium Technical and Support Requirements* document for information about the technical environment.

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Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution: *IF-29562 Purchase Order Outbound (850), IF-29526 Electronic Invoice Inbound (810), and IF-29524 Advanced Shipment Notice Inbound (856)* interfaces.

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through our website at www.cerner.com or through our sales organization at (816) 201-0054.

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General Availability

Open Port

CERNER

Purchase Order Outbound (850)

Description

Purchase Order Outbound (ANSI X.12 EDI 850) is a supporting supply chain interface offering that provides the ability to transmit purchase orders outbound from the relevant Cerner Supply Chain solution to external materials vendors or pharmaceutical wholesalers/distributors.

With the transmission of purchase orders outbound on this interface, the user will not be required to fax, phone, or mail purchase orders. Instead, the user will transmit purchase orders electronically as a by-product of confirming the purchase order for submission.

The interface can be used in conjunction with other EDI supply chain interfaces or as a standalone solution to automate the purchasing process.

Client Benefits

- No manual transmission of purchase orders to vendors or wholesalers
- Eliminate human error involved with the transmission of purchase orders to vendors or wholesalers
- Minimize or eliminate the need to print purchase orders
- Reduced the overall overhead cost of the purchasing operation by streamlining the communication process

Major Features

- Automated seamless transmission of purchase orders outbound to vendors and/or wholesalers
- Configurable based on vendor/wholesaler requirements
- Increased accuracy in the purchasing process
- Audit trail available for transmission analysis
- Transmission error resolution support

"Net" Affiliations

Supply Chain, PharmNet

Availability

Cerner Millennium 2007 (was released in Nov 2006)

Software Prerequisites

PO-20201 Clinical Supply Chain or *PH-25201 Departmental Clinical Supply Chain for Pharmacy* is required.

Technical Environment Requirements

Refer to the *Understanding Cerner Millennium Technical and Support Requirements* document for information about the technical environment.

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Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution: *IF-29522 Purchase Order Acknowledgment Inbound (855), IF-29526 Electronic Invoice Inbound (810), and IF-29524 Advanced Shipment Notice Inbound (856)* interfaces.

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

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Open Port: PC Encoder Interface

Description

The *PC Encoder Interface* is an Open Port medical device interface that provides a communication link between an encoder and *Cerner Health Information Management* (HIM) (MR-20400). This bidirectional interface supports both the transmission of patient demographics to the encoder from *Cerner HIM* and the return of coded and DRG data from the encoder.

The interactive interface is designed as a timesaving device, allowing numeric and alphanumeric results to be recorded automatically in the *Cerner Millennium®* system. These results are then made available for inquiry, printing or communication to other systems.

Client Benefits

- Improves efficiency with demographic data downloaded to the encoder and results recorded automatically during the encoding process
- Makes encoded data immediately available to other systems
- Reduces chances for error with manual processes performed only once
- Simplifies work queue management with work assignments automatically generated
- Eliminates redundancy

Major Features

- Demographic data is downloaded to the encoder and coded and abstracted data is uploaded from the encoder
- Work queues are created for charts to be coded
- Cumulative performance reporting is available
- A customized transaction layout is defined based on the third-party encoding system
- Optionally, account balances, received via an interface from the financial system, can be used for prioritization, with licensing of *Open Account Balances Incoming* (IF-29140).
- Coded data and signature indicators optionally can be passed via a foreign system interface to non-Cerner systems, with licensing of *Abstracted/Coded Data Outgoing* (IF-29325).

Special Licensing Considerations

A foreign encoder system PC is required. Some suppliers require special software or licensing considerations, in order for their encoders to be interfaced. Cerner Corporation is not responsible for the hardware, software licensing, pricing or installation requirements of the encoder PC. The specific encoder provider should be contacted directly for pricing and configuration.

Availability

For *Cerner Health Information Management*: *Cerner Millennium* Release 2000.01

Software Prerequisites

The following solutions are required: *Cerner Health Information Management* (MR-20400).

Technical Environment Requirements

Refer to the *Understanding Cerner Millennium Technical* and *Support Requirements* document for information about the technical environment.

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution: *Abstracted/Coded Data Outgoing* (IF-29325).

Installation Considerations

The *PC Encoder Interface* can be installed during the initial implementation engagement of *Cerner Health*

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Open Port: PC Encoder Interface

Information Management or the installation can be subsequently performed as an add-on implementation engagement. Since each interface is customized, the design, installation, testing, and sign-off period will vary for each client. Clients are required to participate in the installation and testing process.

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

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Unidirectional Device Interface

Description

Unidirectional Device Interface provides a communication link between an analyzer (that is, a medical device or instrument) and the *PathNet® Laboratory Information System*.

This *Unidirectional Device Interface* is designed as a timesaving tool, supporting the automated transmission of both numeric and alphanumeric result data from the analyzer to the Cerner® system with little if any human intervention. It is unidirectional in nature because the data flows in one direction only, from the device to the Cerner system.

Client Benefits

- The automatic transfer of result data from the analyzer to the Cerner system reduces human intervention and automates processes.
- The elimination of manual data entry minimizes human error, increasing accuracy.
- Improved efficiency in the clinical department results in time and cost savings.

Major Features

- Instrument result flags that identify problem values are captured from the device. The client can define whether to post the result flag with the result, prevent the result from posting, or ignore the flag completely.
- Quality control (QC) and patient results are available for immediate result verification once they are transmitted from the instrument.
- Some interfaces support online, immediate result verification and reporting, depending on the instrument's capability.
- A complete audit trail of communications from the medical device to the Cerner system is provided.

Supported Interfaces

The *Unidirectional Device Interface* license is applicable to the existing library of interfaces and does not apply to devices not previously interfaced. In some cases, if it is determined that Cerner can provide an interface; the existing license from the contract will be applied.

Availability

The solution is available as described.

Special Licensing Considerations

This product is licensed on a per-device basis. A *Unidirectional Device Interface* license is required for every instrument model to be interfaced. The license is only applicable for the original interface purchased. This license describes functionality; however, instrument specific product codes will be updated to reflect the make and model of the interface. When a new instrument model is purchased, either as an addition or substitute, a new *Unidirectional Device Interface* license is required.

Assuming the interface supports bar-code recognition technology, the client should specify this desired capability at the time of licensing.

Software Prerequisites

General Laboratory (PA-20070), *Microbiology* (PA-20075), *Blood Bank Transfusion* (PA-20090)

Support Considerations

Cerner's support is limited to the interface aspects of this product solution, not to native medical device functionality, which is directly supported by that product's supplier.

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Unidirectional Device Interface

Related Solutions

The following Cerner software product(s) significantly extend the functionality of this product: *Bidirectional Device Interface* (IF-29655).

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Bidirectional Device Interface

Description

Bidirectional Device Interface provides a communication link between a laboratory analyzer (that is, a medical device or instrument) and the *PathNet® Laboratory Information System*.

The *Bidirectional Device Interface* is designed as a timesaving tool, allowing patient demographics and work orders to be downloaded automatically to the analyzer and results to be recorded/uploaded automatically to the PathNet system with little if any human intervention.

Client Benefits

- The automatic transfer of data between the analyzer and the PathNet system reduces human intervention and automates processes.
- The elimination of manual data entry minimizes human error, increasing accuracy.
- Improved efficiency in the laboratory results in time and cost savings.

Major Features

- Depending on the analyzer's capability, transmitted patient information can include name, age (in years), birth date, medical record number, financial number, nursing station or location, and room and bed
- Depending on the analyzer's capability, transmitted order information can include accession number, bar code, or other sample identifier; requested collection date and time; drawn date and time; collection priority (routine vs. STAT); and ordering doctor name or number
- Patient demographics and order information can be transferred via one of two methods: direct download or host query. With direct download, the order is transmitted automatically to the instrument as soon as it receives an "In Lab" status. With host query, the order is kept in a queue and is not transmitted to the instrument until the instrument sends a request for it. The actual method supported varies based on the instrument
- Some interfaces support online, immediate result verification and reporting, depending on the instrument's capability
- A complete audit trail of communications between the medical device and the PathNet system is provided

Supported Interfaces

The *Bidirectional Device Interface* license is applicable to the existing library of interfaces and does not apply to devices not previously interfaced. In some cases, if it is determined that Cerner® can provide an interface; the existing license from the contract may be applied

Availability

The solution is available as described.

Special Licensing Considerations

This product is licensed on a per-device basis. A *Bidirectional Device Interface* license is required for every instrument model to be interfaced. The license is only applicable for the original interface purchased. This license describes functionality; however, instrument specific product codes will be updated to reflect the make and model of the interface. When a new instrument model is purchased, either as an addition or substitute, a new *Bidirectional Device Interface* license is required.

Assuming the interface supports bar-code recognition technology, the client should specify this desired capability at the time of licensing.

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Bidirectional Device Interface

Software Prerequisites

General Laboratory (PA-20070) or *Microbiology* (PA-20075) is required.

Support Considerations

Cerner's support is limited to the interface aspects of this product solution, not to native medical device functionality, which is directly supported by that product's supplier.

Related Solutions

The following Cerner software product(s) significantly extend the functionality of this product: *Unidirectional Device Interface* (IF-29650).

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Content360™: Cerner ProVision® Document Imaging (CPDI)

Description

Cerner ProVision® Document Imaging (CPDI) is Cerner's enterprise-wide solution that provides sophisticated document capture, storage and retrieval. Clinical documents and other information that make up the medical record are stored in an image archive and accessed on-line. CPDI makes information available where it is needed to reduce costs and improve care.

Unlike most document imaging systems, Cerner's imaging solution can be leveraged in both clinical and non-clinical settings. When used in non-clinical venues, many organizations choose to automate the Business Office or Human Resources department.

In relation to the *Cerner Millennium®* architecture, *CPDI* has over 50 integration points including integration into the *CareAware®* Multimedia Archive. With this module, a healthcare organization has the ability to operate in a completely paperless environment.

Client Benefits

- Improves patient safety and reduces error
- Streamlines and automates workflow
- Increases clinical and operational performance
- Unifies seamlessly with Cerner Millennium applications
- Hard savings are seen in the reduction of storage space, supplies and personnel
- Increases positive person identification and lessens fraud with person photos
- Enables clinicians to view charts and electronically sign scanned documents remotely
- Allows Medical Records Coders to work remotely
- Reduces A/R days
- Dramatically reduces manual data entry in patient accounting
- Reduces technical denials
- Increases user satisfaction

Major Features

- Patient electronic signature
- Importing digital photos
- Advanced Capture- Indexing documents without barcodes
- EOB processing
- Scanning documents directly into the patients' charts
- Physician electronic signature of scanned documents
- Invoice processing
- High volume scanning
- Process-Based workflow solution

Cerner Millennium Integration Benefits

Benefits of using *Cerner Provision Document Imaging* in the *Cerner Millennium* environment include the following:

- Single Source of Truth
- Unique Identifier
- Patient Safety
- Deficiency Management

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Content360™: Cerner ProVision® Document Imaging (CPDI)

- Citrix Impact
- Software Licensing
- Printing
- Minimal Training for Physicians

Availability

HNA Millennium®, Revision HNAM.2000.01

Special Licensing Considerations

The Cerner *ProVision Document Imaging* product is the integration of *HNA®* applications and components that were developed by OTG Software, Inc. A special licensing agreement has been established between Cerner and OTG, allowing Cerner to act as a value-added reseller for these applications.

Software Prerequisites

Cerner ProVision Document Imaging solution actually represents a flexible grouping of hardware and software products that is specifically configured based on the client's document imaging requirements. The combination of hardware and software recommended for Cerner ProVision Document Imaging is defined during the functional evaluation phase of the sales process.

System Resource Considerations

The processing capacity required for use of Cerner ProVision Document Imaging is measured in terms of the number of documents stored and retrieved. The amount of memory required per PC is based on the number and type of applications installed on a specified workstation. The amount of storage capacity is based on the organization's patient history retention requirements and the other applications licensed.

Network considerations are dependent on the document retrieval volume and the scanning input specific to the configuration.

Cerner ProVision Document Imaging can be implemented in conjunction with the installation of a variety of *HNAM* applications or subsequently installed as an add-on implementation engagement. Additionally *Cerner ProVision Document Imaging* may be installed in a standalone mode for certain departments in the enterprise

Additional system requirements may be defined during the application design and specification phase.

Related Solutions

The following Cerner software product(s) significantly extend the functionality of this product:

Profile (MR 20400) and *PowerChart* (PC 02025)

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through www.cerner.com.

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Content360™: eSignature

Description

Cerner's eSignature solution allows patients to sign electronic documents with a handwritten signature on a signature pad or tablet, which in turn permanently embeds the signature in a secure searchable document.

Using this solution eliminates the need for printing and scanning forms that require a signature (for example, patient consents, HIPAA privacy forms, discharge instructions, etc.). Configurable rules within the application can be designed to pull required documents into a default list that are specific to the patient, ensuring all required forms are presented for signature. Witness stamps, multiple signatures, required document reminders and check boxes are all part of the solution's functionality.

This solution is typically implemented in registration units or on bedside tablets, but can also be launched from any *Cerner Millennium*® solution that integrates with the CPDI eSignature components.

Client Benefits

- Integrates with Cerner PDI (available in any application that has document library capabilities: Registration, PowerChart®, PathNet®, etc.)
- Eliminates printing and scanning forms that need to be signed
- Reduces paper storage costs
- Improves patient safety/satisfaction
- Ensures signatures with required document reminders
- Speeds up the registration process with intelligent form functionality (rules & triggers)
- Stores as any defined Millennium or CPDI document type

Major Features

- Automated association of signed documents to the correct level within the patient record (person, encounter, clinical, or nonclinical)
- "Hard Stop" functionality that ensures required forms are presented for signature as part of the workflow
- Accessible from multiple points within *Cerner Millennium* applications.
- Deployable via permanent workstations with tethered signature pads or via portable tablet PC devices
- Support for the capture of patient signatures on clinical and non-clinical documents
- Support for capture of single or multiple signatures within a document
- Support for check boxes within the electronic form.
- Immediate verification of successfully captured documents, whether captured previously or as part of the current process
- Easy end-user navigation via touch screen technology to identify and complete signature zones within the document.
- Page navigation features are provided, including next page, previous pages forward and backward as well as accept and decline buttons.

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Content360™: *eSignature*

- Leverages *Cerner Provision Document Imaging* infrastructure for document management and creation.

Availability

Cerner Millennium Release 2007.19 or later

Special Licensing Considerations

Any Non-Cerner sublicense software required to implement *Forms Management* is not included and needs to be licensed separately.

Software Prerequisites

Content360™ Cerner ProVision Document Imaging is required as baseline for the *eSignature* Solution to be built upon.

Communication Materials

Cerner® provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

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CareAware MultiMedia: Worklist Manager (Modality Worklist)

Description

Worklist Manager (Modality Worklist) is a supporting *CareAware MultiMedia®* offering that operates along with the separate licensure of *RadNet® Radiology Management* (RA-20135) and provides native DICOM services for use in a PACS environment as well as the ability to manage the movement of images throughout the healthcare enterprise. *Worklist Manager (Modality Worklist)* provides enhanced DICOM services to support DICOM Modality Worklist and Modality Performed Procedure Step. The power of coupling *RadNet* with the *Cerner ProVision PACS* architecture allows seamless integration of centralized worklist management into filmless and film-based environments without a requirement for an external "broker" and its associated interfaces.

Worklist Manager (Modality Worklist) makes it possible to directly exchange patient and study information between the *Radiology Management* System and any PACS solution that uses standard DICOM 3.0 services. By utilizing these standard DICOM services, information exchange occurs seamlessly, providing a central database on the RIS for storage of important departmental and enterprise information about images, as well as traditional RIS-level text and events.

Worklist Manager (Modality Worklist) is a DICOM Modality Worklist Service Class Provider (SCP). Any modality that supports DICOM Modality *Worklist Manager,* as a Service Class User (SCU), can query for an updated worklist directly from the modality console or workstation. When selected from the worklist, the patient demographic information will be directly inserted into the DICOM headers of the associated images during the acquisition process. For those modalities that do not support modality worklist, *RadNet* Radiology Information Systems can provide a unique DICOM Study Validation Service, with the separate licensure through *Cerner®* Technologies of Study Validation.

Client Benefits

- Supports paperless environment — eliminates requisitions and order documents.
- Saves radiologist time — images are already linked to patient and order demographic data — no need to find the paper requisition and identify patient on another system.
- Technologists are more productive and data is accurate
- Reduces errors from manually inputting patient demographic information — images are automatically linked to patient and order demographic data.
- No intermediary device such as a "PACS broker" or conversion of RIS data to data useful to a PACS (no "Broker") is required.
- Supports standard, direct DICOM communication. Technologist and radiologist worklists facilitate automation of manually collected data, promotes a "paperless" and "filmless" environment.

Major Features

- Native DICOM 3.0 SCP/SCU services.
- Support for DICOM Modality Worklist and Modality Performed Procedure Step.

Availability

Cerner Millennium® Release 2003, version 2003.01

Software Prerequisites

Radiology Management (RA-20135) OR *PowerChart Cardiovascular* (CV-20486) is required.

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CareAware MultiMedia: Worklist Manager (Modality Worklist)

Communication Materials

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CareAware MultiMedia™: CareAware MultiMedia - DICOM

Description

CareAware MultiMedia™ – *DICOM* (MM-22270) is composed of an integrated set of foundation-level services supporting acquisition, storage and management of DICOM objects as a component of *Cerner ProVision® PACS, PowerChart Cardiology*™ *PowerChart ECG*™, and a number of other Cerner solutions acquiring and storing DICOM objects. It is also used as a storage and management system for third party DICOM systems. Associated distribution of images produced within any of these departments is available through *Cerner Image Distribution*, which is licensed separately.

CareAware MultiMedia – DICOM includes the services needed to enable a core set of DICOM management capabilities within any DICOM-enabled environment or enterprise, including acquisition from DICOM modalities such as CT and MR scanners. *CareAware MultiMedia -DICOM* is required to enable any PACS application or management of DICOM objects produced within such an environment. This configuration also may serve as the basis for the addition of other optional DICOM and non-DICOM services.

CareAware MultiMedia – DICOM includes the following:

- DICOM image management for all major DICOM compatible digital modalities
- Management of multiple distributed hardware environments
- Pre-fetching and routing DICOM objects within the enterprise management capabilities
- DICOM object management and association of studies with relevant patient data
- Specialized communications with the *Cerner Millennium®* environment for validation of acquired studies

A separate hardware server and associated software is required for *CareAware MultiMedia – DICOM*. Optional extensions include the ability to acquire, store, manage and distribute non-DICOM objects for those areas that may not have DICOM compatible objects. Additional license fees will apply.

Client Benefits

- Provides the ability to acquire, store and manage most DICOM compatible objects produced in healthcare
- Provides DICOM image distribution capability through Cerner Image Distribution (requires additional license) to enable *PowerChart* and *PowerChart Ambulatory*™ viewing of images
- Provides ability to associate DICOM images and the associated study with exams from the RIS or HIS

Major Features

- DICOM image storage and management
- High performance storage and retrieval of images for diagnostic and distribution purposes
- High Availability configurations
- Disaster Recovery and Business Continuity configurations
- High performance image compression using JPEG 2000 technology

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CareAware MultiMedia™: CareAware MultiMedia - DICOM

- Study Validation services with certain Millennium solutions (*RadNet®, PowerChart Cardiovascular, PowerChart ECG*)
- HL7 interfaces as required for HIS/RIS messages

Cerner Millennium Integration Benefits

Benefits of using *CareAware MultiMedia - DICOM* in a *Cerner Millennium* environment include the following:

- Image-enabled DICOM services for acquisition, storage and display of DICOM images produced in DICOM-enabled departments
- Integration with Millennium for unified RIS/PACS applications
- Use of Millennium security in integrated mode operations with selected Millennium solutions
- Integrated validation of acquired studies

Availability

CareAware MultiMedia -DICOM is available for all Millennium releases back to release 2003.02.

Software Prerequisites

Image Distribution (MM-22276) for DICOM image distribution of objects to the clinician through *PowerChart and/or PowerChart Ambulatory*.

Related Solutions

For optimal performance, Cerner recommends using *Cerner ProVision Workstation* (MM-22720)

System Resource Considerations

All DICOM objects are stored separately from the main *Cerner Millennium* server. Consequently, the I/O requirements on the main server are marginally increased to handle communications related to storage of multimedia object handles rather that the objects themselves. Additional disk space on the main *Cerner Millennium* server should be configured to handle the additional space needed to store the pointers. For any of the objects stored, the network should be configured to handle larger transactions than normal traffic. The use of switched networking should be considered, if not presently installed, to help isolate network traffic.

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

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CareAware MultiMedia: Image Distribution™

Description

Image Distribution™ (MM-22276) provides fast secure access to non-diagnostic patient images throughout the enterprise. *Image Distribution* provides the distribution and viewing of images and can be the first step in building an enterprise-wide, multimedia image management system.

Client Benefits

The unified solutions of *Image Distribution* and *PowerChart®* offers the following key benefits not available with standard web-based image distribution systems:

- Provides a single solution for:
  - Clinical review
  - Consultation
  - General image distribution to clinicians
- Saves time by providing one-click access to images within the context of the EHR
- Extends radiology images to the point of care
- Eliminates the need to provide separate log-ins and passwords. Instead, images are viewed within the *PowerChart* information system. Delivers web-based distribution for easy enterprise-wide deployment and low IT maintenance
- Restricts access through Virtual Private Network (VPN) or Secure Socket Layer (SSL)
- Follows the HIPAA compliant security model. *Cerner Millennium®* ensures that only those with proper privileges are able to view images
- Establishes the foundation for future management and viewing of multimedia objects such as cardiology, pathology, oncology, ECG, digital photos, and more

Major Features

The *Image Distribution* solution license can be delivered using several different technical platforms.

1) Cerner Media Viewer ™

A zero footprint, browser-based viewer with the ability to view DICOM and multimedia objects side by side. The lack of install drives down installation and support costs for clients but additional rendering servers are often required. This application can be launched through MultiMedia Manager and/or *PowerChart*.

2) *Cerner ProVision®Web*

A web based image distribution solution with a client footprint and significant tools. It provides secure access to patient images via the Internet or hospital intranet through the *PowerChart* Electronic Health Record (EHR) or in standalone mode. Designed to deliver images within the physicians' normal workflow, this solution offers single-click contextual access within the *PowerChart* EHR flow sheet. There is no need to log into a different application, search for the patient, or use a foreign interface. Coupled with the security of the *Cerner Millennium* architecture, only physicians with the proper privileges can view their patient images within *PowerChart*.

3) Radiology Image Context Incoming as a URL via an HL7 interface.

While this is a fully resolved URL interface to a third-party distribution viewer, there are several potential issues associated with this choice that must be considered and accepted by clients that are out of Cerner's control (e.g. security, auditing, context maintenance, performance, viewer functionality, log-in features, etc.). This solution also requires Content

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CareAware MultiMedia: Image Distribution™

Redirection on the Citrix server to be "ON" (checked) for clients where *Cerner Millennium* is remote hosted.

4) A third-party advanced visualization solution offered by Cerner through one of its partners.

The *Image Distribution* solution is required to enable this option and further license costs will be associated.

Availability

Each of the options listed have associated release requirements – please consult with your Cerner representative to verify that the option chosen is available on the Cerner code release being targeted.

Special Licensing Considerations

Cardiology and other specialty imaging applications (including domain specific specialized viewing, analysis, and manipulation) are available for an incremental license fee. *Image Distribution* does not include *CareAware MultiMedia* ™ capabilities for the permanent storage of objects. The software, hardware, and professional services for viewing images using *Image Distribution* are not included within the related solutions of *PowerChart*, *PowerChart Ambulatory®*, *PowerChart Cardiovascular™*, *SurgiNet®*, *RadNet®*, *or FirstNet®*. The ability to view images requires *Image Distribution* licensing.

Software Prerequisites

- *Clinical Data Repository* (PS-20570)

Related Solutions

- *Standalone Study Validation* (MM-22272)
- *Radiology Management* (RA-20135)
- *PowerChart Cardiovascular* (CV-20486)
- *CareAware MultiMedia – DICOM* (MM-22270)
- *CareAware MultiMedia* –Digital Objects (MM-22260)

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through www.cerner.com.

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PowerInsight: PowerInsight Explorer

Description

PowerInsight® Explorer leverages the technology of BusinessObjects, a proven industry leader, to deliver meaningful data to stakeholders within an organization. With *PowerInsight Explorer* organizations have the ability to drag and drop predefined objects within BusinessObjects to create a report. In addition, organizations can utilize the library of existing report templates to deliver immediate data to end users. Reports can be pushed to a Web site for viewing by an entire clinical community and scheduled to execute off hours or at set intervals. *PowerInsight Explorer* reports can contain advanced graphics and charting capabilities that may be converted to a number of different file formats, including Excel and PDF.

Client Benefits

- Identify variations between current and targeted outcome performance
- Use clinical parameters to identify specific types of patients in the database
- Analyze outcomes and cause/effect relationships
- Data can be made securely available to all authorized users with access to the network, including via the Intranet
- Limit information viewable on any report based on the role of the end user
- Measure efficiency based upon timely action by clinical staff
- Admissions, discharges and transfers can be analyzed to determine how efficiently patients are moved in and out of the healthcare facilities
- Track physician resource usage variation
- A complete listing of reports can be found on the *PowerInsight Explorer* Reference pages

Major Features

- Web-based reporting screens
- Queries on in-house patients are run on a near real-time basis
- Easy-to-read, yet sophisticated, graphical user interface
- Business calculations are predefined; additional calculations can be user-defined
- Menu-driven reports
- Allows executive management to compare diverse clinical departments by filtering the appropriate information
- Ability to analyze operations across multiple venues
- Quick return on investment and short implementation timelines
- Structured report templates that can be utilized out of the box
- Ability to do ad hoc queries with easy to use drag and drop objects
- Leverages existing *Cerner Millennium®* database knowledge for ad hoc queries
- Stoplight coding and charting capabilities in robust front end tool
- Web viewing of reports
- Supports structured query language (SQL) reporting

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PowerInsight: PowerInsight Explorer

- Supports reporting against a *Cerner Millennium* domain. Does not support or license consolidated enterprise reporting across multiple Millennium domains.

Availability

Cerner Millennium® Release 2005.02

Special Licensing Considerations

A standby or standby equivalent database is highly recommended for *PowerInsight Explorer*.

Software Prerequisites

- *SAP BusinessObjects Runtime license for PowerInsight* (PI-20701)

Related Solutions

The following Cerner® software solution(s) extend the functionality of *PowerInsight Explorer* and are closely related:

- *Business Objects Expanded Use Upgrade* (PI-20754)
- In addition to the functionality highlighted in the *PowerInsight Explorer* Solution Description, the following functionality is also available by our *PowerInsight Enterprise Data Warehouse* (PI-20617) solution. Please see the *Enterprise Data Warehouse* solution description for a more complete listing of functionality:
    - Enterprise wide reporting across multiple Millennium domains
    - Support for non-Cerner interfaces

Communication Materials

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General Availability

Cerner Critical Care

INet Virtual

Description

INet Virtual is a major Cerner Critical Care offering that allows continuous 24 hours per day expert care by an off site critical care team.

The Cerner Millennium architecture and the Cerner Critical Care solutions allow both the bedside clinicians and the remote team a way to view, document, and order from one single screen within the context of pertinent patient data. *INet Virtual* provides a license to extend all licensed Cerner Critical Care solutions to the remote team of clinicians at a designated workstation.

Direct communication with the care team is facilitated through the use of remote-controlled cameras with high-resolution video and audio hookups provide a real time observation of the patient and activity at the bedside. Evidence-based critical care specific decision-support tools provide early alerts demonstrating a trend to guide physicians through diagnostic and therapeutic decision-making.

Using this solution, critical care patients may be cared for at the remote site by one intensivist and one nurse. Critical care nurses at the patient's bedside maintain on site direct patient care. With *INet Virtual,* along with the appropriate hardware technology, two-way communication into each patient's room is supported, along with high-resolution video and audio that provide the eyes and ears of what is happening real time. Audio transmission of stethoscope-derived heart sounds, breath sounds, and bowel sounds are possible as well as high-resolution video transmission of the patient, which can illustrate even skin tone and pupillary changes. Thus, the remote monitoring site provides a virtual physical exam, with real-time findings simultaneously visible to the remote team.

Client Benefits

- Real-time assessment findings allow immediate intervention. Communication delays are eliminated. Finding the right physician to call, waiting for a return page, and waiting for the pharmacy to get the order are avoided with real-time cross provider order entry and review. Messaging between the remote site, the patient's bedside providers and the facility pharmacy are simultaneous and closed loop. Orders can be placed and results viewed either at the patient's bedside or at the remote site. These simultaneous dynamic workflows allow the bedside and remote clinicians to view and organize patient data and to optimize the care process.

- The Remote Intensivist is able to proactively care for patients at an off site critical care unit. Platformed from Cerner Millennium architecture, the remote physician has real-time access to bedside medical devices interface, waveform visualization and capture, as well as live video to the patients.

- The Remote Intensivist tracks early awareness of impending negative events or

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trends with patient-specific alerts/alarms for immediate intervention.

- Improved efficiency in the critical care areas with 24-hour per day physician staffing, decreased hospital and critical care length of stay, and decreased hospital costs.

- Improved patient outcomes include optimal patient management, decreased critical care complications and greater consistency with best practice guidelines. Critical decision-making supported by real-time access to the remote critical care team and integrating care processes into one seamless flow.

- Licensure of *INet* (IC-20389) is required. By also licensing *INet MD* (IC-20392) quality is improved by integrating plans, orders, documentation, and viewing, and providing data availability of clinical information from multiple locations throughout the continuum of care.

- Patient safety is increased with integration with CPOE, which requires licensure of *PowerOrders®* (PS-20576), and use of Cerner's powerful decision support technologies.

- With the licensing of *Discern Expert®* (IC-26105), *Critical Knowledge and Outcomes* (KS-26768), patient-specific critical care knowledge and decision support is available for the clinician to view within the workflow at the bedside and in the remote site.

- Using *INet MD* (IC-20392), documentation is simplified with Admission, Daily, and Consult critical-care-specific templates, order sets, and notelets. Alarms and Early Alerts are embedded within the documentation and physician coding is a by-product of template completion.

Major Features

- *INet Virtual* is the only solution in the industry with a unified seamless solution between the patient and the remote team. Simultaneous viewing of the patient's condition and response to interventions, as well as cross provider bedside device communication and closed loop meds processes help reduce errors and optimize patient safety. Cerner's common data structure provides access to a longitudinal medical record shared by the patient site and the remote site in one view.

- *INet Virtual* displays data from all licensed BMDIs (Bedside Medical Device Interfaces), which capture monitored data from the bedside devices and automatically document on the bedside clinician's flowsheet. Vital signs automatically are captured. Intake and output are directly entered in the flowsheet. Both are immediately visible to the remote team. Multicontributor notes allow real-time documentation by the remote team, which is then immediately accessible within the patient's unified medical record. Thus, redundant data entry is eliminated, and the real-time information is visible simultaneously to the remote team

- In addition to automation of the flowsheet, *INet Virtual* provides interfaces to infusion pump monitoring networks. Unique to Cerner's *PowerPOC CareGuard* (IC-22774 or PH-22774), which require separate and additional licensure, *PowerPOC CareGuard* has the ability for each infusion to have a separate identification for each pump that can be directly linked to an order. This automates the order to the specific pump with the right patient and the right dose. Platformed from the Cerner Millennium architecture, the remote team has real-time access. This is yet another opportunity for efficient, safe patient care.

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- Outcomes evaluation is another unique attribute to *INet Virtual.* Cerner- *APACHE III,* which is bundled within *Critical Knowledge and Outcomes* (KS-26768), provides a unified comprehensive adult severity of illness risk adjustment score as well as a comparative database of over one million patients. Daily, Day One and Day Five predictions are unique to APACHE III – Version J and include critical care and Hospital mortality predictions, as well as LOS predictions.

- *INet Virtual* manages information flow and presentation, supports care management and workflow processes, and encourages timely decisions based on comprehensive data availability and information tailored to the clinician and the patient, both at the patient's bedside and at the remote site.

Supported Interfaces

INet Virtual, in conjunction with licensures for Bedside Medical Device interfaces, supports a variety of bedside medical devices. This includes hemodynamic monitors, ventilator interface, IV pumps and real time waveform capture.

Availability

Cerner Millennium Release 2004

Special Licensing Considerations

INet Virtual is sold as a license.

Software Prerequisites

INet (IC-20389) is required.

Technical Environment Requirements

Refer to the *Understanding Cerner Millennium Technical and Support Requirements* document for information about the technical environment.

System Resource Considerations

The CPU, memory, and disk requirements for *INet Virtual* are measured in terms of the number of beds, the volume of procedures, the number of interactive users, and the data acquisition resources required.

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution:

- *Departmental PowerPlan*™ (IC-22344)
- *INet MD* (IC-20392)
- *Discern Expert*® (IC-26105)
- *Discern Explorer*® (IC-26140).
- *Critical Knowledge and Outcomes* (KS-26768)
- *PowerInsight*™ solutions (various)
- *Inpatient Pharmacy* (PH-20160)

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through our website at www.cerner.com or through our sales organization at (816) 201-0054.

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P2Sentinel: P2Sentinel Enterprise

Description

P2Sentinel is Cerner's auditing solution for tracking end user access to confidential patient data in *Cerner Millennium* as well as other non-Cerner clinical solutions and infrastructure systems. Under HIPAA, provider organizations must implement a system of accountability with regards to how patient information is accessed and used. Through *P2Sentinel* only Cerner can provide our clients with a single view of PHI audit events – Cerner and non-Cerner - necessary to meet the requirements of HIPAA, HITECH, and Meaningful Use.

Client Benefits

- Addresses HIPAA and Meaningful Use requirements
- CCHIT Certified as part of the "Complete EHR" *Cerner Health* solution set for Meaningful Use Stage 1.
- Meets privacy and policy regulations – *P2Sentinel* measures audit-ability, policy accountability and improvement against said policy.
- Auditing individual users – *P2Sentinel* provides insights into application access patterns – supporting access, policy or behavioral changes.
- Rapid identification of suspect access enables quicker response to potential privacy and security breaches.
- Exposure to unauthorized data access – *P2Sentinel* identifies the data individuals accessed –pinpointing the amount and the specifics of the data compromised.

Major Features

- Health Care Intellischema provides a full view of access audit data from all clinical sources in a single, filterable view.
- In Report Filtering: Spreadsheet-like text filtering available within the report allowing for quicker analysis of the data
- Forensic Investigation: Comprehensive incident response and investigation capability.
- Ability to audit *Cerner Millennium* and over 200 other applications, operating systems, network and security devices
- Out-of-the-box reports tailored for healthcare organizations
- Automated report delivery and e-mail notifications
- Dashboards provide quick identification of potential security and privacy breaches

Cerner Millennium Integration Benefits

Benefits of using *P2Sentinel* in the *Cerner Millennium* environment include:

- The ability to capture audit data from all *Cerner Millennium* applications as well as other Cerner applications.

Availability

P2Sentinel is available to any healthcare organization but is maximized for all Cerner clients.

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P2Sentinel: P2Sentinel Enterprise

Special Licensing Considerations

P2Sentinel audits all workstations relating to clinical and healthcare needs. Additional licensing is required for auditing an entire enterprise.

System Resource Considerations

There are specific minimum requirements for the types of hardware on which *P2Sentinel* will run.

Client Workstation Requirements

- Operating System: Windows 7 or higher
- CPU: *Pentium®* IV-class processor (or higher) running at 2.0Ghz (or higher)
- Memory: At least 512MB RAM
- Network: Client and server must communicate over a clean network that can support at least 128kbps sustained in both directions.
- Java: Java Runtime Environment (JRE) 1.6 Update 13, or higher

Server Requirements

- CPU: 4 CPU cores per server. Intel Xeon Processors running at 2.5Ghz minimum
- Architecture: 64bit is *highly* recommended
- Storage:
    - OS: 2 x72GB SCSI hard drives – (RAID 1)
    - Data store: 4x146GB SCSI hard drives – for Log data (RAID 5) or 500GB SAN LUN (SLS) or 150GB SAN LUN (Collector/Analyzer)
- Network: x1 GB Network Adaptor

Virtual Hardware Requirements

- CPU: 4 CPU cores per server (minimum 2.5ghz, 3ghz+ is recommended)
- Architecture: 64bit VMWare ESX/ESXi 3.5 Update 3+
- Memory: 17 GB (4GB per core is recommended + 1GB for ESX overhead)
- Storage:
    - OS: 50 GB
    - Data store: 500GB (SLS) or 150GB (Collector/Analyzer)
- Network: x1 physical gigabit Ethernet NIC

Operating System Requirements

- **Red Hat:** **Red Hat Enterprise Linux AS/ES 4.0 Update 7 (32/64bit)
- **Red Hat:** *Red Hat Enterprise Linux 5.0 Update 5 64bit

**Cerner does recommend using Redhat 5.5 for P2Sentinel v4.6*

***32 bit Redhat 4.7 is not support on VMWare for P2Sentinel*

Related Solutions

P2Sentinel-Security as a Service (P2SaaS) offers clinical access to clients as a hosted service, allowing organizations to rapidly deploy an auditing solution for all of their clinical and non-clinical systems. P2Saas provides all the functional features of P2Sentinel, with the added benefits of high availability, high scalability and secure access with no

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P2Sentinel: P2Sentinel Enterprise

client site hardware footprint or software requiring constant monitoring/maintenance.

Communication Materials

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Disaster Recovery: 724Access®

Description

The *724Access®* solution provides 7x24 historical access to all clinical data currently available in the *Cerner Millennium®* production database when the system or supporting infrastructure is otherwise unavailable yet the network is still functioning (Level 1 Read Only). The solution also provides 7x24 access to a more limited subset of clinical data for cases when the network is unavailable (Level 2 Downtime Viewer). *724Access* provides access to clinical data that is typically less than one minute behind production for both planned and unplanned outages.

724Access can be a critical component to a Business Continuity Plan. Patient care and safety are enhanced during system downtimes by minimizing information and workflow disruption.

Client Benefits

- Provides access to all clinical data during both planned or unplanned downtime event within minutes
- *724Access* Level 1 utilizes the *Cerner Millennium* application suites to access *724Access* data
- Ensures patient safety during downtime events
- Reduces data redundancy
- Easy to install, operate and manage both inside and between data centers
- Minimizes workflow disruptions to clinicians

Major Features

- In the event of disruption at the primary site, restoration of *Cerner Millennium* functionality can be accomplished in minutes at a secondary site
- Automated procedures for replicating all patient data in nearly real-time to the appropriate location
- Protects confidential patient information from unauthorized access
- Consistent data replication of the patient data and the back-end Cerner server software to a separate location
- *724Access* Level 2 retrieves data as far back as 30 days

Availability

Supported on *Cerner Millennium* release 2007.17 and beyond.

System Resource Considerations

Memory and CPU needs to be allocated for target system.

On the source system, 4GB of memory is required for GoldenGate.

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this application:

Disaster Recovery Toolkit for CPDI (CTP-DRCPDI)

Disaster Recovery Toolkit for CAMM (CTP-DRCAMM)

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General Availability

Open Port

CERNER

AutoMed FDS Interface

Description

AutoMed FDS Interface is designed as a custom pharmacy device interface that provides a communication link between the AutoMed FDS pharmacy automation system and Cerner's PharmNet Inpatient system.

This unidirectional interface supports the transmission of patient demographic information and pharmacy orders from the Cerner PharmNet Inpatient system to the AutoMed FDS system.

The AutoMed FDS System packages patient specific oral-solid medications for dispensing by pharmacies in extended care facilities or institutional settings.

NOTE: This product is in the early stages of development. It has been described here to assist with budgetary planning. This product description is subject to change.

Client Benefits

- Time savings associated with automating the dispensing process
- Increases accuracy of the drug dispensing process.
- Increases productivity of staff who dispense drugs
- Reduces operating costs
- Provides time savings so pharmacists may spend more time on clinical activities

Major Features

- TCP/IP network protocol is included.
- Real time processing is supported.
- HL7 Universal Interface functionality and configurable options are supported.
- Audit trail and exception reporting is included.

Availability

For PharmNet Inpatient: Planned for future availability in *HNA Millennium*

Special Licensing Considerations

This product is licensed on a "per channel" basis.

The *AutoMed FDS Interface* license entitles only an outgoing connection.

Software Prerequisites

Inpatient Pharmacy (PH-20160) is required.

Technical Environment Requirements

Refer to the *Understanding HNA Millennium Technical and Support Requirements* document for information on the technical environment.

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Communication Materials

Cerner provides user documentation for its software applications in the form of online Help and computer-based training (CBT).

Cerner also provides product-specific brochures, flyers, and other communications in print, as well as product information available through Cerner's World Wide Web page; contact the Marketing Communications Department for more information.

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General Availability
Open Port

CERNER

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- Audit trail and exception reporting is included.

Availability

For PharmNet Inpatient: Planned for future availability in *HNA Millennium*

Special Licensing Considerations

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Software Prerequisites

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Technical Environment Requirements

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Knowledge Solutions: CPT Codes

Description

CPT Codes are a procedure identification system that serves as the basis for healthcare billing. CPT coding assigns a five-digit code to each service or procedure provided by a physician. *Current Procedural Terminology, Fourth Edition (CPT)*, is updated and distributed by the American Medical Association, for physician and other health related services.

Client Benefits

- CPT coding simplifies billing and is a way to protect a patient's medical privacy.

Major Features

- CPT codes are available in Content Packages that client download from CKN and install in their databases.

Availability

The solution is available as described.

Special Licensing Considerations

Cerner® has a reseller's agreement with the American Medical Association (AMA) for *CPT Codes*.

The AMA licenses for CPT users are on a per-product basis. Therefore, Cerner asks that the client consider users of *Cerner Millennium®* only.

As Cerner reviews the AMA definition of "per user," we believe the following areas, at a minimum, need to be considered when determining the number of licensed AMA "users" in your organization:

- Billing coder personnel (i.e. billing clerk utilizing ProFile or ProFit)
- Executive-level users (i.e. CFO)
- Outpatient personnel (i.e. MDs, nurses)
- Laboratory and/or Radiology department personnel
- Individuals who produce reports/queries that utilize CPT

Software Prerequisites

Clients who purchase *CPT Codes* (KS-22092) from Cerner also must subscribe to *Cerner Controlled Medical Terminology* (KS-22091) to receive the codes in a Millennium-ready format. All Cerner Millennium contracts should include a reference to the cost of CPT codes. Any Millennium client may choose to download this content and should understand the costs from the AMA. Whenever a subscription for *Cerner Controlled Medical Terminology* (KS-22091) subscription is quoted, the specifications for *CPT Codes* also should be added to the quote. Clients have the option of completing the number of users at the contract stage or defining the number of users post-contract when *CPT codes* are needed.

Communication Materials

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Knowledge Solutions: MediSource Foundation for Ambulatory

Description

MediSource Foundation for Ambulatory is a medication safety solution that is part of the Cerner® *MediSource* suite of drug information offerings. *MediSource Foundation for Ambulatory* conducts an extensive array of core safety checks and contains referential content to support order entry, pharmacy dispensing, nurse administration and consumer education. In addition, *MediSource Foundation for Ambulatory* supports advanced drug content such as dose-range checking and order sentences.

MediSource Foundation for Ambulatory is unified within *Cerner Millennium®* clinical solutions, allowing just-in-time access to critical drug information.

Client Benefits

- Unified clinical decision support provides consistent drug information throughout *Cerner Millennium®* solutions.
- Increased patient safety with authoritative drug information that aids clinical decision-making.
- Reduced variance in drug therapy through the availability of evidence-based drug knowledge.
- High-quality reference data incorporated into *Cerner Millennium®* solutions assist clinicians at the point of care, where the information is most needed.
- Current and concise reference data on the actions, side effects, elimination, and hazards of medications allows clinicians to stay current on the latest medical findings.
- A streamlined, efficient drug ordering process allows clinicians to create accurate, complete, safe medication orders and prescriptions.
- Custom, honed checking for the safety of drug therapy.
- Rational dosing ranges for pediatric thru geriatric populations.

Major Features

- Prospective monitoring of drug-drug interactions, drug-food interactions, drug-herb/neutraceutical interactions.
- Drug-allergy contraindications.
- Therapeutic duplication checking and therapeutic categorization.
- Descriptions of side effects/toxicities of drugs.
- Descriptions of the pharmacological and pharmacokinetic properties of drugs.
- Pregnancy and lactation hazards of drug therapy.
- Drug dosing recommendations.
- References to the primary medical literature for all clinical topics.
- Consumer drug information leaflets in English and Spanish.
- IV fluid compatibility/incompatibility data.
- Drug names, formulations, NDCs, orange book codes and warning labels.
- The latest pricing information, including current average wholesale prices.
- Frequent clinical and pricing updates, based upon the specific Cerner solution and country, automatically are provided from Cerner on a monthly, quarterly, or bi-annual basis. Additional updates are provided daily on the *MediSource* Web site, offering clients a variety of frequency options for updating their databases.



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Knowledge Solutions: MediSource Foundation for Ambulatory

- Dose-range checking (age and weight specific, based on renal function and lifetime therapy limits).
- Common adult medication orders.
- Common pediatric medication orders.

Availability

Cerner Millennium, Release 2000, version 2000.01.

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution:

- *MediSource Patient-Specific for Ambulatory* (KS-26966) which is inclusive of *MediSource Foundation for Ambulatory* (KS-26965).

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

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Knowledge Solutions: PowerNote Content for Ambulatory

Description

PowerNote® Content for Ambulatory was designed by clinicians to provide comprehensive and user-friendly documentation that encompasses the diversity of Ambulatory and related diagnoses. Cerner continuously seeks feedback from the end-user physician community and enhances the *PowerNote* content on regular bases. *Millennium® PowerNote solution*, combined with *PowerNote Content for Ambulatory* provides a powerful documentation solution that integrates actionable documentation and ordering capabilities into the workflow of the clinician.

Major Features

PowerNote Content for Ambulatory:

- Enables comprehensive physician documentation through a multitude of care designs, each designed to capture the relevant clinical data for a specific patient encounter.
- Provides ability to easily include results, cross encounter clinical problems, order details and other relevant information into the physician documentation.
- Optimizes integration with key *Cerner Millennium®* solutions which enables clinician to review and intervene while remaining in context of the typical clinical workflow.
- Enables better implementation of documentation for regulatory compliance and ensures documentation legibility, accuracy, completeness and availability. This improves communication of the individual's status to other providers and health care agencies. Documentation is signed online so other providers can view the information immediately.
- Improves patient safety by capturing information only once and limiting the need for redundant charting that can result in errors and omission of pertinent information.
- Enables documentation to be completed in the context of the individual's health summary and is organized intuitively to the clinician's workflow.
- Empowers clinicians to place appropriate diagnostic and therapeutic orders at the time of documentation which enhances the timing of treatment provided while improving accuracy and completeness of documentation.
- Ensures that each discrete term selected during documentation is codified and its relationships captured in a way that allows retrospective analysis for various clinical and research purposes.
- Facilitates efficient procedure documentation by requiring clinicians to update only the limited number of fields with patient specific information.
- Provides the ability to supports clinicians with links to applicable evidence-based literature.
- The structured documentation capabilities using this content significantly reduce the overall transcription cost.
- Contributes to a comprehensive documentation solution to better support the billing needs of the organization.

Special Licensing Considerations

PowerNote Content for Ambulatory is contracted for a minimum five-year subscription.

Software Prerequisites

- *Clinical Office with PowerNote* (PV-20230)

Availability

Available as described.

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Knowledge Solutions: PowerNote Content for Ambulatory

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through www.cerner.com.

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Knowledge Solutions: Cerner Controlled Medical Terminology for Ambulatory

Description

Cerner Controlled Medical Terminology (CMT) for Ambulatory is a medical terminology offering that enables controlled and structured data capture. The *CMT* incorporates industry standard sets of terminology modeled and codified to *Cerner Controlled Medical Terminology* to provide controlled and structured flexibility for the *Cerner Millennium*® nomenclature requirements.

Cerner Controlled Medical Terminology for Ambulatory is an annual subscription required of all *Cerner Millennium* clients.

Client Benefits

The *Cerner Controlled Medical Terminology for Ambulatory* provides the data model to accommodate multiple disparate terminology sets as established by the sources, yet enable Cerner® and clients to customize and extend the terminologies in a controlled and structured manner that ensures valid and reliable knowledge representation to fill in terminology gaps, meet client terminology preferences, and enable executable functionalities.

Synonyms, new concepts, or new terminology sets can be modeled into the *Cerner Millennium* nomenclature subsystem.

Each terminology set is formatted to a concept-based model with codification of all terminology entities to enable better knowledge representation with flexible display options, and easier and reliable content management and synchronization.

Cerner Controlled Medical Terminology for Ambulatory provides a reliable system to both uniquely identify clinical concepts within *Cerner Millennium* while enabling a semantic understanding of concept meaning and hierarchical relationships.

Major Features

Cerner Controlled Medical Terminology for Ambulatory comprises the following:

- Current industry standard terminologies sets are formatted, versioned, codified, and made available to the clients upon proof of licensure.
- The Cerner Knowledge Index (Concept_CKI) is the functional concept identifier. The Concept_CKI is the codified means within Millennium to identify key medical concepts to support information processing, clinical decision support, Executable Knowledge® and knowledge presentation. The Concept_CKI remains specific to the medical concept regardless of how that concept is described, expressed, or related to other concepts.
- The CMT Index (CMTI) is the unique identifier that supports terminology management, synchronization and versioning. The CMTI maintains uniqueness across multiple terminology sets, relating the Cerner Millennium nomenclature content with the original sources.

The terminology sets are derived from many sources, some electronic and parseable, others from paper and non-parseable sources. Cerner manages these terminology sets, ensuring timely and accurate updates and distribution to clients. Each terminology follows a schedule for version update, a quality assurance process that reviews new and obsolete terms/codes, identifiers, begin and end effective dates, indexes, completeness and integrity of terminology content, and validates the upload process.

Currently available terminologies:

- SNOMED CT
- ICD-9-CM
- CPT*
- HCPCS



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Knowledge Solutions: Cerner Controlled Medical Terminology for Ambulatory

- APC
- DRG
- LOINC
- DSM-IV-TR
- ICD-O
- SNOMED CT to ICD-9-CM Cross Map
- ICD-9-CM to SNOMED CT Cross Map

*Client must purchase KS-22092 CPT Codes, per-user AMA licensing fee.

Availability

Cerner Millennium® Release 2003, version 2003.01 and above for all terminologies

Cerner Millennium® Release 1999, version 1999.01

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CareAware MultiMedia: CareAware MultiMedia – Digital Objects

Description

CareAware® MultiMedia – Digital Objects is composed of an integrated set of foundation-level *Cerner Millennium®* services supporting acquisition, storage, management, notification and distribution of multimedia objects within a *Cerner Millennium* environment. This version provides storage for all non-DICOM objects within a single facility.

CareAware MultiMedia - Digital Objects enables a core set of multimedia capabilities *within Cerner Millennium*, including digital photograph insertion into *Cerner Millennium* applications such as *PowerNote™*, basic multimedia object storage and associated distribution. *CareAware MultiMedia – Digital Objects* also serves as the storage management system for *Cerner ProVision Document Imaging*. *CareAware MultiMedia – Digital Objects* is required to enable integrated multimedia capabilities in *Cerner Millennium* applications. This configuration also serves as the basis for *CareAware MultiMedia* services such as waveform, audio management and video management.

CareAware MultiMedia – Digital Objects includes the following:

- Digital photo acquisition from select devices, including digital cameras
- Digital image storage for non-DICOM images
- Digital image import from files for non-DICOM images
- Digital image distribution and management
- Digital image management for clinical documentation (with additional licensure of *PowerNote*)
- Document Image storage management allowing the application to store and retrieve all information created by *Cerner ProVision Document Imaging (CPDI)* applications and *Cerner Millennium* applications with integration of CPDI components.
- Document Image storage management

Client Benefits

- Provides the ability to acquire and store digital images in *PowerNote* documentation within Millennium
- Provides digital image management to enable PowerNote applications for dermatology
- Provide the ability to store document images and display them in *Cerner Millennium* applications (Ex. *RadNet®*, *Health Information Management*, *PathNet®*, *Patient Accounting*, *Cerner Registration Management*, *PharmNet®*, *PowerChart®*, and others)
- Provides permanent storage and management for document images
- Single Storage Architecture for all multimedia object storage needs
- Provides ability to associate multimedia object file with person documentation through *PowerNote*

Major Features

- Digital image acquisition from digital cameras and placement into clinical documentation via *PowerNote* applications
- Digital image import from files into a *PowerNote* document
- Print job storage and management

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CareAware MultiMedia: CareAware MultiMedia – Digital Objects

- Non-DICOM image and other object management
- The solution provides Storage management capabilities including storage of any supported file types for images
- Also includes the ability to store versions, OCR'd renditions, and associated annotation files

Cerner Millennium Integration Benefits

Benefits of using *CareAware MultiMedia - Digital Objects* in a *Cerner Millennium* environment include the following:

- Image-enabled services for acquisition, storage and display
- Print queue storage and retrieval for large print jobs
- Foundation-level services for optional multimedia component additions
- Integration with *Clinical Data Repository* (PS-20570)

Cerner Professional License

Cerner Professional License grants clients the right to utilize design and configuration tools, including Cerner Bedrock® and Reference Data Domain Sync (RDDS) where applicable. These services simplify and expedite the design, build and maintenance process throughout the lifecycle of a Cerner® solution. Clients can reduce implementation time and eliminate variance by automating processes with Cerner Professional License.

Availability

CareAware MultiMedia – Digital Objects is available in Release 2005.01

Special Licensing Considerations

This solution is priced based on a perpetual license using annual object storage volume as the metric. Acquisition and display of the objects managed is through *Clinical Data Repository* (PS-20570), *PowerNote* and related *Cerner Millennium* applications. Only non-DICOM objects are managed through this license. A separate license is required, using the same hardware and SSL components for DICOM object management. No additional licenses are required for storage and management of non-DICOM objects with this version of *CareAware MultiMedia*.

System Resource Considerations

All multimedia objects are stored separately from the main server. Consequently, the I/O requirements on the main server are marginally increased to handle communications related to storage of multimedia object handles rather that the objects themselves. Additional disk space on the main *Cerner Millennium* server should be configured to handle the additional space needed to store the pointers. For any of the objects stored, the network should be configured to handle larger transactions than normal traffic. The use of switched networking should be considered, if not presently installed, to help isolate network traffic.

Related Solutions

- *FirstNet®*
- *PowerChart®*
- *PowerChart Office®*
- *PowerNote*
- *Cerner Cardiovascular*
- *PowerChart ECG*
- *RadNet®*

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CareAware MultiMedia: CareAware MultiMedia – Digital Objects

- *CareAware FetaLink™*

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General Availability

Point of Care

CERNER

Point of Care Medication Administration

Description

Point of Care Medication Administration is a Cerner Millennium™ offering that supports the use of bar-coding technology to ensure safe administration of medications at the bedside.

Point of Care Medication Administration automates the documentation of medication administration and documentation of tasks related to specific physician/nursing orders at the point of care (POC). This solution set provides notification to the clinician when inconsistencies occur that could represent potential medication administration errors. The solution brings the power of Cerner's Millennium architecture to the point of care, without reliance on HL7 interfaces.

Cerner's Point of Care solutions facilitate patient safety through barcode verification of the "Five Rights" data review and collection, as well as medical devices integration at the patient bedside.

The solution offers two deployment options – either via mobile carts leveraging tethered barcode scanners (*CareAdmin*) or through the use of handheld devices (*CareMobile)*. By combining both deployment offerings in a single offering, Cerner provides clients with the ability mix and match depending on their organization's workflow requirements. It will be noted later in this document that technical and scope requirements will differ depending on the actual method chosen for implementation.

Client Benefits

- Provides full medication administration capabilities associated with the additional licensure of the electronic medication administration record (eMAR)
- Promotes improved patient care in terms of quality, accuracy, and safety (decrease human errors in the care process), facilitating improved outcomes
  - Automates the Positive Patient Identification (PPID) process
  - Automates "Five Rights" verification through use of barcode technology:
    - Right Patient
    - Right Medication
    - Right Dose
    - Right Route
    - Right Time
- Enables the capture of pharmacy charges upon medication administration:
  - Provides greater accuracy for medication administration and charges
  - Captures charges at the point of care, thereby improving cash flow and accelerating the claims process
  - Promotes efficiency and timesaving by eliminating manual activities associated with the billing process (credits)
- Provides legal documentation for medication administration and other patient care tasks

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- Facilitates compliance with JCAHO standards for patient identification
- Eliminates illegible notation
- Promotes streamlined operations and workflow by providing consistent control and standardization of documentation
- Incorporates collection and documentation at the bedside, as part of normal workflow and a by-product of the care process

Major Features

Major features include:

- Full medication administration documentation functionality
- Provides flexible task list related medication administration and vital signs collection
- Enhanced patient safety, via automating the process of verifying the "Five Rights" through barcode technology
- Audit reporting
- Seamless, real-time sharing of data across all domains, including patient demographics and allergies
- Provides flexible patient lookup options (such as name/FIN/MRN/Location)
- Clients can choose to deploy via either mobile carts with tethered barcode-scanning device or handheld devices with an integrated barcode scanning device
- Incorporates a full-screen view of tasks associated with care process
- The ability to ad-hoc order medications in an emergent situation
- When deploying *CareMobile* and with the additional licensure of *CareAware MDBus for CareMobile,* nurses can auto program IV pumps to ensure proper setting as part of the "five rights" verification

Cerner Millennium™ Integration Benefits

Benefits of using Point of Care solutions in a Cerner Millennium environment include the following:

- Promotes patient safety through the real-time, seamless sharing of data, which provides a complete, accurate, and consistent view of the patient
- Provides streamlined workflow throughout the medication administration process by incorporating documentation at the point of care
- Single file structure/common architecture eliminates duplication of build and maintenance effort associated with:
  - Formulary
  - Allergies
  - Clinical Events

With the *MillenniumMobile* Framework serving as the platform for the *CareMobile* solution, the infrastructure for the incorporation of additional mobile applications is established when deployed via handheld devices.

Availability

Point of Care Medication Administration was first generally available with Cerner Millennium Production Release 2004.01.

Special Licensing Considerations

Point of Care Medication Administration is sold as a license.

When choosing to deploy via handheld devices, Millennium Mobile is also required. It requires separate licensure through Cerner Technologies and serves as the platform for *CareMobile*.

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Software Prerequisites

Electronic Medication Administration Record (MAR) (PS-22732) and Inpatient *Pharmacy* (PH-20160).

Technical Environment Requirements

It is required that clients include a "Point of Care/Meds Administration Assessment" as part of their deployment strategy when implementing the *CareMobile* solution.

If deploying *CareMobile,* a Radio Frequency (RF) network must be installed at the client's facility. Clients will also be required to purchase additional technology infrastructure licenses including IBM WebSphere and *MillenniumMobile* Framework licenses.

System Resource Considerations

Based upon the findings of the "Point-of-Care/Meds Administration Assessment," clients can determine a deployment that best meets their mode of practice. *CareAdmin* would require the purchase and incorporation of mobile carts, while *CareMobile* and *Care Aware* solutions require the use of handheld devices.

Related Solutions

The following Cerner software solution(s) significantly extends the functionality of the *CareMobile* solution: *CareAware MDBus for CareMobile.*

Communication Materials

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General Availability

PharmNet

Outpatient Pharmacy

Description

Outpatient Pharmacy is a major PharmNet offering designed to automate the prescription order management process in the retail pharmacy setting. This solution's unique features provide the necessary prescription and clinical information for efficient order entry, refill, and dispensing processes. *Outpatient Pharmacy* supports drug-allergy, drug-drug, and drug-food interaction checking, as well as dose range management. Other features include online claims processing, support for dispensing device interfaces (with appropriate licenses), compound drug support, and reporting capabilities. When *Outpatient Pharmacy* is combined with *Inpatient Pharmacy* (PH-20160), the integrated medication profile provides a single view for both inpatient and retail medication orders.

With licensure of *Registration Management* (CP-20735) within CapStone or an optional foreign system interface, ADT (admission, transfer, and discharge) and patient demographic information is automatically transmitted to *Outpatient Pharmacy,* eliminating duplicate patient registration.

Outpatient Pharmacy fully supports the following activities in the pharmacy:

- *Patient registration*
- *Pharmacy order entry*
- *Dose Range Management*
- *Batch refill and return-to-stock processing*
- *Patient information leaflets*
- *Online claims processing*
- *Compound drug support*
- *Prescription tracking*
- *Clinical management and drug utilization review*
- *Downtime processing*
- *Retail pharmacy reporting*
- *Database tools*
- *HL7-Compliant interfaces (supporting solution)*
- *Foundations*

Client Benefits

- Automates the order entry, dispensing, and refill processes in the retail setting, streamlining workflow
- Enhances the overall financial management of the retail pharmacy, improving cash flow
- Integrates with other Cerner solutions to enable review of medication use across the continuum of care, improving patient safety and quality of care

Major Features

- *Patient Registration* is a feature of Cerner's *Foundations,* which is embedded as the underlying foundation of every major software offering that Cerner develops. It provides the ability to enter demographic, financial, insurance, and clinical information for a specific patient within *Pharmacy Order Entry.* As changes are made either manually or through a foreign system ADT interface, the *Patient Registration* component ensures that users have access to the most current patient demographic information.

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- *Pharmacy Order Entry* provides the user with several options for selecting medications, such as by brand name, generic name, solution identification number (such as NDC), or mnemonic. *Pharmacy Order Entry* supports the selection of therapeutic alternatives and generic substitutions. During order entry, pharmacy personnel have direct access to patient registration information and can easily access and update patient demographics and insurance, employer, and prescriber information. Prescription details and financial information entered by default during the order conversation streamline the processing of prescription orders. Patient profile actions can be performed during order entry and include refill, cancel, copy, modify, discontinue, inquire, request history, request label, void, and transfer. *Pharmacy Order Entry* provides the ability to enter pharmacy products into the database and supports the entry of investigational drugs and nonprescription (that is, over the counter or OTC) items, as well as the processing of compound medication prescriptions. Interaction checking, drug utilization review, and other clinical interventions are fully supported throughout the order entry conversation. Pricing and third-party claims adjudication occurs automatically upon processing of prescriptions. The system provides for the generation of labels, receipts, and counseling information.

- A *Dose Range Management* component establishes minimum and maximum dose checking guidelines for the safe administration of medication, so that medication orders can be screened for the minimum and maximum values of specific drugs based upon age ranges, routes of administration, single, daily and therapy doses, and other patient-specific modifiers including renal status and lifetime therapy limits on specific drugs.

- *Batch Refill and Return-To-Stock Processing* is used for efficient refill and return processing of multiple prescriptions in a batch mode. The batch refill and return function can be performed using bar-code technology. The system enables users to monitor, modify, review, or add adjudication information to prescription orders. To help assess patient medication compliance, refill checks are performed, such as early/late and extra refill notification and prescription expiration.

- *Patient Information Leaflets* can be viewed online, and they print automatically with all new prescriptions. *Patient Information Leaflets* can be printed on demand if needed. Depending upon the language of the patient, these leaflets can be printed in English or Spanish. Cerner Multum, a wholly owned subsidiary of Cerner Corporation, provides the embedded content for the leaflets.

- *Online Claims Processing* is used to perform submission, editing, queueing, and monitoring of third-party prescription claims. The adjudication function also supports resubmission and reversal of claims and provides the ability to send denial overrides and prior authorizations. Pre-adjudication checks can be performed, such as limits on dispense quantity, days supply, price, and OTC medications, which decreases prescription claim submission time and expenses.

- *Compound Drug Support* is provided within *Outpatient Pharmacy*. Users can predefine commonly dispensed compound prescriptions in the database or build compounds during pharmacy order entry. *Compound Drug Support* is designed to enable users to adjudicate compound prescription claims via online claims processing to third-party prescription plans.

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- *Prescription Tracking* provides the ability to track the movement of prescriptions throughout the pharmacy dispensing process. *Prescription Tracking* captures the user, date, and time for certain events in the processing of prescriptions. By capturing this information, workload analysis can be performed. Events such as filling, checking, dispensing, packaging, shipping, delivery, and counseling can be tracked for each prescription and can be defined by the user. This enables users to tailor events specific to the prescription dispensing process for the pharmacy.

- *Clinical Management and Drug Utilization Review* is provided for clinical analysis. Users can quickly and easily view the patient's clinical summary and add/edit demographic, allergy, and problem information. Additionally, users can view current prescription interactions, a summary of clinical results, and a patient's medication profile, as well as monitor lab values. *Clinical Management and Drug Utilization Review* supports documentation of clinical conflict/interaction, intervention, and outcome information, which can then be tracked by the system. With the addition of *Discern Expert* (PH-26105), Cerner's clinical decision support system, rules and alerts can be written to notify users in real time as prescription use problems arise.

- *Downtime Processing* enables the processing and dispensing of prescriptions when the system has experienced an interruption. The downtime process enables users to remain operational until the system responds. This process can be activated or deactivated automatically or via user interaction.

- *Retail Pharmacy Reporting* is used to print various reports for clinical and management usage. Reports can be generated by location, patient name, health plan, payment method, dispense category, user, or physician. Also, these reports can be set up in operations to be run automatically by the system. *Retail Pharmacy Reporting* has the flexibility to run single-transaction or multi-facility reports.

- *Database Tools* provide the backbone of information for *Outpatient Pharmacy* and are used to build the reference tables for this solution. The tools have the flexibility to be customized with site-specific information.

- *HL7-Compliant Interfaces* to all major suppliers that support HL7-compliant standards are optionally available for licensing. For example, *Outpatient Pharmacy* can be interfaced to patient registration and billing systems, as well as automated dispensing devices used in the retail setting.

- In addition to the features inherent within PharmNet, *Foundations* functionality is also included. *Foundations* refers to Cerner's definition of those common processes or tasks that are shared across clinical and administrative domains and applications, technical areas, and project or production tasks. *Foundations* is included in all major Cerner licensed software solutions and includes *Technical Components (Technical Environment Management, Security Management, User Management,* and so on), *Functional Components* (for example, *Person Management, Order Management,* and *Result Processing),* and *Operational Components (Operation/System Management, System Integration,* and so on). The majority of the componentry applies to all Cerner solutions, though a few specific components may not be applicable to every solution line. Refer to the *Foundations* Solution Description for more information.

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Cerner Millennium Integration Benefits

Benefits of using *Outpatient Pharmacy* in Cerner Millennium's environment include the following:

- With *Care Documentation* (PS-22719) and *PowerOrders* (PS-20576) within PowerChart or *Clinical Office With PowerNote* (PV-20230) within PowerChart Office, the medication process is truly a closed loop, since providers can process prescription orders online and transmit them to *Outpatient Pharmacy*. When *Inpatient Pharmacy* is added, practitioners throughout the healthcare facility have online access to an integrated patient medication history for both the inpatient and retail setting.

- With the *General Laboratory* (PA-20070) offering within PathNet, patient-specific physiologic calculations and actual results are available in *Outpatient Pharmacy*. Laboratory results from *General Laboratory* can be monitored based on the patient's medication therapy.

- With the PathNet *Microbiology* (PA-20075) offering installed, the online antibiogram feature within PharmNet provides pharmacists with information about the susceptibility patterns of microorganisms to antibiotics based on the site of infection.

Availability

Cerner Millennium 2000, version 2000.01

Software Prerequisites

One of the following is required: *MediSource Foundation (Retail/Clinic)* (PH-22160), *MediSource Foundation By Net, Per Facility* (KS-22005), *MediSource Foundation Facility-wide)* (KS-22004), *MediSource Patient Specific* (KS-22001) or *Knowledge Catalog* (KS-26801, KS-28802, or KS-26803).

Technical Environment Requirements

Refer to the *Understanding Cerner Millennium Technical and Support Requirements* document for information about the technical environment.

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution: *Inpatient Pharmacy* (PH-20160), *PowerOrders* (PS-20576), *Registration Management* (CP-20735), *Care Documentation* (PS-22719), *Clinical Documentation Management (ClinDoc)* (PH-22275), *Departmental Clinical Supply Chain for PharmNet* (PH-25201), *Discern Expert* (PH-26105), *Discern Explorer* (PH-26140), *General Laboratory* (PA-20070), *Microbiology* (PA-20075), *Clinical Office With PowerNote* (PV-20230), and *Billing & Accounts Receivable* (PF-20450).

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PharmNet: Inpatient Pharmacy

Description

Inpatient Pharmacy is a major PharmNet® offering designed to manage pharmacy operations serving an inpatient population. This solution's unique features make drug ordering and dispensing significantly faster than other system solutions in the marketplace, without compromising a critical aspect of the pharmacy's involvement in patient care – clinical validation. *Inpatient Pharmacy* supports drug-allergy, drug-drug, and drug-food interaction checking, as well as therapeutic duplication screening.

With *Registration Management* (CP-20735) within CapStone or an optional foreign system interface, ADT (admission, transfer, and discharge) and patient demographic information is automatically transmitted to *Inpatient Pharmacy,* eliminating duplicate patient registration within the pharmacy.

Inpatient Pharmacy fully supports the following activities in the pharmacy:

- Departmental Patient Registration
- Pharmacy Order Entry
- Clinical Documentation Management (ClinDoc)
- Decision Support/Clinical Review
- Physician Order Processing
- Dispensing
- Medication Administration Record Processing
- Bar-Code Charge/Credit
- Formulary Management
- Database Tools
- HL7-Compliant Interfaces (optional)
- Foundations

Client Benefits

- Improves quality of care by providing comprehensive, integrated clinical information at the point of clinical decision making
- Clinical documentation (*ClinDoc*), integrated with order entry, saves time and increases the likelihood of documenting all clinical activities. Provides tracking and reporting of all patient outcomes related to such activities
- Automates the medication use management process, streamlining workflow
- Enhances patient safety through advanced clinical intervention tools
- Provides productivity tools that enhance departmental operations using real-time workload statistics, such as orders and clinical tasks
- Supports pharmacoeconomic analysis, by trending intervention types, quantities, recommendation acceptance and potential cost savings/avoidance
- Employs a user-friendly, Microsoft Windows-based design for ease of navigation

Major Features

- *Departmental Patient Registration* is a feature of Cerner's *Foundations,* which is embedded as the underlying foundation of every appropriate major software offering that Cerner develops. It supports the quick entry and modification of patient demographic information by pharmacy personnel. As changes are made either manually or through a foreign system ADT interface, *Departmental Patient Registration* features

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PharmNet: Inpatient Pharmacy

ensure that users have access to the most current patient demographic information.

- *Pharmacy Order Entry* provides the user with several options for selecting medications, such as by brand name, generic name, product identification number (that is, NDC or DIN), or mnemonic. Predefined defaults for order details expedite the medication order entry process. Order sets and IV sets can be used for commonly ordered medication therapy plans, including defaults of the most commonly accepted medications. User-defined order alerts can be displayed during pharmacy order entry and are used to notify pharmacists of certain formulary items that require restricted dispensing or for special instructions. Integration with *Departmental Clinical Supply Chain for Pharmacy* (PH-25201) automates the reorder and inventory control processes, with support for contract item identification, extemporaneous compounding, and inventory tracking capabilities.

- *ClinDoc* provides comprehensive clinical documentation of activities integrated within the medication alerting process. Such documentation can include non-medication parameters such as diseases, allergies or patient conditions. *ClinDoc* automatically captures the identification of the user entering documentation when a clinical audit is encountered. Each *ClinDoc* activity generates a unique document that is assigned at the point of intervention. Clinical activity workload reporting at the user or activity/issue level is provided as well. This can be used to assign specific tasks to clinicians or clinical teams.

- *Decision Support/Clinical Review* enables institutions to define specific criteria for clinical appropriateness of drug therapy. Clinical intervention management for safe medication utilization is achieved through the licensure of *MediSource Foundation* (KS-22004 or KS-22005) or *MediSource Patient Specific* (KS-22001), Cerner Multum's drug database solutions, to perform drug interaction checking and screening for therapeutic duplication at the time of order entry. All messages for alerts and interaction checks are presented in the same window for review, reducing the number of alert windows presented during pharmacy order entry. The supporting *Clinical Documentation Management (ClinDoc)* (PH-22275) solution can be integrated with pharmacy order entry to support clinical conflict analysis and intervention.

- *Physician Order Processing* in PharmNet supports the complete electronic process for medication orders placed in a Cerner or non-Cerner physician order entry system. *Physician Order Processing* for these types of orders received by PharmNet supports pharmacy order verification, decision support, clinical checking, and the use of electronic signatures. Physician orders placed via *PowerOrders®* (PS-20576) also provide pharmacy personnel with the override reason to alerts, when a physician chooses to bypass a medication alert. The pharmacy personnel also have access to the normalized dose used by the physician when ordering weight-based doses (typically in the pediatric setting).

- The *Dispensing* component supports multiple facilities, satellites, and mobile carts, as well as different exchange times for each nursing station. It supports processing of patient charges immediately through order entry and dispensing functions. Dispensing lists are available for an individual patient, single or multiple nursing stations, or the entire organization. The system supports unit dose, traditional fill, pass medication, and floor stock drug distribution methods.

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PharmNet: Inpatient Pharmacy

- *Medication Administration Record (MAR) Processing* supports the documentation of medication administration for scheduled, PRN, IV piggyback, continuous infusion, and one-time orders. Standard MAR reports can be generated by the system for use by nursing personnel in charting the administration of patient medications. Additional MAR formats or customization of the MAR to meet the client's clinical data requirements is available for additional service fees. Integration of *Inpatient Pharmacy* with *Medication Administration Record* (PS-22732) a supporting solution that creates an electronic profile of the patient's medications organized by medication groupings and administration times, offers the highest degree of medication administration documentation.

- *Bar-Code Charge/Credit* simplifies the entry of charges and credits for pharmacy medication orders placed in PharmNet. This form of rapid data entry is accomplished by using bar-code readers to enter the orders that are being charged or credited.

- *Formulary Management* provides a centralized method of support for a single- or multi-institution medication database. *Formulary Management* simplifies monitoring the use of nonformulary items and investigational drugs, assisting with control of the pharmacy's formulary. The system can identify drug categories, such as formulary, nonformulary, and investigational items, for one or more formularies. Order entry defaults can be set for billing codes and formulas, specific commercial products, and formulary products that are defined at the facility/nursing station level. Reports can be requested by therapeutic category to assist in effectively regulating formulary drug use.

- *Database Tools* represent a toolset for building the reference tables that are used by this solution. For example, with these functions, the pharmacy's formulary can be defined, as well as system processing variable settings. *Database Tools* also are used to set up employee records and security.

- *HL7-Compliant Interfaces* to all major suppliers that support HL7-compliant standards, including order entry, patient registration, billing, and laboratory information systems, are optionally available for licensing. For example, PharmNet can be interfaced to many of the automated dispensing devices used in hospital pharmacy departments.

- In addition to the features inherent within *Inpatient Pharmacy, Foundations* functionality is also included. *Foundations* refers to Cerner's definition of those common processes or tasks that are shared across clinical and administrative domains and applications, technical areas, and project or production tasks. *Foundations* is included in all major Cerner licensed software solutions and includes *Technical Components (Technical Environment Management, Security Management, User Management,* and so on), *Functional Components* (for example, *Person Management, Order Management,* and *Result Processing),* and *Operational Components (Operation/System Management, System Integration,* and so on). The majority of the componentry applies to all Cerner solutions, though a few specific components may not be applicable to every solution line. Refer to the *Foundations* Solution Description for more information.

- A *Dose Range Management* component establishes minimum and maximum dose checking guidelines for the safe administration of medication, so that medication orders can be screened for the minimum and maximum values of specific drugs based upon age ranges, routes of administration, single, daily and therapy doses, and other patient-specific modifiers

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PharmNet: Inpatient Pharmacy

including renal status and lifetime therapy limits on specific drugs.

Cerner Millennium Integration Benefits

Benefits of using *Inpatient Pharmacy* in Cerner Millennium's® environment include the following:

- With the *General Laboratory* (PA-20070) offering within PathNet®, physiologic calculations or actual results, such as a creatinine clearance, are displayed in the *Clinical Summary* window of *Inpatient Pharmacy*. Calculations are based on the serum creatinine value from *General Laboratory*. Calculations are patient-specific using standard. Laboratory results from *General Laboratory* can be monitored based on the patient's medication therapy.
- With the *PathNet Microbiology* (PA-20075) offering installed, the online antibiogram feature within *PharmNet* provides pharmacists with information about the susceptibility patterns of microorganisms to antibiotics based on the site of infection.
- With *the Medication Administration Record* (PS-22732), the medication process is truly a closed loop, as direct care providers process medication orders online and transmit them to *Inpatient Pharmacy,* as well as document the administration of medications online. As a feature of this integration, a charge for the medication order can be generated based upon this documentation process. Reporting and monitoring capabilities are expanded to include the actual time of medication administration rather than the scheduled time within *Inpatient Pharmacy*.

Cerner Professional License

Cerner Professional License grants clients the right to utilize design and configuration tools, including Cerner Bedrock™ and Reference Data Domain Sync (RDDS) where applicable. These services simplify and expedite the design, build and maintenance process throughout the lifecycle of a Cerner solution. Clients can reduce implementation time and eliminate variance by automating processes with Cerner Professional License.

Discern Explorer

Discern Explorer® uses full-featured, fourth-generation programming language patterned after Structured Query Language (SQL) to maintain and extract data from both *Cerner Millennium®* and client-developed databases. All *Cerner Millennium* applications use *Discern Explorer* to select from, insert into, update into and delete from the *Millennium* database. *Discern Explorer* can also be used to extract data to download to other applications. Individuals with little computer experience can use *Discern Explorer* to generate simple queries and reports, or computer professionals can use it to perform more complex and sophisticated programs.

Discern Expert

Discern Expert® is an event-driven, rules-based decision support capability. This sophisticated functionality is offered within a rules logic model and user interface design that simplifies the everyday use and management of critical decision support.

Availability

Cerner Millennium Release 2000, version 2000.01

Software Prerequisites

MediSource Foundation (whose functionality is included in *MediSource Patient Specific* KS-22001; or *MediSource Foundation* facility-wide KS-22004; or *MediSource Foundation* by net KS-22005; or within functionality included in the *Knowledge Catalog* KS-26805 or KS-26806) is required.

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PharmNet: Inpatient Pharmacy

Technical Environment Requirements

Refer to www.cerner.com and navigate to Home→ Solutions & Services→ Cerner Technologies for information about the technical environment.

Cerner also offers our solutions in a shared environment for certain markets, and these offerings require some degree of standardization and adherence to Cerner recommended workflows and content.

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution: *Medication Administration Record* (PS-22732), *Outpatient Pharmacy* (PH-20170), *PowerOrders* (PS-20576), *Registration Management* (CP-20735), *Departmental Clinical Supply Chain for Pharmacy* (PH-25201), *General Laboratory* (PA-20070), *Microbiology* (PA-20075) and *ADE Prevention Alert Foundation Package* (KS-26702).

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through our website at www.cerner.com.

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Cerner Cardiovascular: PowerChart ECG

Description

PowerChart® ECG is a major cardiovascular offering that provides a unique and comprehensive ability to receive, manage, display and report on ECG (12-lead, Stress, Holter) exams anywhere from within *PowerChart* and affiliated *Cerner Millennium®* solutions. This offering makes Cerner® the first company to provide full capabilities for the ECG from within the Electronic Medical Record.

Client Benefits

- Tighter integration between ECGs and the electronic medical record improve patient safety and allow for executable rules and content.
- Costly disparate ECG management systems are no longer needed – digital ECG and workflow activities are together in *PowerChart.*
- ECGs are available in *PowerChart* in a matter of seconds. Turnaround time for final reports and referral letters is reduced, improving patient throughput and cardiologist satisfaction.
- A full range of ECG viewing and measurement capabilities exist within *PowerChart.* The complete workflow is available, including ordering tests, interpretation, and completing the clinical report.
- The physician workflow is streamlined to help manage the worklist.

Major Features

The *PowerChart ECG* component includes communication integration and clinical worklist functionality that presents a consolidated view of ECG information, visually incorporating prior encounters, critical results and observations.

- Full fidelity ECG data can be viewed.
- The ECG can be measured and analyzed, and the presentation can be manipulated all within *PowerChart.*
- With storage, ECG images are stored.
- ECG images are distributed enterprise-wide.
- The specific care process needs for the ECG cardiology setting are managed.

Cerner Millennium Integration Benefits

Benefits of using *PowerChart ECG* in the *Cerner Millennium* environment include the following:

- Complete sharing of information among Cerner systems without interfaces.
- Clinicians can view the Diagnostic ECG **regardless of status (such as "preliminary"),** when most EMRs only acquire an ECG image that has been finalized by a cardiologist.
- *PowerChart* provides for an enhanced analysis package such as automatic serial comparisons, dynamic morphological comparisons and dominant beat comparisons.

Cerner Professional License

Cerner Professional License grants clients the right to utilize design and configuration tools, including Cerner Bedrock™ and Reference Data Domain Sync (RDDS) where applicable. These services simplify and expedite the design, build and maintenance process throughout the lifecycle of a Cerner solution. Clients can reduce implementation time and eliminate variance by automating processes with Cerner Professional License.

Discern Explorer

Discern Explorer ® uses full-featured, fourth-generation programming language patterned after Structured Query Language (SQL) to maintain and extract data from both *Cerner Millennium®* and client-developed databases. All *Cerner Millennium* applications use *Discern Explorer* to select from, insert into, update into and delete from the

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Cerner Cardiovascular: PowerChart ECG

Millennium database. *Discern Explorer* can also be used to extract data to download to other applications. Individuals with little computer experience can use *Discern Explorer* to generate simple queries and reports, or computer professionals can use it to perform more complex and sophisticated programs.

Discern Expert

Discern Expert® is an event-driven, rules-based decision support capability. This sophisticated functionality is offered within a rules logic model and user interface design that simplifies the everyday use and management of critical decision support.

Availability

The solution is available as described.

Special Licensing Considerations

This solution requires a 3rd party software component (from Mortara), which is integrated into *Cerner Millennium*.

Software Prerequisites

The following *Cerner Millennium* solutions are required:

- *Clinical Data Repository* (PS-20570)
- *CareAware MultiMedia™ – DICOM* (MM-22270)
- *PowerOrders®* (PS-20576)

If implementing Stress and Holter workflow PowerNote™ (PS-22480) is required

System Resource Considerations

A technical and system engineer must assess the impact to the *Cerner Millennium* domains and hardware, based on the volume of ECG and number of facilities. An evaluation of the network components is recommended as well.

Technical Environment Requirements

Depending on the type of ECG cart, a WIN32 server may be required.

This solution supports DICOM ECG carts and non-DICOM ECG carts with optional ECG DICOM converter.

This solution supports DICOM enabled .pdf files for Stress and Holter reporting.

A hardware archive and related sublicensed software are required for storage of ECG clinical images with *CareAware MultiMedia*.

Related Solutions

The following Cerner software solutions significantly extend the functionality of *PowerChart ECG*:

- *PowerChart Cardiovascular* (CV-20486)
- *Emergency Department Care Management* (ER-20280)
- *INet Critical Care* (IC-20380)

Support Considerations

Cerner will be the primary organization for support. Cerner may involve Mortara if the problem is diagnosed to a Mortara developed function.

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

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Patient Accounting: Cerner Patient Accounting

Description

Cerner Patient Accounting is an offering within the Clinically Driven Revenue Cycle ™ solution that provides the foundation for financial management of an integrated delivery system (IDS). *Patient Accounting* fully integrates clinical data with the appropriate financial information to manage patient accounting across the entire continuum of care.

The Cerner® integrated system draws charge data from the clinical process to generate claims, invoices, and statements. As a result, the *Patient Accounting* solution gives the financial office the ability to view, manage, and assess patient accounts throughout the entire IDS. Management has the ability to examine and analyze accounts receivable (A/R) across the facilities that are licensed to use this solution via one A/R system. *Patient Accounting* includes the following components to support the business activities of an integrated delivery system's centralized business office:

- Claims Management
- Consolidated Billing
- Cash Management
- Account Management
- Collections Management
- Report Management
- Workflow Management
- Document Management
- EDI-Compliant Functionality
- Business Rules Logic

Client Benefits

- *Patient Accounting* improves cash flow management across the facilities that are licensed to use this solution:
- Clean claims are generated through the seamless integration of *Cerner Millennium®* clinical and financial data when Cerner clinical applications are installed.
- Electronic transmission of data facilitates improves turnaround times on claims and remittances and significantly reduces manual intervention, with licensing of the appropriate interface(s).
- Capturing detailed and accurate raw charges from clinical activity provides accurate line level detail in accounts receivable.
- Automated collection functions facilitate timely action on aged accounts.
- Satisfaction is improved for both users and patients, by having relevant demographic, clinical, and financial information available at any point in the service process.
- Consolidated billing allows patients to receive a single patient bill for an entire episode of care within the delivery system.
- Simple statements inform the guarantor of individual patient claims submitted with subsequent payments, and aging of accounts for all encounters within the delivery system.
- The central business office provides patients with one point of contact to address billing questions and issues.
- Better customer service results through easy access to pertinent documents such as letters, statements, claims, patient demographics, and

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Patient Accounting: Cerner Patient Accounting

insurance information in one account record location.

- Workflow management automates work queues, bringing assignments directly to the user in an online format, reducing paper reports, and improving work processes.
- Reports provide timely information for improved process performance and management of time, resources, and finances.
- The solution includes tools for automated business rules which reduce manual intervention, creates opportunities to improve process flow, and ensures consistency.
- The scheduling of tasks eliminates daily user intervention, ensures that tasks are performed, and optimizes system operations by running routine tasks during off-peak hours.
- The design of *Patient Accounting* optimizes system performance and enables the user to navigate rapidly and accurately through system applications.
- User-friendly graphical user interfaces (GUI) allow for more effective use of training time.
- Consolidated billing services translate into less mail handling with fewer bills and checks from patients.

Major Features

- The *Claims Management* component offers a variety of claims management options:
- Claims generation cycles are defined by the user and ensure timely submission of electronic or paper claims.
- Claims formatting tools provide the user with flexibility to model claims according to payer standards.
- The *Charge Grouping* tool provides the ability to group charges based on user-defined and payer rules.
- Claims generation allows for the production of on-demand claims, split billing, and balance billing.
- Claims submission to secondary and tertiary carriers can be automated, with licensing of the appropriate interface(s).
- *Consolidated Billing* features provide complete *Facility Billing, Guarantor Billing* and *Demand Billing* capabilities:
- *Facility Billing* enables the IDS to have one overall A/R across all facilities that are licensed to use this solution. Patients have a single bill for all of their encounters within the organization.
- *Demand Billing* is achieved through real-time availability of account history. This information can be used either for collecting payments at the point of service or for providing the patient with a summary of charges.
- The *Hold Bills* feature enables the business office to hold or suspend charges at the procedure, encounter, and account level and by guarantor, patient, or insurance carrier.
- The *Cash Management* component offers a variety of cash management and payment posting options:
- Daily receipts can be posted directly to patients' accounts and a deposit slip created to accompany the money to the bank at the end of the day.

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Patient Accounting: Cerner Patient Accounting

- Payments can be deposited and reported as monies received, then posted to the individual patient accounts at a later time.
- Payments can be distributed against the oldest balance or posted at an encounter or procedure level.
- Payments received through Electronic Data Interchange (EDI) can be automatically posted at the level of detail specified in the electronic transaction.
- *Account Management* component provides the following capabilities:
- Current patient account information is available throughout the facilities that are licensed to use this solution.
- Account inquiry within *Patient Accounting* is efficient and informative. Authorized personnel can inquire on a patient's account to ascertain the balance and the status of all charges.
- Account history includes all related activity, such as bills, statements, claims, payments, letters, and notes.
- Account level line-item detail gives an accurate and easy way to discover discrepancies and target issues.
- *Patient Accounting* provides complete *Collections Management* capabilities:
- Complete tracking of all collections cases established by the business office is provided. Open cases are automatically tracked for follow-up, with user-established, time-sensitive cues to prompt for the next collection action.
- *Billing & Accounts Receivable* also provides complete documentation capability and case history tracking, allowing for effective management of each individual case, including the ability for the collections staff to easily negotiate payment plans for each case as appropriate.
- Automated correspondence functionality facilitates the timely and consistent production of dunning reminders throughout the billing and collections cycle, as well as automatic update of the account history files. The business office can adapt these letters to meet both content and production needs.
- If a third-party collections agency is used, *Patient Accounting* provides the ability to automatically transmit the appropriate accounts and corresponding account information electronically based on predefined thresholds, with licensing of the appropriate interface(s).
- The *Report Management* component provides a complete library of standard reports that can be adapted to meet the needs of the integrated delivery system:
- Flexible reporting capabilities provide timely and accurate analysis of financial data.
- Clients can consolidate and view financial activity for individual facilities or across the facilities that are licensed to use this solution.
- The *Workflow Management* component improves business office productivity.
- Data-driven rules automatically route similar items to user queues.
- Users have assignments at their fingertips, rather than bulky paper reports.

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Patient Accounting: Cerner Patient Accounting

- The *Document Management* component provides a variety of options for the management of account documents:
- Users can add messages to claims, bills, and statements and can add comments to an account.
- Imaging technology allows for the storage and retrieval of account documentation, explanation of benefits (EOB), and patient registration information with licensing of the appropriate imaging technology applications.
- *EDI-Compliant Functionality* is supported:
- With licensing of the appropriate interface(s), claims can be electronically submitted using the ANSI X.12 837 standard.
- If the appropriate interface(s) are licensed, remittances can be received electronically using the ANSI X.12 835 standard. Functionality includes the ability to post payments and remarks at the level of detail received within the remittance, such as at the individual charge level.
- *Business Rules Logic* is automated, providing the user with effective processing tools:
- Editing and processing rules can be used to define incidents where a process fails to meet defined criteria and to send the process to a work queue for review.
- Automated rules reduce manual intervention by billing personnel.
- In addition to the features inherent within *Patient Accounting*, *Foundations* functionality is also included. *Foundations refer* to Cerner's definition of those common processes or tasks that are shared across clinical and administrative domains and applications, technical areas, and project or production tasks. *Foundations* is included in all major Cerner licensed software solutions and includes *Technical Components (Technical Environment Management, Security Management, User Management,* and so on), *Functional Components* (for example, *Person Management, Order Management,* and *Result Processing),* and *Operational Components (Operation/System Management, System Integration,* and so on). The majority of the componentry applies to all Cerner applications, though a few specific components may not be applicable to every solution line. Refer to the *Foundations* Solution Description for more information.

Cerner Millennium Integration Benefits

Benefits of using *Patient Accounting* in a Cerner *Millennium* environment include the following:

- Facility charge and reimbursement analysis can be performed, with licensing of additional Cerner systems in the various business unit areas.
- Hospital-based professional charges can be easily captured within Cerner departments.
- Centralized demographic update support for patient information results in patient demographic information and updates being immediately available to business office personnel, when the *Registration Management* (CP-20735) offering within Access Management is also licensed.
- Appropriate health plan information is provided when ordering, reducing charge entry and billing errors, when used with *PowerOrders®* (PS-20576) within PowerChart® and *Eligibility Management* (CP-20750) within Access Management.

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Patient Accounting: Cerner Patient Accounting

- Chart pulls by business office personnel can be eliminated with licensing of *Clinical Data Repository* (PS-20570) within PowerChart to provide online access to clinical information.
- Coding completion is immediately recognized with the integration of the coding and abstracting capabilities of *Health Information Management* (MR-20400) This results in the ability to submit claims in a more timely fashion and thus reduces A/R days.
- When using Patient Accounting as the facility-wide billing solution, your facility has direct access to relevant encounter information managed by the *PowerChart Office Management System* streamlining billing, collections, and follow-up for the physician office as a business unit within the IDS.

Cerner Professional License

Cerner Professional License grants clients the right to utilize design and configuration tools, including Cerner Bedrock™ and Reference Data Domain Sync (RDDS) where applicable. These services simplify and expedite the design, build and maintenance process throughout the lifecycle of a Cerner solution. Clients can reduce implementation time and eliminate variance by automating processes with Cerner Professional License.

Discern Explorer

Discern Explorer® uses full-featured, fourth-generation programming language patterned after Structured Query Language (SQL) to maintain and extract data from both *Cerner Millennium®* and client-developed databases. All *Cerner Millennium* applications use *Discern Explorer* to select from, insert into, update into and delete from the *Millennium* database. *Discern Explorer* can also be used to extract data to download to other applications. Individuals with little computer experience can use *Discern Explorer* to generate simple queries and reports, or computer professionals can use it to perform more complex and sophisticated programs.

Discern Expert

Discern Expert® is an event-driven, rules-based decision support capability. This sophisticated functionality is offered within a rules logic model and user interface design that simplifies the everyday use and management of critical decision support.

Availability

Currently available in *Cerner Millennium*

Technical Environment Requirements

Cerner also offers our solutions in a shared environment for certain markets, and these offerings require some degree of standardization and adherence to Cerner recommended workflows and content.

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this application: *Cerner Health Information Management* (MR-20400), *PowerOrders* (PS-20576), and *Revenue Manager - Min Chg* (TSEDI-RM-MIN), *Electronic Lock Box Processing* (IF-29207), *Accounts Receivable Refunds* (IF-29440).

Software Prerequisites

The following Cerner software solutions are required with *Cerner Patient Accounting*: *Registration Management* (CP-20735), *Electronic Remittance* (IF-29200), *Collections* (IF-29551 HL7, or IF-29552 Non HL7), *Statements Outbound* (IF-29297), *General Ledger* (IF-29306), *Electronic Healthcare Claims 837 Professional* (IF-29343), *Electronic Healthcare Claims 837 Institutional* (IF-29342), *External Claim Editor Status* (IF-29087), *State Reporting* (IF-29345),

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Patient Accounting: Cerner Patient Accounting

Contract Management Incoming and Outgoing (IF-29545), *Charges Incoming* (IF-29070).

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT). Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through our website at www.cerner.com.

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Women's Health: PowerChart Maternity™ - Ambulatory

Description

PowerChart Maternity™ - Ambulatory (WH-10220) is a component of *Cerner's PowerChart Maternity* offering. *PowerChart Maternity* collects and integrates all of the clinical information for both mother and baby - from diagnosis of pregnancy through the post-partum period – creating a lifetime electronic medical record.

PowerChart Maternity-Ambulatory (WH-10220) automates nursing and provider workflows and supports nursing and ambulatory care processes for scheduling management, and conducting initial, routine, and postpartum obstetrical visits.

Client Benefits

- Creates a *Single Source of Truth™* across the maternity care continuum, providing integration ambulatory clinic nurses, medical assistants and clinic primary providers need to deliver high quality care and reduce the risk of injury.
- Allows obstetrical primary providers, nurses and medical assistants to document and access real-time data at the point of care, from both the ambulatory and acute setting, enhancing clinical decision-making.
- Standardizes workflows for obstetrical primary providers, nurses and medical assistants, eliminating redundancy and reducing waste.
- Streamlines and automates paper processes, saving time and allowing for real time access to information.
- Provides evidence-based treatment plans based on professional practice guidelines, reducing risk and allowing the provider to tailor care to the appropriate time and situation, increasing the quality of care.
- Streamlines and automates paper processes, saving time and allowing for real-time access to this data.
- Includes all content needed to drive complete clinical documentation for care providers, including rules, reports, alerts and summaries.

Major Features

- Includes a customizable pregnancy summary that provides a quick overview of information relevant to the pregnancy. Weight tracking, laboratory results, pregnancy timeline, problems, OB exam documentation, fundal height graphs, and other key data points are aggregated and can be viewed in this summary.
- Automatically calculates estimated due date (EDD) and estimated gestational age (EGA) and simplifies EDD maintenance by trending information over time.
- Automates the care provider workflows for conducting initial obstetrical visits, including: identifying the patient, scheduling rooms, obtaining history, managing orders and relevant education, scheduling follow-up appointments, and collecting specimens.
- Automates the care provider workflows for conducting routine obstetrical visits, including: identifying the patient, scheduling rooms, reviewing and transcribing results, managing orders, identifying risks and relevant education, and scheduling follow-up appointments.
- Automates the care provider workflows for conducting post partum visits, including: identifying the patient, reviewing intake data and delivery details, performing the physical exam, managing orders, providing education, managing referrals, and closing the pregnancy.
- Automates schedule and provides a central message center giving care providers the ability

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Women's Health: PowerChart Maternity™ - Ambulatory

to initiate and respond to phone calls, facilitate messaging and manage results from a single location.

- Allows clinicians to easily copy data from the mother's record to the baby's record at any time and as many times as needed after birth.

Cerner Millennium Integration Benefits

Benefits of using *PowerChart Maternity* in the Cerner Millennium environment include the following:

- Real-time access to encounters, laboratory tests, medications and other clinical data is available at the clinicians' fingertips by allowing ambulatory primary providers to access an EMR that works in both the ambulatory and acute care settings.
- Relevant clinical information is made available wherever a woman is treated during the maternity process.
- Pertinent pregnancy information is accessible across all care venues, from the first ambulatory visit, through self care during the pregnancy to delivery and then through the education and discharge process, as a part of the patient's lifetime medical record.

Availability

Cerner Millennium Production Release 2007.18

Software Prerequisites

There are two versions of PowerChart Maternity – Ambulatory. For clients who are currently licensed for and/or licensing *Clinical Office with PowerNote* (PV-20230); PowerChart Maternity – Ambulatory (WH-10220A) will be licensed.

For clients without the Cerner Millennium ambulatory solution; PowerChart Maternity – Ambulatory (WH-10220) is licensed.

Related Solutions

PowerChart Maternity is optimally designed to cover the primary roles across all venues for the entire pregnancy. To maximize the benefits of *PowerChart Maternity Ambulatory*, we recommend clients license all complimentary roles/venues for the solution, including:

- *PowerChart Maternity – Acute Care* (WH-10410)

The following Cerner software solution(s) significantly extend the functionality of this solution:

- *FetaLink®* (WH-20110) is a maternal and fetal monitoring system that facilitates the flow of data from medical devices in a manner that supports display needs of clinicians in hospital and outpatient settings.
- In complex or high-risk pregnancies, *IQHealth®* provides the ability for patient and provider to communicate conveniently, sharing personal health record and applicable self-monitored information.
- With the utilization of *Image Distribution* (MM-22276) clinicians can view images from a single location, extending pertinent images to the point of care.

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through *www.cerner.com*.



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Open Port: Remittance Incoming

Description

Remittance Incoming (IF-29200) is a mandatory interface designed to support the transfer of electronic data to the *Cerner® Patient Accounting* solutions from a third-party system which provides for a receipt of remittance advice information from insurance payer organizations regarding the payment of Health Care Claims. This interface may be used for receipt of remittance advice from all government and commercial payer organizations.

Client Benefits

Automates payments from government and commercial payers

Reduces countless hours of data entry and reduces errors

Expedites remittance processing to improve cash flow

Major Features

Allows use of clearinghouse for a single source for all payer solutions

Increase efficiency and cost for payment processing

Eliminates postage and handling costs for processing remittances

Availability

Cerner Millennium® Release 2002, version 2002.01

Special Licensing Considerations

The *Remittance Incoming* license entitles only an outgoing connection to one foreign system

Additional fees for increased service hours may apply when custom scripting is required to meet mutually agreed-upon specifications. If *Remittance Incoming* is activated in a production environment lacking any scoped or specified functionality for any reason, additional fees for increased service hours may apply for remaining or enhanced functionality to be activated.

Software Prerequisites

The following solutions are required:

Cerner Patient Accounting (PF-20450) OR

Cerner Revenue Cycle Ambulatory (PV-20245) AND

Open Port Technical Protocol Channel license (IF-29560) OR

Open Engine Communication Service license (OE-22850)

One channel license fee is charged per foreign system. If multiple point to point connections (Cerner to multiple Foreign Systems) are required, additional channel licenses and professional service hours may be applied.

Related Solutions

The following *Cerner* software solution(s) significantly extend the functionality of this solution:

Electronic Claims Healthcare Claims Outgoing – Professional (IF-29343)

Electronic Claims Healthcare Claims Outgoing – Institutional (IF-29342)

Accounts Receivable to General Ledger Outgoing (IF-29306)

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Open Port: Remittance Incoming

State Reporting Outgoing (IF-29345)

Collections Incoming and Outgoing (IF-29551 or IF-29552)

Statements Outgoing (IF-29297)

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through www.cerner.com.

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Open Port: Accounts Receivable to General Ledger Outgoing

Description

Accounts Receivable to General Ledger Data Outgoing (IF-39306) is a mandatory interface designed to support the transfer of general ledger data from the Cerner® Patient Accounting Solution sub-ledger to a non-Cerner financial system.

Client Benefits

- Data is automatically transferred to a client's general ledger system.
- Account structures may be unique for a particular company.

Major Features

- A comma-separated .CVS file is formatted in batch mode via a background operations job which requires no manual intervention.
- The client is responsible for actually transmitting the file using FTP or some other means.
- Custom scripts can be written to meet the client's unique posting needs.
- General ledger alias tool has four sections which compose the account structure.
    - Company alias
    - Account unit alias
    - Account number
    - Sub-account number
- Flexible filtering and grouping of *Cerner Patient Accounting* sub-ledger data into the client's account structure

Availability

Cerner Millennium® Cumulative Production Update 2006.02

Software Prerequisites

The following solutions are required:

- *Cerner Patient Accounting* (PF-20450) OR
- *Cerner Revenue Cycle Ambulatory* (PV-20245) AND
- *Open Port Technical Protocol Channel* license (IF-29560) OR
- *Open Engine Communication Service* license (OE-22850)

  One channel license fee is charged per foreign system. If multiple point to point connections (Cerner to multiple Foreign Systems) are required, additional channel licenses and professional service hours may be applied.

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution:

Electronic Claims Healthcare Claims Outgoing – Professional (IF-29343)

Electronic Claims Healthcare Claims Outgoing – Institutional (IF-29342)

Remittance Incoming (IF-29200)

State Reporting Outgoing (IF-29345)

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Open Port: Accounts Receivable to General Ledger Outgoing

Collections Incoming and Outgoing (IF-29551 or IF-29552)

Statements Outgoing (IF-29297)

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through our website at www.cerner.com.

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OpenPort: Electronic Healthcare Claims Outgoing: Institutional

Description

Electronic Healthcare Claims Outgoing- Institutional is an interface designed to support the transfer of electronic data from the *Cerner Patient Accounting* solution to a third-party system. This interface provides for the transmission of healthcare claims to an insurance payer organization or clearinghouse and may be used for Institutional claims for all government and commercial payer organizations.

The claims interface is sold as a single line item – x12 HCFA 1450 institutional claims.

Client Benefits

- Improved cash flow due to decreased payment delays
- Increase the ability to produce "clean claims"
- HIPAA-compliant formats and data fields
- Enables a claim to be tracked throughout its life cycle from billing to payment

Major Features

- Improved efficiency with the billing process through automation and seamless integration
- Elimination of unnecessary data formatting
- Reduction in redundant data entry and increase in data validation
- Facilitates automated remittances

Availability

For *Cerner Patient Accounting*: *Cerner Millennium*® Release 2002, version 2002.01

Special Licensing Considerations

The *Electronic Healthcare Claims Outgoing- Institutional* license entitles only an outgoing connection to one foreign system.

Additional fees for increased service hours may apply when custom scripting is required to meet mutually agreed-upon specifications. If interface is activated in a production environment lacking any scoped or specified functionality for any reason, additional fees for increased service hours may apply for remaining or enhanced functionality to be activated.

Software Prerequisites

Cerner Patient Accounting (PF-20450) is required and either an Open Port Technical Protocol Channel license (IF-29560 through IF-29625) or an Open Engine Communication Service license (OE-22850 through OE-22890) are required.

One channel license fee is charged per foreign system. If multiple point to point connections (Cerner to multiple Foreign Systems) are required, additional channel licenses and professional service hours may be applied.

Communication Materials

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Open Port: Electronic Healthcare Claims Outgoing_Professional

Description

Electronic Healthcare Claims Outgoing- Professional (IF-29343) is a mandatory interface designed to support the transfer of electronic data from the *Cerner® Patient Accounting* solution to a third-party system. This interface provides for the transmission of healthcare claims to an insurance payer organization or clearinghouse and may be used for Professional claims for all government and commercial payer organizations.

The claims interface is sold as a single line item – x12 HCFA 1500 professional claims.

Client Benefits

- Improved cash flow due to decreased payment delays
- Increase the ability to produce "clean claims"
- HIPAA-compliant formats and data fields
- Enables a claim to be tracked throughout its life cycle from billing to payment

Major Features

- Improved efficiency with the billing process through automation and seamless integration
- Elimination of unnecessary data formatting
- Reduction in redundant data entry and increase in data validation
- Facilitates automated remittances

Availability

Cerner Millennium® Release 2002, version 2002.01

Special Licensing Considerations

The *Electronic Healthcare Claims Outgoing-Professional* license entitles only an outgoing connection to one foreign system.

Additional fees for increased service hours may apply when custom scripting is required to meet mutually agreed-upon specifications. If interface is activated in a production environment lacking any scoped or specified functionality for any reason, additional fees for increased service hours may apply for remaining or enhanced functionality to be activated.

Software Prerequisites

- *Cerner Patient Accounting* (PF-20450) OR
- *Cerner Revenue Cycle Ambulatory* (PV-20245) AND
- *Open Port Technical Protocol Channel* license (IF-29560) OR
- *Open Engine Communication Service* license (OE-22850)

One channel license fee is charged per foreign system. If multiple point to point connections (Cerner to multiple Foreign Systems) are required, additional channel licenses and professional service hours may be applied.

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Open Port: Electronic Healthcare Claims Outgoing_Professional

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution:

Accounts Receivable to General Ledger Outgoing (IF-29306)

Electronic Claims Healthcare Claims Outgoing – Institutional (IF-29342)

Remittance Incoming (IF-29200)

State Reporting Outgoing (IF-29345)

*Collections Incoming and Outgoing (*IF-29551 or IF-29552)

Statements Outgoing (IF-29297)

Communication Materials

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General Availability

Open Port

CERNER

Pyxis MEDSTATION Interface

Description

Pyxis MEDSTATION Interface is an optional pharmacy device interface that provides a communication link between the Pyxis pharmacy console and PharmNet's *Inpatient Pharmacy* (PH-20160), with the licensure of these solutions. (Pyxis uses a controller called Procar for the Pyxis MEDSTATION devices.)

This bidirectional interface supports transmission of pharmacy orders and medication profiles to the Pyxis console from PharmNet's *Inpatient Pharmacy* Also, the interface supports the transmission of charging transactions generated by dispensing events on Pyxis back to PharmNet.

New features have been added to this interface to provide the following functionality:

- Pass through ADT information - an HL7 ADT message can originate from a foreign registration system or can be generated by a Cerner patient management message and sent to the Pyxis system.
- Allergy trigger options:
  - Allergies are sent with each order. This option is a snapshot of the patient's allergies at the time the order is placed.
  - The allergy segment is included in the HL7 ADT message. This option requires the pass through ADT functionality mentioned above.
  - Allergy discrete triggers are sent at the person level. An HL7 message is sent with a Cerner defined trigger event when an allergy is added, modified, or deleted by a Cerner Millennium user. This message simulates an HL7 A60 trigger event. All other existing allergies are sent along with the allergy which has been changed.
- Formulary updates are sent to Pyxis in a real-time mode. When a new item is added, changed, or deleted, a message is sent to the Pyxis system.

Client Benefits

- Automated billing from the Pyxis MEDSTATION dispensing events results in both time and cost savings.
- Increases accuracy of the drug dispensing process
- Increases productivity and accountability of staff who dispense drugs
- Control of medication dispensing is extended beyond the pharmacy department
- Time savings for nursing and pharmacy personnel by eliminating the need to physically inventory narcotics

Major Features

- Pocket-load and unload transactions from the Pyxis MEDSTATION device is supported

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- With Departmental Materials Management, dispensing events from Pyxis MEDSTATION will adjust inventory quantities in PharmNet
- TCP/IP network protocol is included
- Real time processing is supported
- HL7 Universal Interface functionality and configurable options are supported
- Audit trail and exception reporting is included

Availability

For PharmNet Inpatient: Cerner Millennium, Release 2000, version 2000.01

Special Licensing Considerations

This solution is licensed on a "per channel" basis with support calculated per group of ten devices.

The *Pyxis MEDSTATION Interface* license entitles both incoming and outgoing connections.

Software Prerequisites

Inpatient Pharmacy (PH-20160) is required.

Technical Environment Requirements

Refer to the *Understanding HNA Millennium Technical and Support Requirements* document for information on the technical environment.

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this application:

Departmental Materials Management (PH-25200).

Communication Materials

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Transaction Services: Automated Messaging

Description

Automated Messaging is a Transaction Service that automatically contacts patients with important information from your organization via personalized phone delivery or e-mail notification. *Automated Messaging* detects answering machines and leaves a distinct message when a person cannot be reached directly by phone. *Automated Messaging* logs each call or message, offering a secure audit trail for communications

Client Benefits

- Enhances provider-patient relations by extending regular contact with patients regarding appointments, new patient information and account details.
- Increases revenue by reducing no-show appointments.
- Offers a more effective, consistent and lower cost messaging option when compared with traditional postcard reminders or phone calls.
- Service has capacity to grow as your business grows; no additional hardware is needed.
- Integrates with Cerner Access Management solutions to eliminate manual data re-entry.
- Automates the delivery of accurate and personalized patient messages.

Major Features

- Medical facility or clinic office phone number is promoted to the Caller ID of person receiving the reminder.
- Ability to notify patients of multiple same day appointments with one phone call.
- Multiple call schedules may be used to handle cancellations.
- Patients may opt out entirely, or choose to receive an email in place of a phone call.
- Messages are recorded using live voice talent.
- Patients confirm the appointment or indicate appointment needs to be rescheduled using the keys on their touch tone phone. The responses are captured and reportable.
- Standard message templates are available in English and Spanish. Other languages may be recorded for an additional fee.
- Reports may be sorted by provider, location, patient or status. Reports may be auto-distributed via printer or emailed to users.

Special Licensing Considerations

Automated Messaging is priced on a minimum volume transaction basis with a minimum five-year term. Minimum transaction and overages are invoiced on a monthly basis.

Software Prerequisites

- Client is required to have a license to one of the following:
  - CP-20740 Cerner Scheduling Management
  - CV-22100 Departmental Scheduling Management
  - RA-22100 Departmental Scheduling Management
  - SU-22100 Departmental Scheduling Management

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Transaction Services: Automated Messaging

  - IF-29035 Appointment Notifications Incoming
  - PV-20245 Cerner Revenue Cycle Ambulatory

- EDI Automated Messaging Incoming & Outgoing (IF-29413) is required.

Communication Materials

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CareNet: Advanced Care Documentation

Description

The Cerner® *Advanced Care Documentation* is a CareNet® offering designed to automate documentation related to care delivery within acute care areas of a hospital (i.e., medical surgical units). *Advanced Care Documentation* is an interdisciplinary suite of applications including: PowerForms, *CareCompass™* (CA-22700), Interactive View, I&O 2G, Advanced Graphing and Interdisciplinary Summary. Combined, these solutions manage the flow and presentation at the bedside, support care management and workflow processes across multiple disciplines, including respiratory therapy, and encourage timely decisions.

Advanced Care Documentation provides a **centralized location in the patient's chart for clinicians** to access activities, view patient data, document findings, update orders, and receive important notifications, such as new orders or new results. *Advanced Care Documentation* also serves as a launch pad for other activities as it relates to the **patient's condition. Additiaonlly**, *Advanced Care Documentation,* provides a mechanism for pertinent information to be shared across disciplines in a high-level summary available to the entire care team. With separate licensure of *CareAware® iBus™* as well as licensure to the applicable device interfaces, *Advanced Care Documentation* enhances workflow efficiencies by allowing the clinician to review clinical data from bedside medical devices and commit that **information to the patient's record. Bedside medical** device interfaces vary by location and therefore are licensed separately.

To automate and unify the workflow process across all venues of care, including Emergency, Surgery and Critical Care, the following solutions are required for additional licensure: *Emergency Department Care Management* (ER-20280), *Perioperative Nursing Care Management* (SU-22463), and *INet® Critical Care* (IC-20380).

Client Benefits

- Clinician efficiency is increased dramatically by automatically populating orders and result views. Additionally, clinicians can customize their individual views to match their workflow, thus eliminating manual steps and wasted time searching for the appropriate patient information.
- Critical decision-making is supported by real-time access to cross-disciplinary patient orders, results, and information, promoting optimum outcomes, and integrating care processes into one seamless flow.
- Improves patient care by making the electronic health record the single source of truth for patient information
- Streamlines the process of associating devices with a patient through plug-and-play connectivity
- When combined with the licensure of *CareAware iBus*, clinicians spend more time with the patient and less time doing data collection. Device data **can be defaulted into the patient's record** automatically to allow the clinician to chart device data with increased accuracy and ease of entry.
- Patient safety is increased when integrated with **Cerner's powerful CPOE and decision support** technologies.
- Care processes are streamlined by eliminating redundant data entry, and updating activities as a byproduct of documentation.
- Interdisciplinary communication is streamlined by providing a mechanism to easily capture pertinent information in a high level summary **making it easier for clinicians to "tell the story" of the patient's condition.**
- For respiratory, billing accuracy is improved. Charges can be created and sent at any point in

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CareNet: Advanced Care Documentation

the order process: at the time of ordering, upon receipt, upon collection, or when performed.

Major Features

- Provides dynamic customization of the view "on the fly" for the patient and the clinician.
- Dose/rate automatic conversions are supported for continuous IV infusions.
- Documentation on the Interactive View captures charges and updates appropriate activities.
- Orders placed for a patient are displayed.
- Clinicians control what data is displayed together at a given time.
- Documentation capabilities are improved, with plug-and-play connectivity to bedside medical devices.
- Supports embedded complex clinical calculations and IV drip calculations that are integrated into the clinical workflow.
- Clinicians have the ability to flag and view patient events in a filtered view within the interactive view.
- Provides chart level notifications from within the view.
- *CareCompass* is an innovative, interdisciplinary workflow solution that guides the collaborative care team in the organization, prioritization and planning of patient care - giving the right information at the right time.
- The *CareCompass* can be defined specifically for each type of user, making their *CareCompass* a view of all the pertinent patient information they need to provide the best care.
- Activity list creates a dynamic group of activities for the end user for either a single patient or multiple patients.
- Integration between I&O2G and Interactive View for IV titration documentation streamlines the clinician workflow at the bedside.
- The I&O2G is a record of a patient's fluid intake and output for a specified time period. Shift totals, daily totals and fluid balance are automatically accumulated as volumes are documented. The discrete amounts of each event can be viewed along with a graphical view of totals and fluid balances
- Continuous infusion volumes can be automatically calculated based on IV dose rates or last charted volume documentation
- Advanced Graphing allows clinicians to save pre-designed or customized graphs in their personal folders.
- Advanced Graphing allows clinicians to view discrete data in a graphical trended format.
- Allows clinicians to flag documented results, observations and other pertinent information for inclusion in a high-level interdisciplinary summary.
- Specifically for the respiratory therapist, Advanced Care Documentation:
- Provides order, result, and work assignment inquiry functions
- Enables workload statistics and reporting
- Allows departmental charting
- Calculates prospective workload based on treatments ordered

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CareNet: Advanced Care Documentation

- Makes work assignments using workload values calculated for patients
- Reports outcomes from respiratory care processes

Cerner Millennium Integration Benefits

Benefits of using *Advanced Care Documentation* in the *Cerner Millennium®* environment include the following:

- Seamless integration with the person's lifetime medical record. Complete information is available regardless of location, the information's system of origin, or how the data was first captured.
- Increased patient safety when integrated with the medication process (including licensures for *Medication Administration Record (MAR),* Point of Care solutions, *PowerOrders®,* PowerPlan™ and PharmNet® solutions.

Cerner Professional License

- Cerner Professional License grants clients the right to utilize design and configuration tools, including Cerner Bedrock™ and Reference Data Domain Sync (RDDS) where applicable. These services simplify and expedite the design, build and maintenance process throughout the lifecycle of a Cerner solution. Clients can reduce implementation time and eliminate variance by automating processes with Cerner Professional License

Availability

Cerner Millennium Release 2007, version 2007.01

Software Prerequisites

Clinical Data Repository (PS-20570), *Medication Administration Record (MAR)* (PS-22732), *PowerOrders* (PS-20576) and *CareCompass* (CA-22700) are required.

System Resource Considerations

Cerner® also offers our solutions in a shared environment for certain markets, and these offerings require some degree of standardization and adherence to Cerner recommended workflows and content.

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution:

- *CareAware®iBus* (CI-200800)
- Various Point of Care solutions, including *Point of Care Medication Administration* (PH-22780)
- *Inpatient Pharmacy* (PH-20160)

Communication Materials

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Cerner Cardiovascular: PowerChart ECG

Description

PowerChart® ECG is a major cardiovascular offering that provides a unique and comprehensive ability to receive, manage, display and report on ECG (12-lead, Stress, Holter) exams anywhere from within *PowerChart* and affiliated *Cerner Millennium®* solutions. This offering makes Cerner® the first company to provide full capabilities for the ECG from within the Electronic Medical Record.

Client Benefits

- Tighter integration between ECGs and the electronic medical record improve patient safety and allow for executable rules and content.
- Costly disparate ECG management systems are no longer needed – digital ECG and workflow activities are together in *PowerChart*.
- ECGs are available in *PowerChart* in a matter of seconds. Turnaround time for final reports and referral letters is reduced, improving patient throughput and cardiologist satisfaction.
- A full range of ECG viewing and measurement capabilities exist within *PowerChart*. The complete workflow is available, including ordering tests, interpretation, and completing the clinical report.
- The physician workflow is streamlined to help manage the worklist.

Major Features

The *PowerChart ECG* component includes communication integration and clinical worklist functionality that presents a consolidated view of ECG information, visually incorporating prior encounters, critical results and observations.

- Full fidelity ECG data can be viewed.
- The ECG can be measured and analyzed, and the presentation can be manipulated all within *PowerChart*.
- With storage, ECG images are stored.
- ECG images are distributed enterprise-wide.
- The specific care process needs for the ECG cardiology setting are managed.

Cerner Millennium Integration Benefits

Benefits of using *PowerChart ECG* in the *Cerner Millennium* environment include the following:

- Complete sharing of information among Cerner systems without interfaces.
- Clinicians can view the Diagnostic ECG **regardless of status (such as "preliminary")**, when most EMRs only acquire an ECG image that has been finalized by a cardiologist.
- *PowerChart* provides for an enhanced analysis package such as automatic serial comparisons, dynamic morphological comparisons and dominant beat comparisons.

Cerner Professional License

Cerner Professional License grants clients the right to utilize design and configuration tools, including Cerner Bedrock™ and Reference Data Domain Sync (RDDS) where applicable. These services simplify and expedite the design, build and maintenance process throughout the lifecycle of a Cerner solution. Clients can reduce implementation time and eliminate variance by automating processes with Cerner Professional License.

Discern Explorer

Discern Explorer ® uses full-featured, fourth-generation programming language patterned after Structured Query Language (SQL) to maintain and extract data from both *Cerner Millennium®* and client-developed databases. All *Cerner Millennium* applications use *Discern Explorer* to select from, insert into, update into and delete from the

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Cerner Cardiovascular: PowerChart ECG

Millennium database. *Discern Explorer* can also be used to extract data to download to other applications. Individuals with little computer experience can use *Discern Explorer* to generate simple queries and reports, or computer professionals can use it to perform more complex and sophisticated programs.

Discern Expert

Discern Expert® is an event-driven, rules-based decision support capability. This sophisticated functionality is offered within a rules logic model and user interface design that simplifies the everyday use and management of critical decision support.

Availability

The solution is available as described.

Special Licensing Considerations

This solution requires a 3rd party software component (from Mortara), which is integrated into *Cerner Millennium*.

Software Prerequisites

The following *Cerner Millennium* solutions are required:

- *Clinical Data Repository* (PS-20570)
- *CareAware MultiMedia™ – DICOM* (MM-22270)
- *PowerOrders*® (PS-20576)

If implementing Stress and Holter workflow PowerNote™ (PS-22480) is required

System Resource Considerations

A technical and system engineer must assess the impact to the *Cerner Millennium* domains and hardware, based on the volume of ECG and number of facilities. An evaluation of the network components is recommended as well.

Technical Environment Requirements

Depending on the type of ECG cart, a WIN32 server may be required.

This solution supports DICOM ECG carts and non-DICOM ECG carts with optional ECG DICOM converter.

This solution supports DICOM enabled .pdf files for Stress and Holter reporting.

A hardware archive and related sublicensed software are required for storage of ECG clinical images with *CareAware MultiMedia*.

Related Solutions

The following Cerner software solutions significantly extend the functionality of *PowerChart ECG*:

- *PowerChart Cardiovascular* (CV-20486)
- *Emergency Department Care Management* (ER-20280)
- *INet Critical Care* (IC-20380)

Support Considerations

Cerner will be the primary organization for support. Cerner may involve Mortara if the problem is diagnosed to a Mortara developed function.

Communication Materials

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Healthe Intent: St. John Sepsis agent

Description

Sepsis affects nearly 750,000 Americans annually resulting in a mortality rate of more than 28.6%. Each case of sepsis adds significant cost and days to hospital length of stay. Sepsis is consistently among the top three causes of death in the United States.

Sepsis progressively manifests in two stages. The initial stage known as systemic inflammatory response syndrome (SIRS) which when combined with organ dysfunction in the presence of infection leads to sepsis.

The *St. John Sepsis* agent (CE-10300-PKG) continuously monitors key clinical indicators and attempts to recognize a potentially septic pattern. The data collected is limited to a single *Cerner Millennium®* domain. This data is extracted by the *Chart Search™* (CE-10200-PKG) crawler, which is then logically analyzed by the sepsis agent for identification of potential risk. As the agent finds the risk for sepsis, an alert is sent to *Cerner Millennium®*.

Users are notified of the risk for sepsis for the given patient using *Discern Notify*. The *Discern Notify* alerting can be configured to ensure the correct clinicians and/or teams are notified as early as possible.

Client Benefits

- Increase the number of survivors by enabling early recognition of patients at risk for sepsis
- Avoid burden on your system, personnel with this cloud-based service
- Algorithm is always up to date with the latest evidence and recommendations

Major Features

- A proven algorithm made available with little implementation work.
- The threshold values for the algorithm can be adjusted for each domain to reduce false positives.
- The cloud service model provides real-time services improvements with minimal impact to systems and client personnel resources.

Availability

Cerner Millennium® 2007.19 or above.

Software Prerequisites

- *Chart Search™* (CE-10200-PKG) is required.

Communication Materials

Cerner provides comprehensive user documentation for its services in the form of online Help and web-based end-to-end reference material.

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Healthe Intent: Chart Search

Description

Chart Search (CE-10200-PKG) enables clinicians to perform searches of both structured and unstructured data for certain clinical elements in the Cerner Millennium® patient chart. Clinicians can search using phrases and/or clinical terms across text documents and discrete results including laboratory results and vital signs in an individual patient's chart.

Chart Search (CE-10200-PKG) enables a clinician to quickly view all relevant documents related to a search term; for example: "Heart Disease" would display documents that mention "Heart Disease", "Arrhythmia", "CHF", "Angina", etc. The clinician can search for multiple terms or concepts with a single query.

Chart Search (CE-10200-PKG) provides a time-delayed index to a subset of the patient's medical record. The delay is based on configuration and time to process. The user can easily find the date and time of the most recently indexed clinical activity.

The datasets listed below are currently indexed as part of *Chart Search* (CE-10200-PKG).

- Text Only Documents
  - Clinical notes
  - Diagnostic reports
  - Pathology reports
- Discrete Lab Values
  - Vital signs
  - Laboratory results
  - Measurements

Chart Search (CE-10200-PKG) **does not currently index** other information such as:

- Non-textual information such as scanned documents, images and forms
- Problem list, allergy profile, or medication profile
- Orders, order sets, or prescriptions
- Microbiology, I&O, or procedures
- Encounters, financial data, or billing diagnoses

The following clinical concepts are recognized and included in the search:

- Diseases
- Symptoms
- Medications
- Common Procedures

Client Benefits

- Delivered via an *MPage*, *Chart Search* (CE-10200-PKG) is easily accessible and integrated into clinical workflows. Limited training is required for clinician adoption.
- Using the cloud service subscription model, *Chart Search* (CE-10200-PKG) does not require major client operational support nor generate significant load on existing hardware.

Major Features

- Search of a patient's Cerner Millennium® electronic medical chart.
- Document titles and snippets provide a quick summary of results.

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Healthe Intent: Chart Search

- Smart ranking promotes the most relevant documents to the top of summary.
- Document viewer allows a more in-depth view of a cached version of the data.
- Facets allow refinement of search results by attributes such as author, location, medication, document type, or time.
- The cloud service model provides real-time services improvements with minimal impact to systems and client personnel resources.

Availability

Cerner *Millennium*® 2007.19 or above.

Software Prerequisites

- *Clinical Data Repository* (PS-20570) is required.
- *MPages Development Toolkit* (PS-22700) or *MPages Runtime License* (PS-22760) is required.

Communication Materials

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Transaction Services: Cerner Eligibility and Benefits Verification

Description

Cerner Eligibility and Benefits Verification is a Transaction Service that provides real-time patient verification of eligibility and benefit information. *Cerner Eligibility and Benefits Verification* offers access to Medicaid, Medicare, and commercial payers. Eligibility inquiries may be performed individually or in batch.

The Cerner® enrollment team coordinates the entire enrollment process for all providers. The enrollment team monitors status and responses from providers, payers and other trading partners and follows up by phone, email or fax, if needed, until enrollment is complete.

Client Benefits

- Minimizes claim denials, increasing revenue for your organization.
- Decreases the amount of direct patient billing and opportunity for bad debt while reducing outstanding balances.
- Reduces days within the payment cycle, improving cash flow.
- Streamlines patient processing, improving the efficiency of the revenue cycle.
- Automated eligibility checking provides faster verification than by phone, saving administrative time and reducing labor costs.
- Enhances patient satisfaction by reducing the delivery of services that are unknowingly not covered by insurance.
- Improves staff satisfaction when compared with manual eligibility checking by phone.
- Optimizes cash flow through the opportunity to collect patient payment prior to services being rendered.
- Includes *Cerner Address Validation*

Major Features

- Provides co-pay and deductible information for patient.
- Supports real-time or batch processing of eligibility verification.
- Supports requests with multiple service types.
- Enhanced EDI includes normalized responses, payer downtime awareness, transaction caching with master person index, response filtering, and cascading search criteria, alerts, encounter based billing.
- Alerts include Medicare Replacement Plan information.

Special Licensing Considerations

Cerner Eligibility and Benefits Verification requires a minimum monthly volume using a per provider or transaction basis for a multi-year term. Minimum transactions and overages are invoiced on a monthly basis.

Notice:

- Cerner Corporation (Cerner) is a non-exclusive licensee of the United States Postal Service® (USPS®), and is allowed to incorporate the Address Matching System (AMS) of the USPS® as part of the Cerner software (software).
- The price of the software is not established, controlled, or approved by the USPS®. All payment related to this software shall be made payable to Cerner.

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Transaction Services: Cerner Eligibility and Benefits Verification

- This advertising is neither approved nor endorsed by the USPS®.
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Availability

The service is available with *Cerner Millennium®* 2007.19.09, 2010.01.04, or 2010.02.09.

Software Prerequisites

- *Cerner Registration Management* (CP-20735)

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Transaction Service: Cerner Address Verification powered by SearchAmerica

Description

Cerner Address Verification powered by SearchAmerica is a Transaction Service that goes beyond simply validating a residential address. *Cerner Address Verification powered by SearchAmerica* uses multiple data sources to determine where a patient actually lives.

Client Benefits

If patient demographics are not captured correctly on the front-end, the bad or missing information flows through the organization resulting in returned letters, statements, invoices, billing rejections, and ultimately increases bad debt.

- The service enables pre-registration and registration end users to have accurate person demographics within seconds.
- Increases staff efficiency by reducing the number of key strokes and time required to enter person address demographics.
- Enables clients to increase person address accuracy at the point of registration or scheduling.
- Improves client communications for appointment reminders, patient statements, bills, collections activities, or other mail correspondence.
- Reduces the amount of returned mail.
- The cost-effective service is integrated with Cerner® software.

Major Features

Verify and corrects a person's demographic information including:

  - Name
  - Address
  - Social Security Number
  - Date of Birth
- Visual indicator that person's addresses have been verified.
- Ability to view the previous response returned by the service.
- Ability to update multiple address types from a single response.

Cerner Millennium Integration Benefits

Benefits of using *Cerner Address Verification powered by SearchAmerica* in a *Cerner Millennium®* environment include the following:

- Real-time updates of persons' addresses are directly available to all departments, clinics, billing and home care agencies licensing a Cerner system.

Availability

The solution is available as described.

Software Prerequisites

The following are required with *Cerner Address Verification powered by SearchAmerica*: *Cerner Registration Management* (CP-20735)

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT). Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through our website at www.cerner.com.

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PowerInsight: PowerInsight Explorer

Description

PowerInsight® Explorer leverages the technology of BusinessObjects, a proven industry leader, to deliver meaningful data to stakeholders within an organization. With *PowerInsight Explorer* organizations have the ability to drag and drop predefined objects within BusinessObjects to create a report. In addition, organizations can utilize the library of existing report templates to deliver immediate data to end users. Reports can be pushed to a Web site for viewing by an entire clinical community and scheduled to execute off hours or at set intervals. *PowerInsight Explorer* reports can contain advanced graphics and charting capabilities that may be converted to a number of different file formats, including Excel and PDF.

Client Benefits

- Identify variations between current and targeted outcome performance
- Use clinical parameters to identify specific types of patients in the database
- Analyze outcomes and cause/effect relationships
- Data can be made securely available to all authorized users with access to the network, including via the Intranet
- Limit information viewable on any report based on the role of the end user
- Measure efficiency based upon timely action by clinical staff
- Admissions, discharges and transfers can be analyzed to determine how efficiently patients are moved in and out of the healthcare facilities
- Track physician resource usage variation
- A complete listing of reports can be found on the *PowerInsight Explorer* Reference pages

Major Features

- Web-based reporting screens
- Queries on in-house patients are run on a near real-time basis
- Easy-to-read, yet sophisticated, graphical user interface
- Business calculations are predefined; additional calculations can be user-defined
- Menu-driven reports
- Allows executive management to compare diverse clinical departments by filtering the appropriate information
- Ability to analyze operations across multiple venues
- Quick return on investment and short implementation timelines
- Structured report templates that can be utilized out of the box
- Ability to do ad hoc queries with easy to use drag and drop objects
- Leverages existing *Cerner Millennium®* database knowledge for ad hoc queries
- Stoplight coding and charting capabilities in robust front end tool
- Web viewing of reports
- Supports structured query language (SQL) reporting

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PowerInsight: PowerInsight Explorer

- Supports reporting against a *Cerner Millennium* domain. Does not support or license consolidated enterprise reporting across multiple Millennium domains.

Availability

Cerner Millennium® Release 2005.02

Special Licensing Considerations

A standby or standby equivalent database is highly recommended for *PowerInsight Explorer*.

Software Prerequisites

- *SAP BusinessObjects Runtime license for PowerInsight* (PI-20701)

Related Solutions

The following Cerner® software solution(s) extend the functionality of *PowerInsight Explorer* and are closely related:

- *Business Objects Expanded Use Upgrade* (PI-20754)
- In addition to the functionality highlighted in the *PowerInsight Explorer* Solution Description, the following functionality is also available by our *PowerInsight Enterprise Data Warehouse* (PI-20617) solution. Please see the *Enterprise Data Warehouse* solution description for a more complete listing of functionality:
    - Enterprise wide reporting across multiple Millennium domains
    - Support for non-Cerner interfaces

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through www.cerner.com.

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Lighthouse: Falls Prevention

Description

Cerner® has developed an offering addressing the need to prevent falls.

Supported with initiatives published by institutes such as the Institute for Healthcare Improvement (IHI), The Joint Commission (TJC) and Centers for Medicare and Medicaid Services (CMS), *Lighthouse: Falls Prevention* helps hospitals eliminate a key cause of patient injury, mortality and cost.

Millennium Lighthouse® provides tools, process maps, reference data, actionable content, reporting and training materials to healthcare facilities potentially save millions of dollars per year by preventing falls.

Millennium Lighthouse helps organizations leverage existing investments to measure and improve outcomes. Improving performance through data analysis enables organizations to not only improve care quality and regulatory compliance, but also continually reap the benefits of cost savings each year.

By driving toward evidence-based practice (EBP), organizations will begin seeing clinical, operational and financial benefits in 12-14 weeks. EBP is internationally acclaimed as the gold standard for delivering the highest quality care. An essential component of the Forces of Magnetism, EBP characterizes nursing excellence in Magnet organizations. Transforming the nursing work environment to promote and support EBP is an essential process for hospitals embarking on the Magnet journey.

Client Benefits

- Leverage technology and data to improve outcomes
- Achieve speed to value on current efforts
- Improve patient safety, care quality and approaches
- Increase revenues and reduce costs
- Use resources more effectively to improve outcomes
- Identify patients at risk for falls and provide consistent, cost-effective treatment
- Achieve and sustain performance improvement

Major Features

- Professional services, including localized adoption, ongoing monitoring and on-site project checkups
- Perform annual *Lighthouse* Health Checks, by enabling automated reports in the client environment
- *Lighthouse* methodology
- Training materials
- Process Models and visual framework depicting how work is performed from the perspectives of role, venue and condition
- *Executable Knowledge*™ and reference data
- System provides tools to automatically screen patients upon admission and addresses for risk or falls, and rules automatically order assessment

Availability

Cerner Millennium® 2007

Special Licensing Considerations

- Cerner Professional License grants clients the right to utilize design and configuration tools,

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Lighthouse: Falls Prevention

including Cerner Bedrock™ and Reference Data Domain Sync (RDDS) where applicable. These services simplify and expedite the design, build and maintenance process throughout the lifecycle of a Cerner solution. Clients can reduce implementation time and eliminate variance by automating processes with Cerner Professional License.

Software Prerequisites

- *PowerInsight® Enterprise Data Warehouse* (PI-20617) or *PowerInsight Explorer* (PI-20611) or *SAP BusinessObjects License for Lighthouse* (LH-20658)
- *Clinical Data Repository* (PS-20570)
- *Advanced Care Documentation* (CA-22346)
- *PowerOrders®* (PS-20576)
- *PowerPlan™* (CA-20344)
- *MPages Runtime™* (PS-22760) or *MPages Dev Kit* (PS-22700)

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through www.cerner.com.

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Lighthouse: Delirium

Description

Cerner® has developed an offering addressing the need to prevent and manage delirium.

Supported with initiatives published by institutes such as the Institute for Healthcare Improvement (IHI), The Joint Commission (TJC) and Centers for Medicare and Medicaid Services (CMS), *Lighthouse: Delirium* helps hospitals eliminate a key cause of patient injury, mortality and cost.

Millennium Lighthouse® provides tools, process maps, reference data, actionable content, reporting and training materials to help healthcare facilities potentially save millions of dollars per year by preventing and managing delirium.

Millennium Lighthouse helps organizations leverage existing investments to measure and improve outcomes. Improving performance through data analysis enables organizations to not only improve care quality and regulatory compliance, but also continually reap the benefits of cost savings each year.

By driving toward knowledge-based medicine, organizations will begin seeing clinical, operational and financial benefits in 12-14 weeks.

Client Benefits

- Leverage technology and data to improve outcomes
- Achieve speed to value on current efforts and approaches
- Improve patient safety and care quality
- Increase revenues and reduce costs
- Use resources more effectively to improve outcomes
- Access the latest evidence at the point of care via order sets, plans of care, alerts and notifications, and documentation
- Identify patients at risk and provide consistent, cost-effective treatment
- Achieve and sustain performance improvement

Major Features

- Professional services, including localized adoption, ongoing monitoring and on-site project checkups
- *Lighthouse* methodology
- Training materials
- Process Models and visual framework depicting how work is performed from the perspectives of role, venue and condition
- Related *Executable Knowledge™* and reference data
- Analytic capabilities, including dashboards and reports providing access to solution-specific data as well as financial, condition, enterprise-wide and even third party data
- Perform annual *Lighthouse* Health Checks, by enabling automated reports in the client environment

Availability

Cerner Millennium® 2007

Software Prerequisites

- *PowerInsight® Enterprise Data Warehouse* (PI-20617) or *PowerInsight Explorer* (PI-20611) or *SAP Business Objects License for Lighthouse* (LH-20658)

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Lighthouse: Delirium

- *MPages® Runtime License (PS-22760)* or *MPages Dev Kit* (PS-22700)
- *PowerPlan™* (CA-20344)
- *PowerOrders®* (PS-20576)
- *Advanced Care Documentation* (CA-22346)
- *Clinical Data Repository* (PS-20570)

Related Solutions

- *CPOE*
- *Surgical Management®* (SU-20310)
- *Medication Administration Record* (PS-22732)

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through www.cerner.com.

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Lighthouse: Restraints

Description

Cerner® has developed an offering which addresses restraints.

Supported with initiatives published by institutes such as the Joint Commission (JC) and Centers for Medicare and Medicaid Services (CMS), *Lighthouse: Restraints* helps hospitals increase their effectiveness and efficiency in successfully treating patient restraints.

Millennium Lighthouse® provides tools, process maps, reference data, actionable content, reporting and training materials to help healthcare facilities potentially save millions of dollars per year by early recognition of patients at risk of restraints and recommending alternative therapies. Interdisciplinary assessment, monitoring, and treatment methodology facilitates efficient restraint management providing consistency across venues.

Millennium Lighthouse helps organizations leverage existing investments to measure and improve outcomes. Improving performance through data analysis enables organizations to not only improve care quality and regulatory compliance, but eliminates the incumbency of manual extraction of data.

By driving toward knowledge-based medicine, organizations will begin seeing clinical, operational and financial benefits in 12-14 weeks.

Client Benefits

- Leverage technology and data to improve outcomes
- Achieve speed to value on current efforts and approaches
- Improve patient safety and care quality
- Use resources more effectively to improve outcomes
- Access the latest evidence at the point of care via plans of care, alerts and notifications, and documentation
- Identify patients at risk and provide consistent, cost-effective treatment
- Achieve and sustain performance improvement

Major Features

- Professional services, including localized adoption, ongoing monitoring and on-site project checkups
- Lighthouse methodology
- Training materials
- Process Models and visual framework depicting how work is performed from the perspectives of role, venue and condition
- **Related Executable Knowledge™ and reference data**
- Health Facts, including benchmark data
- Analytic capabilities, including dashboards, reports and ad hoc queries providing access to solution-specific data as well as financial, condition, enterprise-wide and even third party data
- Perform annual Lighthouse Health Checks, by enabling automated reports in the client environment

Availability

Cerner Millennium® 2007.17

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Lighthouse: Restraints

Special Licensing Considerations

- Professional services, including localized adoption, ongoing monitoring and on-site checkups – fixed fee
- Lighthouse toolkit, including process models, reports/templates, Executable Knowledge, reference data, training materials, and implementation methodology – contracted for a minimum five-year subscription
- Reporting services – included
- Health Facts, including benchmarking data and analytics – free for contributors

Software Prerequisites

- PowerChart Clinical Data Repository (PS-20570)
- Advanced Care Documentation (CA-22346)
- *PowerOrders*® (PS-20576)
- *PowerPlan*™ (CA-20344)
- PowerInsight Enterprise Data Warehouse (PI-20617) or PowerInsight Explorer (PI-20611) or Business Objects Application Specific License (LH-20658)
- MPages™ Runtime (PS-22760) or MPages Full Use (PS-22700)

We *recommend* client be on 2007.18 code to take advantage of dynamic groups and dynamic plans functionality.

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through www.cerner.com.

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Lighthouse: Pressure Ulcer Prevention

Description

Cerner® has developed an offering addressing the need to prevent pressure ulcers.

Supported with initiatives published by institutes such as the Institute for Healthcare Improvement (IHI), The Joint Commission (TJC) and Centers for Medicare and Medicaid Services (CMS), *Lighthouse: Pressure Ulcers* helps hospitals eliminate a key cause of patient injury, mortality and cost.

Millennium Lighthouse® provides tools, process maps, reference data, actionable content, reporting and materials to support development of training documents by healthcare facilities to potentially save millions of dollars per year by preventing pressure ulcers.

Millennium Lighthouse helps organizations leverage existing investments to measure and improve outcomes. Improving performance through data analysis enables organizations to not only improve care quality and regulatory compliance, but also continually reap the benefits of cost savings each year.

By driving toward evidence-based practice (EBP), organizations will begin seeing clinical, operational and financial benefits in 12-14 weeks. EBP is internationally acclaimed as the gold standard for delivering the highest quality care. An essential component of the Forces of Magnetism, EBP characterizes nursing excellence in Magnet organizations. Transforming the nursing work environment to promote and support EBP is an essential process for hospitals embarking on the Magnet journey.

Client Benefits

- Leverage technology and data to improve outcomes
- Achieve speed to value on current efforts
- Improve patient safety, care quality and approaches
- Increase revenues and reduce costs
- Use resources more effectively to improve outcomes
- Access the latest evidence at the point of care via order sets, plans of care, alerts and notifications, and documentation
- Identify patients at risk for pressure ulcers and provide consistent, cost-effective treatment
- Achieve and sustain performance improvement

Major Features

- Professional services, including localized adoption, ongoing monitoring and on-site project checkups
- Perform annual Lighthouse Health Checks, by enabling automated reports in the client environment
- Lighthouse methodology
- Training materials
- Process Models and visual framework depicting how work is performed from the perspectives of role, venue and condition
- **Executable Knowledge™ and reference data**
- Analytic capabilities, including dashboards and reports providing access to solution-specific data as well as financial, condition, enterprise-wide and even third party data
- System provides tools to automatically screen patients upon admission and addressed for risk

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Lighthouse: Pressure Ulcer Prevention

or pressure ulcers, and rules automatically order assessment

- Nurses are able to capture the description and stage of any existing pressure ulcer in electronic documentation, identify whether it was present on admission or hospital acquired, and adjust nursing care orders appropriately
- Materials including reference links to evidence-based nursing are available to support development of patient education specific to pressure ulcer prevention

Availability

Cerner Millennium® 2007

Software Prerequisites

- *PowerInsight® Enterprise Data Warehouse* (PI-20617) or *PowerInsight Explorer* (PI-20611) *or SAPBusiness Objects License for Lighthouse* (LH-20658)
- *PowerChart® Clinical Data Repository* (PS-20570)
- *PowerOrders®* (PS-20576)
- *Advanced Care Documentation* (CA-20344)
- *PowerPlan™* (CA-20344)
- *MPages™ Runtime* (PS-22760) or *MPages Full Use* (PS-22700)
- *iView with Dynamic Groups*

Related Solutions

- *CPOE*
- *Surgical Management*(SU-20310)
- *Medication Administration Record* (PS-22732)

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through www.cerner.com.

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Lighthouse: Glycemic Control

Description

Cerner® has developed an offering which addresses the management of diabetes and inpatient glycemic control.

Supported with initiatives published by institutes such as the Institute for Healthcare Improvement (IHI), The Joint Commission (JC) and Centers for Medicare and Medicaid Services (CMS), *Lighthouse: Glycemic Control* helps hospitals increase their effectiveness and efficiency in diagnosing and controlling hypoglycemia and hyperglycemia.

Millennium Lighthouse® provides tools, process maps, reference data, actionable content, reporting and training materials to help healthcare facilities potentially save millions of dollars per year with decreased complications associated with hypoglycemia and hyperglycemia through early detection, intervention and treatment.

Millennium Lighthouse helps organizations leverage existing investments to measure and improve outcomes. Improving performance through data analysis enables organizations to not only improve care quality and regulatory compliance, but also continually reap the benefits of cost savings each year.

By driving toward knowledge-based medicine, organizations will begin seeing clinical, operational and financial benefits in 12-14 weeks.

Client Benefits

- Leverage technology and data to improve outcomes
- Achieve speed to value on current efforts and approaches
- Improve patient safety and care quality
- Increase revenues and reduce costs
- Use resources more effectively to improve outcomes
- Access the latest evidence at the point of care via order sets, plans of care, alerts and notifications, and documentation
- Identify patients at risk and provide consistent, cost-effective treatment
- Achieve and sustain performance improvement

Major Features

- Professional services, including localized adoption, ongoing monitoring and on-site project checkups
- *Lighthouse* methodology
- Training materials
- Process Models and visual framework depicting how work is performed from the perspectives of role, venue and condition
- Related *Executable Knowledge*™ and reference data
- Analytic capabilities, including dashboards, reports and ad hoc queries providing access to solution-specific data as well as financial, condition, enterprise-wide and even third party data
- Perform annual *Lighthouse* Health Checks, by enabling automated reports in the client environment

Availability

Cerner Millennium® 2007

Special Licensing Considerations

- Professional services, including localized adoption, ongoing monitoring and on-site checkups – fixed fee



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Lighthouse: Glycemic Control

- *Lighthouse* toolkit, including process models, reports/templates, *Executable Knowledge*, reference data, training materials, and implementation methodology
- Reporting services – included

Software Prerequisites

- *PowerInsight® Enterprise Data Warehouse (PI-20617) or PowerInsight Explorer (PI-20611) or SAP BusinessObjects License for Lighthouse (LH-20658)*
- *Clinical Data Repository (PS-20570)*
- *Advanced Care Documentation (CA-22346)*
- *PowerOrders® (PS-20576)*
- *PowerPlan™ (CA-20344)*
- *MPages Runtime™ (PS-22760) or MPages Full Use (PS-22700)*

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through www.cerner.com.

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Lighthouse: Sepsis

Description

Cerner® has developed an offering to meet the needs of accelerating an accurate diagnosis and treatment of sepsis.

Supported with initiatives published by institutes such as the Institute for Healthcare Improvement (IHI), The Joint Commission (JC) and Centers for Medicare and Medicaid Services (CMS), *Millennium Lighthouse® Sepsis* helps hospitals strive to eliminate a preventable cause of patient morbidity, mortality, and expense.

Millennium Lighthouse provides tools, process maps, reference data, actionable content, reporting and training materials to help healthcare facilities potentially save millions of dollars per year by facilitating an accurate diagnosis of sepsis with commensurate treatment plans.

Lighthouse helps organizations leverage existing investments to measure and improve outcomes. Improving performance through data analysis enables organizations to not only improve care quality and regulatory compliance, but also continually reap the benefits of cost savings each year.

By driving toward knowledge-based medicine, organizations will begin seeing clinical, operational and financial benefits in 12-14 weeks.

Client Benefits

- Leverage technology and data to improve outcomes
- Achieve speed to value on current efforts and approaches
- Improve patient safety and care quality
- Increase revenues and reduce costs
- Use resources more effectively to improve outcomes
- Access the latest evidence at the point of care via order sets, plans of care, alerts and notifications, and documentation
- Identify patients at risk and provide consistent, cost-effective treatment
- Achieve and sustain performance improvement

Major Features

- Professional services, including localized adoption, ongoing monitoring and on-site project checkups
- *Lighthouse* methodology
- Training materials
- Process Models and visual framework depicting how work is performed from the perspectives of role, venue and condition
- Related *Executable Knowledge*™ and reference data
- Analytic capabilities, including dashboards, reports and ad hoc queries providing access to solution-specific data as well as financial, condition, enterprise-wide and even third party data
- Perform annual *Lighthouse* Health Checks, by enabling automated reports in the client environment

Availability

Cerner Millennium® 2007

Special Licensing Considerations

- Cerner Professional License grants clients the right to utilize design and configuration tools, including Cerner **Bedrock™ and Reference Data** Domain Sync (RDDS) where applicable. These

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Lighthouse: Sepsis

services simplify and expedite the design, build and maintenance process throughout the lifecycle of a Cerner solution. Clients can reduce implementation time and eliminate variance by automating processes with Cerner Professional License.

Software Prerequisites

- *PowerInsight® Enterprise Data Warehouse* (PI-20617) or *PowerInsight Explorer* (PI-20611) or *SAP Business Objects License for Lighthouse* (LH-20658)
- *PowerChart® Clinical Data Repository* (PS-20570)
- *Advanced Care Documentation* (CA-22346)
- *PowerOrders®* (PS-20576)
- *PowerPlan™* (CA-20344)
- MPages® Runtime (PS-22760) or MPages Full Use (PS-22700)

Related Solutions

- *CPOE*
- *Medication Administration Record (MAR)* (PS-22732)

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through www.cerner.com.

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Lighthouse: Emergent Stroke and TIA w/ eSubmission

Description

Cerner® has developed an offering addressing the need to quickly identify, treat and manage patients with signs and symptoms of Emergent Stroke or TIA.

Supported with initiatives published by institutes such as the American Stroke Association, The Joint Commission (TJC) and Centers for Medicare and Medicaid Services (CMS), *Lighthouse: Emergent Stroke and TIA w/ eSubmission* equips clinicians with the tools required to create a standardized approach to promote early detection and effective management of Stroke & TIA in the Emergency Room setting.

Millennium Lighthouse® provides tools, process maps, reference data, actionable content, reporting and training materials to help healthcare facilities potentially save lives and reducing morbidity of emergent stroke patients.

Millennium Lighthouse helps organizations leverage existing investments to measure and improve outcomes. Improving performance through data analysis enables organizations to not only improve care quality and regulatory compliance, but also continually reap the benefits of cost savings each year.

The included *Automated Measure Submission* process combines key solutions that integrate the necessary end-to-end steps allowing medical facilities to proactively monitor, manage and electronically submit clinical measures.

By driving toward knowledge-based medicine, organizations will begin seeing clinical, operational and financial benefits in 12-14 weeks.

Client Benefits

- Leverage technology and data to improve outcomes
- Achieve speed to value on current efforts and approaches
- Improve patient safety and care quality
- Increase revenues and reduce costs
- Use resources more effectively to improve outcomes
- Access the latest evidence at the point of care via order sets, plans of care, alerts and notifications, and documentation
- Identify patients at risk and provide consistent, cost-effective treatment
- Achieve and sustain performance improvement
- e-submission of quality measures to outside agencies- CMS
- Real-time clinical quality views for clinicians
- Real-time views for quality abstractors
- Dashboards, Benchmark and Trending Reports

Major Features

- Professional services, including localized adoption, ongoing monitoring and on-site project checkups
- Lighthouse methodology
- Training materials
- Process Models and visual framework depicting how work is performed from the perspectives of role, venue and condition
- **Related Executable Knowledge™ and reference** data

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Lighthouse: Emergent Stroke and TIA w/ eSubmission

- Analytic capabilities, including dashboards and reports providing access to solution-specific data as well as financial, condition, enterprise-wide and even third party data
- Perform annual Lighthouse Health Checks, by enabling automated reports in the client environment
- Automates clinical data capture to support quality initiatives
- Enables direct EHR submission to The Joint Commission, CMS, and/or other agencies (if applicable)

Availability

Cerner Millennium® 2007

Special Licensing Considerations

- This includes transmission fees for the Centers for Medicare and Medicaid Services. It does not include fees for retransmission of data or audits.

Software Prerequisites

- *PowerInsight® Enterprise Data Warehouse* (PI-20617) or *PowerInsight Explorer* (PI-20611) or *SAP Business Objects License for Lighthouse* (LH-20658)
- *MPages® Runtime License* (PS-22760) or *MPages Development Kit* (PS-22700)
  - *Clinical Data Repository (PS-20570)*
  - *PowerOrders®* (PS-20576)
  - *Advanced Care Documentation (CA-22346)*
  - *PowerPlan™* (CA-20344)
  - *Inpatient Pharmacy (PH-20160)*
  - *Emergency Department Triage and Tracking (ER-20275)*
  - *Radiology Management (RA-20135)*

Related Solutions

- *CPOE*
- *Medication Administration Record (PS-22732)*

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through www.cerner.com.

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Lighthouse: Anticoagulation Management

Description

Cerner® has developed an offering addressing the complexities of managing anticoagulation in the inpatient setting.

Supported with initiatives published by institutes such as the Institute for Healthcare Improvement (IHI), The Joint Commission (TJC) and Centers for Medicare and Medicaid Services (CMS), *Lighthouse: Anticoagulation Management* helps hospitals eliminate a key cause of patient injury, mortality and cost.

Millennium Lighthouse® provides tools, process maps, reference data, actionable content, reporting and training materials to help healthcare facilities potentially save millions of dollars per year by preventing anticoagulation.

Millennium Lighthouse helps organizations leverage existing investments to measure and improve outcomes. Improving performance through data analysis enables organizations to not only improve care quality and regulatory compliance, but also continually reap the benefits of cost savings each year.

By driving toward knowledge-based medicine, organizations will begin seeing clinical, operational and financial benefits in 12-14 weeks.

Client Benefits

- Leverage technology and data to improve outcomes
- Achieve speed to value on current efforts and approaches
- Improve patient safety and care quality
- Increase revenues and reduce costs
- Use resources more effectively to improve outcomes
- Access the latest evidence at the point of care via order sets, plans of care, alerts and notifications, and documentation
- Identify patients at risk and provide consistent, cost-effective treatment

Major Features

- Professional services, including localized adoption, ongoing monitoring and on-site project checkups
- *Lighthouse* methodology
- Training materials
- Process Models and visual framework depicting how work is performed from the perspectives of role, venue and condition
- Related *Executable Knowledge™* and reference data
- Analytic capabilities, including dashboards and reports providing access to solution-specific data as well as financial, condition, enterprise-wide and even third party data
- Perform annual *Lighthouse* Health Checks, by enabling automated reports in the client environment

Availability

Cerner Millennium® 2007

Special Licensing Considerations

- Professional services, including localized adoption, ongoing monitoring and on-site checkups – fixed fee

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Lighthouse: Anticoagulation Management

- *Lighthouse* toolkit, including process models, reports/templates, *Executable Knowledge*, reference data, training materials, and implementation methodology
- Reporting services – included
- Lighthouse solutions are built using Millennium tools and where there are not enterprise licenses for the organization, the organization will have access to the content based on the scope of agreement for the Lighthouse solution.

Software Prerequisites

- *PowerInsight® Enterprise Data Warehouse* (PI-20617) or *PowerInsight Explorer* (PI-20611) or *SAP Business Objects License for Lighthouse* (LH-20658)
- *MPages® Runtime License* (PS-22760) or *MPages Dev Kit* (PS-22700)
- *Clinical Data Repository* (PS-20570)
- *Care Documentation* (PS-22719)
- *PowerOrders®* (PS-20576)
- *Inpatient Pharmacy* (PH-20160)
- *General Laboratory* (PA-20070) or Interfaced Lab System

Related Solutions

- *CPOE*
- *Surgical Management®* (SU-20310)
- *Medication Administration Record* (PS-22732)

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through www.cerner.com.



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Lighthouse: Activity Intolerance – Impaired Mobility

Description

Cerner® has developed an offering which addresses Activity Intolerance and Impaired Mobility.

Early ambulation of hospitalized patients can reduce overall hospital length of stay and staff resources without increasing the risk of adverse outcomes. Supported with initiatives published by institutes such as the Institute for Healthcare Improvement (IHI), The Joint Commission (JC) and Centers for Medicare and Medicaid Services (CMS), *Lighthouse: Activity Intolerance – Impaired Mobility* helps hospitals eliminate a key cause of patient injury, mortality and cost.

Millennium Lighthouse® provides tools, process maps, reference data, actionable content, reporting and materials which can be used to support training in the transformation to toward evidence-based practice. This can to help healthcare facilities potentially save millions of dollars per year by managing activities related to early mobilization and subsequent increase in activity.

Millennium Lighthouse helps organizations leverage existing investments to measure and improve outcomes. Improving performance through data analysis enables organizations to not only improve care quality and regulatory compliance, but also continually reap the benefits of cost savings each year.

By driving toward evidence-based practice (EBP), organizations will begin seeing clinical, operational and financial benefits in 12-14 weeks. EBP is internationally acclaimed as the gold standard for delivering the highest quality care. An essential component of the Forces of Magnetism, EBP characterizes nursing excellence in Magnet organizations. Transforming the nursing work environment to promote and support EBP is an essential process for hospitals embarking on the Magnet journey.

Client Benefits

- Leverage technology and data to improve outcomes
- Achieve speed to value on current efforts and approaches
- Improve patient safety and care quality
- Increase revenues and reduce costs
- Use resources more effectively to improve outcomes
- Identify patients at risk and provide consistent, cost-effective treatment
- Achieve and sustain performance improvement

Major Features

- Embeds best -practice evidence, protocols and regulatory guidelines within the workflow process as actionable knowledge
- Professional services, including localized adoption, ongoing monitoring and on-site project checkups
- *Lighthouse* methodology
- Training materials
- Process Models and visual framework depicting how work is performed from the perspectives of role, venue and condition
- Related *Executable Knowledge*™ and reference data
- Analytic capabilities, including dashboards and reports providing access to solution-specific data as well as financial, condition, enterprise-wide and even third party data
- Perform annual *Lighthouse* Health Checks, by enabling automated reports in the client environment

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Lighthouse: Activity Intolerance – Impaired Mobility

Availability

Cerner Millennium® 2007

Software Prerequisites

- *Clinical Data Repository* (PS-20570)
- *PowerPlan™* (CA-20344)
- *PowerOrders®* (PS=20576)
- *Advanced Care Documentation* (CA-22346)
- *PowerInsight® Enterprise Data Warehouse* (PI-20617) or *PowerInsight Explorer* (PI-20611) or *SAP Business Objects License for Lighthouse* (PI-20658)
- *MPages® Runtime* (PS-22760) or *MPages Full Use* (PS-22700)

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

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PowerInsight: SAP BusinessObjects Expanded Use Upgrade

Description

Business Objects Expanded Use Upgrade is an expansion of the *PowerInsight® Data Warehouse* license that allows client creation of new SAP BusinessObjects Universes that access their *PowerInsight Data Warehouse*. With the Expanded Use Upgrade, clients can incorporate new external data they have loaded into the warehouse or create new measures. *Business Objects Expanded Use Upgrade* is also an expansion of the *PowerInsight Explorer* license that allows client creation of new SAP BusinessObjects universes. Used with either solution clients can incorporate additional data elements contained in the database.

All elements created still must be contained in the *PowerInsight Data Warehouse* or *Cerner Millennium®* database and the reports created must continue to access the information in the context of the Cerner-supplied data elements.

Client Benefits

- Measures can be created to meet client specific calculation needs.
- Clients can create elements that allow easier creation of reports that meet their unique needs.

Major Features

- Clients can create new SAP BusinessObjects Universes.
- Client created tables are named with a prefix to easily determine which tables are client created and which are Cerner® created.
- Includes Run Time licenses and 5 named user licenses for BusinessObjects Designer.

"Net" Affiliations

Access Management, CareNet®, Cerner Cardiovascular, Cerner Critical Care, FirstNet®, Health Facts, Health Information Management, Cerner Network, PathNet®, PharmNet®, PowerChart®, PowerChart Office®, PowerChart Oncology, PowerInsight®, Patient Accounting, RadNet®, Supply Chain, SurgiNet®, and Workforce Management.

Availability

Cerner Millennium Release 2005.02

Special Licensing Considerations

PowerInsight BusinessObjects runtime bundles are priced on a per license basis to include one server with four CPUs.

System Resource Considerations

Client created elements may require additional hardware to support more complex queries and measure creation.

For standards relating to new tables in the *Cerner Millennium* database, refer to UCern https://www.ucern.com/docs/DOC-51121

Software Prerequisites

- *PowerInsight Data Warehouse* (PI-20617) or *PowerInsight Explorer* (PI-20611) is required.
- PI-20701 *SAP BusinessObjects Runtime License for PowerInsight* is required.

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

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General Availability

Multi-system Option

Departmental Clinical Supply Chain

Description

Departmental Clinical Supply Chain is a supporting financial and operational solution that captures the use of supplies at the point of care and acts as a trigger for a series of events that make up the supply chain process. This product supports inventory management, facilitates departmental charging, and provides management reporting for these functions.

In addition, the Clinical Supply Chain solution provides a powerful tool to analyze supply usage, support product standardization, and ultimately lead to overall cost reductions

Its unique features automate the processes of materials management, allowing departments to plan, more effectively manage, maintain optimal inventories, contain costs, and capture departmental charges. Integrated with Cerner's clinical applications, the solution connects the clinical event to the supply chain , allowing for the management of perpetual inventories and automated replenishment events.

This system supports PAR management, using optional hand held devices, for inventories not designated as perpetual.

Various interfaces are supported, including General Ledger Inventory Transfers, Requisition Outbound, and Requisition Fill Inbound.

Client Benefits

- When implemented with a Cerner clinical application, products consumed are captured during the patient care documentation conversation. A perpetual inventory becomes possible where previously labor would be prohibitive.
- Coupling the clinical event to the supply consumed allows you to evaluate not only what products are being used by how they are being used. This makes standardization and utilization projects efficient to complete.
- Because the clinical and logistic information is maintained together, better reporting is possible. Immediate access is provided to information needed to support strategic logistics. For example, administrators can generate reports based on the length of time an item has remained in inventory. If the product is underutilized, the organization can sell it to another hospital or can return it to the vendor. This practice translates to savings for the organization, as previously untapped supplies can generate revenue or credit toward a new purchase.
- Inventories are automatically updated based on item fill and return documentation, with the licensing of this product for the applicable departments, such as cardiology, emergency, laboratory, pharmacy, radiology and surgery.

Major Features

- Electronic requisitions provide replenishment automation for both stock and nonstock items.

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- System-generated recommended order lists streamline the requisitioning process, including use of thresholds that may be adjusted as the seasons, corresponding caseloads, or other metrics change.
- Inventory control provides the ability to adjust stock levels; transfer and return stock; loan or borrow stock; and manufacture items, trays, sets, and packs.
- Summary or detail reports of departmental transactions can be generated.
- A wide variety of departmental materials management inquiries and reports can be generated, such as ABC, usage, and stock status reports.
- Robust item, manufacturer, and supplies upload tools speed system implementation.
- *Patient Supply Record* ™ – data repository that stores supply usage by patient with cost and charge information.
- Automated replenishment capabilities based on clinical usage
- On-line requisitioning and product catalog for manual ordering and status tracking
- Mobile device support for inventory management and hand-held requisitioning
- Automated charge generation based on supply utilization

Patient Supply Record

The *Patient Supply Record* ™ supports the following capabilities:

- Patient Demographic Data—Age, gender, allergies (optional), history
- Supply and Medication Database —ability to store UPN, manufacturer numbers, cost and sourcing data
- Clinical Information—Diagnosis codes, procedure codes, severity of illness, complications, co-morbidities (from medical records coding)
- Procedure Event Details—Procedure performed, date, time, place and participating clinicians (available from *Point of Use* (PO-20202)and/ or clinical systems

"Net" Affiliations

CVNet, PharmNet, PathNet and SurgiNet

Cerner Millennium Integration Benefits

Benefits of using *Departmental Clinical Supply Chain* in a Cerner Millennium environment include the following:

- The ability to update inventory levels based on events occurring within Cerner clinical systems
- The ability to capture supply cost for procedures, providing accurate cost analysis information
- Increased productivity and data integrity resulting from a consolidated item database and a reduced dependency on interfaces to external systems

Availability

SurgiNet and PharmNet: Currently available

PathNet and CVNet: Planned for future availability in Cerner Millennium.

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Special Licensing Considerations

Par Level Management requires barcode devices, label printers, and related communication infrastructure licensed separately.

Customization of standard interfaces is available on a time and materials basis.

EDI Communications requires OpenEngine or other third-party mapping software.

Software Prerequisites

Software prerequisites vary based on the department(s) for which this product is licensed.

For cardiology, *Cardiac Invasive Lab Management* (CV-20480) or *CVNet for Cardiac Surgery* (CV-20484) is required.

For the pharmacy department, either *Inpatient Pharmacy* (PH-20160) or *Outpatient Pharmacy* (PH-20170) is required.

For the laboratory department, either *General Laboratory* (PA-20070), or *Microbiology* (PA-20075), or *Anatomic Pathology* (PA-20080), or *Blood Bank Transfusion* (PA-20090) is required.

For the radiology department, *Radiology Management – Cerner Millennium* (RA-20135)

For the surgery/ anesthesia department, *Surgical Management* (SU-20310) is required.

Technical Environment Requirements

Refer to the *Understanding HNA Millennium Technical and Support Requirements* document for information about the technical environment.

Communication Materials

Cerner provides comprehensive user documentation for its software products in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides product-specific brochures, flyers and other communications in print. This information may also be accessed through our website at www.cerner.com or through our sales organization at (816) 201-0054.

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General Availability

Open Port

CERNER

Purchase Order Outbound (850)

Description

Purchase Order Outbound (ANSI X.12 EDI 850) is a supporting supply chain interface offering that provides the ability to transmit purchase orders outbound from the relevant Cerner Supply Chain solution to external materials vendors or pharmaceutical wholesalers/distributors.

With the transmission of purchase orders outbound on this interface, the user will not be required to fax, phone, or mail purchase orders. Instead, the user will transmit purchase orders electronically as a by-product of confirming the purchase order for submission.

The interface can be used in conjunction with other EDI supply chain interfaces or as a standalone solution to automate the purchasing process.

Client Benefits

- No manual transmission of purchase orders to vendors or wholesalers
- Eliminate human error involved with the transmission of purchase orders to vendors or wholesalers
- Minimize or eliminate the need to print purchase orders
- Reduced the overall overhead cost of the purchasing operation by streamlining the communication process

Major Features

- Automated seamless transmission of purchase orders outbound to vendors and/or wholesalers
- Configurable based on vendor/wholesaler requirements
- Increased accuracy in the purchasing process
- Audit trail available for transmission analysis
- Transmission error resolution support

"Net" Affiliations

Supply Chain, PharmNet

Availability

Cerner Millennium 2007 (was released in Nov 2006)

Software Prerequisites

PO-20201 Clinical Supply Chain or *PH-25201 Departmental Clinical Supply Chain for Pharmacy* is required.

Technical Environment Requirements

Refer to the *Understanding Cerner Millennium Technical and Support Requirements* document for information about the technical environment.

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Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution: *IF-29522 Purchase Order Acknowledgment Inbound (855), IF-29526 Electronic Invoice Inbound (810), and IF-29524 Advanced Shipment Notice Inbound (856)* interfaces.

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

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General Availability

Open Port

CERNER

Purchase Order Acknowledgment Inbound (855)

Description

Purchase Order Acknowledgment Inbound (ANSI X.12 EDI 855) is a supporting supply chain interface offering that provides the ability to accept purchase order acknowledgments inbound from external materials vendors or pharmaceutical wholesalers/distributors.

With the acceptance of purchase order acknowledgments the user will have real-time access to price discrepancies and other relative purchase order data communicated from the external vendor or wholesaler/distributor system.

The interface can be used in conjunction with other EDI supply chain interfaces or as a standalone solution to automate the purchasing process.

Client Benefits

- No manual communication required to resolve vendor/internal system discrepancies
- Eliminate human error involved in the purchase order discrepancy management process
- Streamline the purchase order correction process
- Ensure database accuracy by completing updates based on purchase order comments received
- Reduced overall overhead cost of the purchasing process by streamlining the purchasing process

Major Features

- The EDI ANSI X.12 transaction set 855 is received.
- Automated acceptance of vendor or wholesaler/distributor purchase order comments
- Configurable based on vendor/wholesaler requirements
- Audit trail available for analysis
- Transmission error resolution support

"Net" Affiliations

Supply Chain, PharmNet

Availability

Cerner Millennium 2007 (was released Nov 2006)

Software Prerequisites

PO-20201 Clinical Supply Chain or *PH-25201 Departmental Clinical Supply Chain for Pharmacy* is required.

Technical Environment Requirements

Refer to the *Understanding Cerner Millennium Technical and Support Requirements* document for information about the technical environment.

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Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution: *IF-29562 Purchase Order Outbound (850), IF-29526 Electronic Invoice Inbound (810), and IF-29524 Advanced Shipment Notice Inbound (856)* interfaces.

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through our website at www.cerner.com or through our sales organization at (816) 201-0054.

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General Availability

Open Port

CERNER

Advanced Shipment Notice Inbound (856)

Description

Advanced Shipment Notice Inbound (ANSI X.12 EDI 856) is a supporting supply chain interface offering that provides the ability to receive electronic receipts for materials inbound from external materials vendors or pharmaceutical wholesalers/distributors.

With the acceptance of receipt information inbound the user will not have to manually update receipt quantities, rather just verify shipment information for accuracy and commit the receipt to the system.

The interface can be used in conjunction with other EDI supply chain interfaces or as a standalone solution to automate the purchasing process.

Client Benefits

- No manual entry of receipt information, all information is populated automatically based on vendor or wholesaler/distributor transmission
- Increased accuracy in the receiving process by reducing human interaction with the system Increased vendor communication
- Reduced overall overhead cost of the receiving process by streamlining communication

Major Features

- Automated inbound receipt of shipment information from external materials vendors and/or pharmaceutical wholesalers/distributors
- Configurable based on vendor/wholesaler requirements
- Audit trail available for transmission analysis
- Transmission error resolution support

"Net" Affiliations

Supply Chain, PharmNet

Availability

Cerner Millennium 2007 (was released Nov 2006)

Software Prerequisites

PO-20201 Clinical Supply Chain or *PH-25201 Departmental Clinical Supply Chain for Pharmacy* is required.

Technical Environment Requirements

Refer to the *Understanding Cerner Millennium Technical and Support Requirements* document for information about the technical environment.

Related Solutions

The following Cerner software solutions significantly extend the functionality of this solution: *IF-29562 Purchase Order Outbound (850), IF-29522 Purchase Order Acknowledgment Inbound (855), and IF-29526 Electronic Invoice Inbound (810)* interfaces.

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Communication Materials

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General Availability

Open Port

CERNER

Electronic Invoice Inbound (810)

Description

Electronic Invoice Inbound (ANSI X.12 EDI 810) is a supporting supply chain interface offering that provides the ability to receive electronic invoices for received orders inbound from materials vendors and/or pharmaceutical wholesalers/distributors.

With the acceptance of electronic invoice information inbound, the user will not be required to manually recreate invoices in the system, but rather confirm data that is automatically populated.

The interface can be used in conjunction with other EDI supply chain interfaces or as a standalone solution to automate the purchasing process.

Client Benefits

- No manual entry of invoice information
- Eliminate human error of invoice entry into the system
- Minimize or eliminate the need to print invoice information internally
- Increased efficiency in the identification and resolution of invoice price discrepancy information, creating a more accurate accounting workflow and increased database accuracy
- Reduced overall overhead cost of the receiving process by streamlining the communication process

Major Features

- Automated seamless acceptance of electronic invoices inbound from materials vendors and/or pharmaceutical wholesalers/distributors
- Configurable based on vendor/wholesaler requirements
- Increased accuracy in the invoicing process
- Audit trail available for transmission analysis
- Transmission error resolution support

"Net" Affiliations

Supply Chain, PharmNet

Availability

Cerner Millennium 2007 (was released in Nov 2006)

Software Prerequisites

PO-20201 Clinical Supply Chain or *PH-25201 Departmental Clinical Supply Chain for Pharmacy* is required.

Technical Environment Requirements

Refer to the *Understanding Cerner Millennium Technical and Support Requirements* document for information about the technical environment.

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Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution: *IF-20562 Purchase Order Outbound (850), IF-29522 Purchase Order Acknowledgment Inbound (855), and IF-29524 Advanced Shipment Notice Inbound (856)* interfaces.

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

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RadNet: Mammography Management

Description

Mammography Management is a supporting *RadNet®* solution designed for managing the follow-up and tracking of mammography procedures. Facilities performing mammography are monitored by various regulatory agencies to ensure that quality standards are maintained. Some of the regulatory agency requirements include monitoring of equipment, quality assurance, patient communication, legal accountability, responsiveness to patient needs, HCFA/Medicare reporting, and support of a referral base. *Mammography Management* assists clients in achieving compliance with MQSA. The five major areas addressed by the solution include the following:

- Data collection – clinical, procedural and pathological
- Generation of result findings to physicians and patients
- Generation of patient recall notices
- Documentation of follow-up
- Quality assurance/Statistical Reports

Client Benefits

- Capture crucial medical data to optimize patient outcomes:
    - Risk factors
    - Pregnancy information
    - Hormone usage
    - Clinical findings
- Fulfills ACR and FDA regulatory reporting requirements
- Provides full integration, which eliminates the need for interfaces and improving accuracy
- Incorporates full pathology and imaging data, which enhances the workflow
- Increases referral and patient satisfaction
- Provides automatic letter generation, which saves time

Major Features

- The patient follow-up process is automated through the generation of Laymen's term and reminder letters.
- A variety of outcomes analysis reports are available, both standard reports as well as ad hoc queries using the *Discern Analytics* viewer included within *Radiology Management* (RA-20135).
- The mammography follow-up process is integrated into the daily radiology workflow.
- Data collection capabilities are provided to the radiologist, transcriptionist and technologist.
- The facility has the ability to customize patient and physician letters.
- The patient questionnaire is available electronically and can print for patient review and updates.
- An online breast diagram is available for technologist annotation, using standardized symbols for common markings and freehand drawing capabilities, and is available for review by the interpreting physician.

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RadNet: Mammography Management

Cerner Professional License

Cerner® Professional License grants clients the right to utilize design and configuration tools, including Cerner Bedrock™ and Reference Data Domain Sync (RDDS) where applicable. These services simplify and expedite the design, build and maintenance process throughout the lifecycle of a Cerner solution. Clients can reduce implementation time and eliminate variance by automating processes with Cerner Professional License.

Availability

HNA Millennium, Revision HNAM.2001.01

Software Prerequisites

Radiology Management (RA-20135) is required.

Technical Environment Requirements

Refer to www.cerner.com and navigate to Home→ Solutions & Services→ Cerner Technologies for information about the technical environment.

Cerner also offers our solutions in a shared environment for certain markets, and these offerings require some degree of standardization and adherence to Cerner recommended workflows and content.

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through our website at www.cerner.com.

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iAware™: CareAware Infusion Management

Description

CareAware Infusion Management (IW-20450) automates the infusion process by providing comprehensive views to manage and document infusion information. The information flows seamlessly from the infusion pump for viewing and documentation in the patient's electronic medical record (EMR) as a byproduct of device and order association. The solution can show both a graphical and relational representation of the impact of an infusion on other clinical parameters (eg: vital signs and hemodynamic indictors). The single-patient, nursing unit and pharmacy view of associated infusion enable pro-active management utilizing more informed decisions.

The following gadgets (views of specific information) are included with this offering:

- *Patient to Device to Order Association gadget*
- *Individual Patient Infusion Status gadget*
- *Unit View of Infusion Status gadget*
- *Infusion Documentation gadget*
- *Infusion Graphing gadget*
- *Pharmacy Infusion Status gadget*

Client Benefits

- Clinician efficiency is created by providing a centralized view of infusions
- Uses various visual methods (graphical versus tabular),
- Easier to see relational aspects of data
- Removes the nurse as integrator of devices and data
- Proactive volume status and alerting directly from *Cerner CareAware iBus* and infusion pump.
- Improves quality of care by improving clinical decision-making
- Provides visibility to all critical patient information at the point of care
- Allows for comprehensive infusion documentation; document rate, dose rate and volume in one step
- Near-real time graphical display of infusion data directly from device; correlate with near-real time display of physiologic data
- Quick return on investment
- Short implementation timeframe provides speed to value

Major Features

- Personalized display for rapid review and timely clinical decision making
- Allows healthcare organizations to leverage their existing electronic medical record investment
- Provides immediate access to view cohesive patient information
- Displays real-time trends and relational aspects of verified and unverified data
- Intuitive interface design results in minimal training time investment
- By using the *Patient to Device Association* gadget, users are able to associate a specific patient precisely to a particular infusion order and infusion device, as well as other devices such as a cardiac monitor.

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iAware™: CareAware Infusion Management

- The *Unit View of Infusion Status* gadget provides a comprehensive, filterable view of all patients on a unit and their infusions. The following details are presented for each patient:
  - Infusion volume status
  - Patient identifiers
  - Device status
  - Order information and modifications
  - Time remaining for infusion
  - Pharmacy dispense status
- The *Patient Infusion Status* gadget will provide a patient specific view of associated infusions and their status. This view can be utilized in correlation with other patient specific information. The following details are presented for each patient:
  - Infusion Volume Status
  - Alarms and alerts from the infusion pumps
  - Device Status
  - Order information and modifications
  - Time remaining for infusions
  - Pharmacy dispense status
- The *Infusion Graphing* gadget will give users a comprehensive real time trended graphical view of hemodynamic and physiologic data in correlation with infusion data.
- The *Infusion Documentation* gadget allows for contextual viewing and documentation of device data in relation to infusions
- The *Pharmacy Infusion Status* gadget displays a filterable list of all patients for the facility and their infusion status – enabling planning and prioritization of dispensing.

Cerner Professional License

Cerner Professional License grants clients the right to utilize design and configuration tools, including Cerner Bedrock™ and Reference Data Domain Sync (RDDS) where applicable. These services simplify and expedite the design, build and maintenance process throughout the lifecycle of a Cerner solution. Clients can reduce implementation time and eliminate variance by automating processes with Cerner Professional License.

Availability

Cerner CareAware iAware™ Release 2.1

Special Licensing Considerations

Will require Cerner Certified Infusion Pumps with Smart Technology

Will require *CareAware iBus*™

Software Prerequisites

CareAware iBus™ *for POC Medication Administration* (CI-201000)

and

CareAware iAware Platform (IW-20200)

For *Cerner Millennium*® clients the following requirements apply:

Cerner Millennium Release 2007.19 or greater is required as a minimum version to run the *Infusion*

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iAware™: CareAware Infusion Management

Management gadgets. All other gadgets will require the *Cerner Millennium* release of 2007.08 or greater.

The following software and resulting data must be deployed in order to support the related gadget:

- *Patient Data*:
  Dose Weight and Actual Weight must be documented in *iView* via *INet Critical Care* (IC-20380) or *INet* (IC-20389) within Critical Care areas or *Advanced Care Documentation* (CA-22346) or *Care Documentation (PS-22719)* for non-Critical Care areas.

- *Allergies*:
  Millennium Allergies via *INet Critical Care* (IC-20380) or *INet* (IC-20389) or HL7 based allergies via *ADTs/Demographics Incoming* (IF-29010) or *Clinical Data Repository* (PS-20570).

- *Infusion Graphing & Infusion Documentation:*
  Requires usage of *iView*, Orders and eMAR via *INet Critical Care* (IC-20380) *or INet* (IC-20389) or *Inpatient Pharmacy* (PH-20160), *Clinical Data Repository* (PS-20570), *Medication Administration Record (MAR)* (PS-22732) and *Advanced Care Documentation* (CA-22346).

- *Pharmacy Infusion Status*:
  Requires use of *Inpatient Pharmacy* (PH-20160)

For non-*Cerner Millennium* clients (clients wanting to view information from a non-Cerner EMR):

Licensure of the *CareAware iAware Adapter* (IW-20400) is required in order to view data from a foreign electronic medical record.

System Resource Considerations

The CPU, memory, and disk requirements for *CareAware Infusion Management* (IW-20450) are measured in terms of the number of beds, the number of gadgets, the number of interactive users, time interval for automatic refresh and the data acquisition resources required.

For an *Always On* deployment, the recommended display requirements for the *CareAware iAware for Critical Care* (IW-20100A) application are a 24 inch monitor with a resolution of 1920 x 1200.

Minimum display requirements are 22 inch monitors with a resolution of 1680 x 1050.

For deployment leveraging the personalization capability, the recommended display requirement is a 14 inch monitor with a resolution of 1280 x 1024 (with an aspect ratio of 4:3) or a resolution of 1440 x 900 (with an aspect ratio of 16:10).

Related Solution

The following Cerner software solution can significantly extend the functionality of this solution:

CareAware iAware for Critical Care (IW-20100A)

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through our website at www.cerner.com.

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iAware: CareAware iAware™ Platform

Description

The *CareAware iAware™ Platform* allows relevant patient information to be aggregated from multiple sources and displayed within a single view. Information visible within the *CareAware iAware Platform* is pulled from the patient's electronic medical record (EMR), connected devices and other available data services. This innovative view allows for the compilation of contextually appropriate information, which promotes rapid interpretation of and reaction to the patient's condition.

Client Benefits

- Clinician efficiency is created by:
  - Providing a summary view of relevant clinical information
  - Minimizing having to click on multiple tabs
  - Using various visual methods (graphical versus tabular)
  - Quick access to information through the *Always On Display* option
  - Personalization of views based on user preferences
- Improves quality of care by improving clinical decision-making
  - Provides contextually aware visibility to critical patient information at the point of care
- Provides a quick return on investment
  - Short implementation timeframe provides speed to value

Major Features

- User Interface Capabilities
  - Provides immediate access to view cohesive patient information
  - Clinicians are able to personalize views based on user preferences
  - Enables display of trends and relational aspects of data
  - Intuitive interface design results in minimal training time investment
  - Provides application lock functionality so that data can be hidden and protected
  - Supports Dashboard, Kiosk and Personal display modes to tailor to workflow and deployment needs
- Business Infrastructure
  - *Always On Display* option allows for rapid review and timely clinical decision-making
  - Enables automatic refresh of data in 5 minute intervals
  - Allows for healthcare organizations to leverage their existing electronic medical record investment
  - Auto sign-in on application start
  - Pluggable authentication allows integration with a number of authentication schemes
  - Gadget level authorization controls access to gadgets by clinician role

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iAware: CareAware iAware™ Platform

  - Instrumentation (monitoring and reporting for performance and logging)

- Extensibility
  - Create and manage custom perspectives
  - Create and integrate web page gadgets
  - *MPage* integration (create and integrate *MPage* gadgets)
  - *Gadget Library* to manage set of available gadgets across organization
- Core Gadgets
  - *Patient/Encounter Search* gadget
  - *myList* gadget
  - *Patient Demographics* gadget
  - *Patient Data* gadget
  - *Allergies* gadget

- By using the *Patient/Encounter Search* gadget, users are able to search for a patient by a specified identifier such as name, medical record number (MRN) or Financial Number (FIN) and then open an encounter in that patient's chart.
- The *myList* gadget provides clinicians with the ability to view and create lists of encounters. The *myList* gadget uses a combination of assigned locations and tags to generate lists. Locations are assigned through ADT transactions, while tags are keywords that can be assigned to later enable searching for that tag to create a list.
- The *Patient Demographics* gadget displays the demographic and identifying information for the patient/encounter in the *Patient Demographics* gadget. The following details are presented:
  - Patient Name
  - Age (Chronological Age)
  - Gender
  - Deceased Indicator
  - Gestational Age
  - Postmenstrual Age
  - Date of Birth
  - Medical Record Number (MRN)
  - Financial Number (FIN)
  - Admit Date
  - Unit Length of Stay
  - Location
- The *Patient Data* gadget displays the Dose Weight and Actual Weight for the selected patient and encounter.
- In the *Allergies* gadget, the Allergy List displays the patient's active allergies. Active allergies and reactions can also be viewed using the *Allergy Reveal* method.

Availability

Cerner *iAware* Release 1.0

Software Prerequisites

For Millennium® clients the following requirements apply:

Millennium release 2007.08 or later is required as a minimum version to run the included gadgets. *iAware* gadgets require the underlying data be populated in Millennium.

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iAware: CareAware iAware™ Platform

The following software and resulting data must be deployed in order to support the related gadget:

Patient Demographics: Registration Management (CP-20735) or *Benefit Management* (CP-20752) or *ADT's Demographics Incoming* (IF-29010.) The attributes displayed will flex based on information available. (For pediatric units, the gestational age control needs to be in use in order to display gestational age and post-menstrual age)

Patient Data: Dose Weight and Actual Weight must be documented in *iView* via *INet Critical Care* (IC-20380) or *INet* (IC-20389).

Allergies: Allergy information via *INet Critical Care* (IC-20380) or *INet* (IC-20389) or HL7 based allergies via *ADTs/Demographics Incoming* (IF-29010).

System Resource Considerations

The CPU, memory and disk requirements for the *CareAware iAware Platform* are measured in terms of the number of beds, the number of gadgets, the number of interactive users, time interval for automatic refresh and the data acquisition resources required.

Recommended and minimum display requirements will be dictated by the needs of the specific solution and deployment environment. The *CareAware iAware Platform* supports a number of innovative form factors (large screen, touch screens, laptops, etc)

Technical Environment Requirements

Refer to www.cerner.com and navigate to Home→ Solutions & Services→ Cerner Technologies for information about the technical environment.

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

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General Availability

CareAware

CareAware iBus for POC Medication Administration

Description

CareAware™ is a global device architecture designed to infuse medical devices with appropriate knowledge of the care process. The *CareAware* architecture simplifies device connectivity and management and supports clinician workflow. *CareAware* places the electronic health record (EHR) at the center of all information created and stored on the patient to create a single source of truth.

A key component of *CareAware* is the Medical Device Bus, or *CareAware iBus*™. The *iBus* is the enterprise service bus messaging system that manages two-way communication between devices and clinical applications. Similar to USB technology that facilitates plug-and-play capability for peripheral devices (mouse, keyboard, digital camera, etc) with a personal computer, the *iBus* allows healthcare organizations to connect to the medical record.

CareAware iBus for POC Medication Administration is a supporting solution for the *CareAware* device connectivity family and *Point of Care Medication Administration*. Scope of use depends on the solutions licensed *(CI-200800 & PH-22780)*.

CareAware iBus for POC Medication Administration is the *CareAware* device connectivity architecture scaled to support point-of-care medical device types to the *CareAware iBus*. *CareAware iBus for POC Medication Administration* integrates handheld devices into the medication administration process to facilitate **patient safety through barcode verification of "five rights"** at the patient bedside.

CareAware iBus for POC Medication Administration, and the medication administration process, may be enhanced with licensure of *CareAware iBus for Bedside Medical Devices* and other *Cerner Millennium POC* solutions. *CareAware iBus for Bedside Medical Devices* is the platform for integration of additional devices, such as ventilators, anesthesia machines and physiologic monitors, to the EHR. *CareAware Device Manager* is required to provide device connectivity content.

Client Benefits

- Promotes increased patient safety by integrating patient-specific data from multiple point-of-care devices, clinical content (Multum), knowledge-based rule sets to guard against I.V. infusion rates outside of safe limits
- Improves patient care by making the electronic health record the single source of truth for patient information
- Streamlines the process of associating devices with a patient through plug-and-play connectivity
- Enable the capture of pharmacy changes upon medication administration to provide greater accuracy and efficiency in processing charges and receiving payment
- Connectivity to handheld devices of various manufacturers who comply with a communication protocol as part of the FDA clearance process.

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- Supported devices include I.V. infusion pumps; however, data available for collection varies by device and/or by manufacturer
- Utilizes the electronic health record as the single source of truth for patient information
- Facilitates optimal care decisions through access to up-to-date information on the patient via *Point of Care Medication Administration*
- Streamlines the process of connecting associated point-of-care devices through plug-and-play connectivity

Major Features

- Access to the catalogue of supported infusion device types. This includes periodic updates, upgrades, and versions.
- Smart I.V. pump data collection, including validation of pump settings, against ordered parameters. The data available for collection varies by device or by manufacturer. This information may include the following:
    - I.V. Infusion Pumps:
        - Current Rate
        - Current Volume
        - Start/Stop Time
        - Backpressure
        - Event History
- The *CareAware Clinical Connectivity Module* provides the common platform for connection from medical devices to the *iBus*. The *Clinical Connectivity Module* functionality translates and distributes proprietary device message into standard messages that are communicated to the *iBus*. The *Clinical Connectivity Module* resides on the device itself, between/within a device gateway or in the *CareAware Connectivity Engine*.
- *Device Lifecycle* functionality detects the presence of a device and maintains a list of those supported devices currently connected to the *iBus*. It also sends out "device heartbeats" to verify whether the device is still connected.
- *CareAware* global device architecture is a stand-alone system, while it is optimized to run with *Cerner Millennium*®, the *iBus* will also have the ability to connect to non-*Cerner Millennium* systems.

Cerner Millennium Integration Benefits

Benefits of using the *CareAware iBus* in the *Cerner Millennium* environment include the following:

- A single source of truth is created in the electronic health record, utilizing data from the supported point of care devices.
- Associate patients to the appropriate device, based on optimal workflow.
- Enhance integration of supported devices at the point of care.
- Provide full medication administration capabilities associated with the electronic medication administration record (eMAR).
- Facilitate patient safety through verification of the "eight rights."

Pricing Considerations

The *CareAware iBus* is priced through a combination of sub-licensed software, licensed software, hardware, subscriptions, and professional services for the implementation.

CareAware iBus for POC Medication Administration herein is priced via licensed software. *CareAware Device Manager* is required device connectivity content. *CareAware iBus for Bedside Medical Devices* is recommended to fully

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realizing the value of CareAware device connectivity architecture.

The *CareAware iBus* licensing herein is one component of the solution; the additional components are required for a complete solution and quoted as separate pieces.

Software Prerequisites

Sub-license to the Progress® Sonic ESB® and blade server is required for deployment of the CareAware global device architecture.

Cerner Millennium release 2005.02 is the minimum platform requirement.

- *CI-200999 CareAware Device Manager Driver Library* is required.
- *PH-22780 Point of Care Medication Administration* is required.

Technical Environment Requirements

Refer to the Understanding Cerner Millennium Technical and Support Requirements document for information about the technical environment.

Related Solutions

The following Cerner solutions extend and complete the functionality of CareAware:

The core design of the *CareAware* architecture centers on the *iBus*. As noted, the *iBus* requires both Blade Server technology as well as appropriate sublicensed software for the enterprise service bus messaging. Additionally, there are flexible connectivity options for connecting devices to the *iBus*.

- The *CareAware Connectivity Engine* enables device plug-and-play into the *iBus* through a USB adapter called the *CareAware Device ID Module*. The *Connectivity Engine* resides in the patient room and can connect up to eight (8) devices.
- The *CareAware Device Manager* is a required component. For device connectivity through *CareAware* Cerner has created a subscription access for managing the content related to device drivers as well as managing the medical device location(s) and version(s). See *CareAware Device Manager* descriptions for additional details. This component is the enabler for plug-and-play connectivity via associated driver content.

The functionality of *CareAware iBus for POC Medication Administration* is only extended via the incorporation of:

- *CareAware for Bedside Medical Devices – CI-200800*
- *Point of Care Medication Administration (PH-22780)*

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through our website at www.cerner.com or through our sales organization at (816) 201-0054.

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General Availability

CareAware

CERNER

CareAware iBus™ for Bedside Medical Devices

Description

CareAware™ is a global device architecture designed to infuse medical devices with appropriate knowledge of the care process. The *CareAware* architecture simplifies device connectivity and management, and supports clinician workflow. *CareAware* places the electronic health record (EHR) at the center of all information created and stored on the patient to create a single source of truth.

The *CareAware* strategy allows healthcare providers to connect to medical devices in a way that supports the entire care process. *CareAware iBus™ for Bedside Medical Devices* enables medical devices to connect with the *iBus*, to facilitate direct access to the electronic health record. High-acuity care areas, including emergency, surgery and intensive care departments, as well as low-acuity care areas, including medical-surgical and step-down units, are licensed under *Bedside Medical Devices*.

Whether the process is a medication workflow or remotely monitoring a patient and devices, it can be done with *CareAware*. By placing the EHR at the center of all information created and stored on the patient, *CareAware* facilitates a single source of truth.

Client Benefits

- Supports clinician workflow by facilitating device data, sending it to the appropriate scratch database, and incorporating it in the electronic health record
- Utilizes the electronic health record as the single source of truth for patient information
- Facilitates optimal care decisions through access to up-to-date information on the patient
- Streamlines the process of connecting associated devices through plug-and-play connectivity

Major Features

- The *CareAware Clinical Connectivity Module* provides the common platform for connection from medical devices to the *iBus*. The *Clinical Connectivity Module* functionality translates and distributes proprietary device messages into standard messages that are communicated to the *iBus*. The *Clinical Connectivity Module* resides on the device itself, between/within a device gateway or in the *CareAware Connectivity Engine*.
- *Device Lifecycle* functionality detects the presence of a device and maintains a list of those supported devices currently connected to the *iBus*. **It also sends out "Device Heartbeats" to verify whether the device is still** connected.
- *CareAware* global device architecture is a stand-alone system, while it is optimized to run with *Cerner Millennium®* it will also have the ability to connect to non-*Cerner Millennium* systems. It is a standalone distributed architecture built on a continuous availability architecture enterprise service bus that

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provides fault tolerant, highly available, scalable messaging.

- Bi-directional communication is supported.
- A redundant server farm configuration coupled with the continuously available architecture ensures *CareAware* is "always on". Data is collected and stored even if power or a network connection is interrupted, and resumes message delivery once the connection is restored.

Cerner Millennium Integration Benefits

Benefits of using *CareAware* in the *Cerner Millennium* environment include the following:

- A single source of truth is created in the electronic health record, utilizing data from the supported medical devices.
- Associate patients to the appropriate device, based on optimal workflow.
- Enhance integration of supported devices in the emergency department, surgery, critical care, medical-surgical and step-down units through the *iBus*.

Pricing Considerations

The *CareAware iBus* is priced through a combination of sub-licensed software, licensed software, hardware, subscriptions, and professional services for the implementation.

The *CareAware iBus* licensing herein is one component of the solution; the additional components are required for a complete solution and quoted as separate pieces.

Software Prerequisites

Sub-license to the Progress® Sonic ESB® and blade server technology is required for deployment of the *CareAware* global device architecture.

- *CareAware Device Manager* is required.
- *Temporary Bedside Device Data Storage – IF29687* is required.

One or more of the following is required for documentation:

- *Advanced Care Documentation – CA-22346*
- *SurgiNet Anesthesia Management – SU-20320*

Cerner Millennium release 2005.02 is the minimum platform requirement.

Technical Environment Requirements

Refer to the Understanding Cerner Millennium Technical and Support Requirements document for information about the technical environment.

Related Solutions

The following Cerner solutions extend and complete the functionality of *CareAware*:

The core design of the *CareAware* architecture centers on the *iBus*. As noted, the *iBus* requires both Blade Server technology as well as appropriate sublicensed software for the enterprise service bus messaging. Additionally, there are flexible connectivity options for connecting devices to the *iBus*. The *CareAware Connectivity Engine* enables true device plug-and-play into the *iBus*, through a USB adapter called the *CareAware Device ID Module*. The *Connectivity Engine* allows for device connection to the *iBus*. Additional quoting for the *Connectivity Engines* and associated *Device ID Modules* can be delivered as connectivity needs expand.

- The *CareAware Device Manager* is a required component. For device connectivity through *CareAware*, Cerner has created a subscription access for managing the content related to device drivers as well as managing the medical device location(s) and version(s). See *CareAware Device Manager* descriptions for additional details. This component is the

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enabler for plug-and-play connectivity via associated driver content.

- The *CareAware Connectivity Engine* and *Device ID Module* work with the *Device Manager* to enable device plug-and-play connectivity between devices and the *iBus*. The *Connectivity Engine* resides in the patient room and can connect up to eight (8) devices. The *Device ID Module* is connected to each device for unique identification.

The functionality of CareAware iBus for a Cerner Millennium client is further extended via the incorporation of:

- INet – IC-20389
- Advanced Care Documentation – CA-22346
- SurgiNet Anesthesia Management – SU-20320
- Temporary Bedside Device Data Storage – IF-29687
- CareAware iBus for POC Medication Administration – CI- 201000

Communication Materials

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Improved reponse through secondary alerting

CareAware AlertLink

Solution at a Glance

CareAware AlertLink routes secondary alerts from medical devices or nurse call systems directly to a clinician's mobile device. The solution also offers a way to escalate alerts between clinicians when a patient needs assistance and a primary caregiver is not available.

In today's healthcare environment, medical devices sound many alarms. Some are informational, some are life-critical. Unfortunately, nurses often must be close to a nurse's station or a patient's room to hear these alarms. This can result in delayed responses to life-critical alerts. The problem is amplified when there is a high volume of alarms, with a small number requiring an immediate response.

Routing alerts

CareAware AlertLink™ provides an alternative to delayed response times. This solution routes secondary alerts from medical devices or nurse call systems directly to a clinician's mobile device. The solution also offers a way to escalate alerts between clinicians when a patient needs assistance and a primary caregiver is not available.

Here's how it works: Your organization connects your patient monitors, infusion pumps, etc. to *CareAware*®, Cerner's integrated device network. *AlertLink* then captures the alarms these devices produce and forwards life-critical alarms to a caregiver's mobile device.

At the beginning of a shift, a nurse uses the solution to create a connection with his or her phone by scanning an ID badge and phone. Once the nurse connects the phone to the network, he or she can receive alerts, accept notifications and take action. If the nurse is unable to respond to the event, he or she can press "decline" on the phone to immediately forward the alert to the next caregiver, a feature that ultimately improves response times for patients.

Saving time, improving care

In addition to facilitating better care, the system saves time for nurses through improved alert escalation. *AlertLink* also gives administrators better insight into nurse workload by capturing the acceptance and rejection of alerts. The improved ability to monitor facilities and staff gives your organization the opportunity to lower costs.



Key Benefits

- Improve care, response times
- Reduce alarm fatigue
- Lower costs
- Gain greater insight into nurse workload
- Improve system reliability

Finally, you can set up the system so if a device goes offline, the solution will alert your bio-medical engineers, a capability that improves overall system reliability.

In summary, administrators, clinicians and, most importantly, patients can benefit from this integrated system that will help you triage device alerts and get patients the care they need in a timely manner.

Solution packaging

In addition to providing the *AlertLink* software and infrastructure, Cerner also offers the mobile devices themselves along with all required infrastructure through a partnership with Ascom, a wireless telephone and messaging systems company.

For more information on this solution for your organization, contact the Cerner Client Care Team at (866) 221-8877, option 1, or by e-mail at ClientCareTeam@cerner.com.

CERNER All Together

General Availability
Knowledge Solutions

CERNER

MPages

Description

MPages is a new *Knowledge Solutions* offering that provides the ability to customize the display of *Cerner Millennium*® data at the Organizer or Chart Level from within *PowerChart*, *FirstNet*, *INet* and *SurgiNet*. *MPages* enables an ad hoc query to Cerner's clinical decision support system, allowing for proactive and interactive monitoring of real-time patient scenarios crossing many different roles, venues and conditions within an organization.

Client Benefits

Enables customization of information within *PowerChart*

Provides the ability to pull relevant data in real time on an as-needed basis

Enables user to view, input and interact with data in new ways

Allows creation of custom applications within the *Cerner Millennium* structure

Increases adherence to clinical standards, for example, increasing reimbursement for correct drug usage or decreasing length of stay by improving clinical team response time

Major Features

The following data formats are available for *MPages* tabs: ASCII, RTF, PDF, PostScript and HTML format, which allows for interaction

The powerful toolkit that can be used on any piece of data within *Cerner Millennium*—and, in some cases, third-party data—to create a wide range of formatted data for end users, for example:

Consolidate data to present to clinicians in *PowerChart* to identify at-risk patients for various populations

Configure *Cerner Millennium* data in a drillable format for many different role, venues, and conditions

Availability

Cerner Millennium 2007

Technical Environment Requirements

Refer to the *Understanding Cerner Millennium Technical and Support Requirements* document for information about the technical environment.

Communication Materials

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RadNet: Integrated Digital Dictation Integration Software

Description

Integrated Digital Dictation Integration Software is a supporting RadNet® solution that provides the capabilities to perform digital dictation of radiology reports from the Radiology Desktop. *Integrated Digital Dictation Integration Software* is added to the Radiology Desktop to create a powerful tool for radiologists and transcriptionists to dramatically streamline workflow. Integrating this solution within the Radiology Desktop, inherently links the patient demographic information with the dictated report, virtually eliminating mismatching errors, and streamlining the report creation process for more efficient report turnaround. *Integrated Digital Dictation Integration Software* eliminates the need for an interface with a standalone dictation system, thus eliminating maintenance costs. In addition, the voice files created by *Integrated Digital Dictation Integration Software* are accessible by authorized users for emergent review prior to transcription. An optional unique speech microphone is available to eliminate desktop clutter by incorporating microphone, mouse control and barcode reader into a single integrated device for control of the RadNet Radiology Desktop and *Integrated Digital Dictation*.

Client Benefits

- Increases efficiency by combining the tools required for dictation into a single, easy to use application within RadNet
- Creates a simplified and standardized workflow process for radiologists and transcriptionists by providing configurable worklists.
- Supports on-line communication between radiologists and Transcriptionist to minimize errors and optimize corrections
- Maximizes patient safety and transcriptionists productivity by automatically linking the voice file to the exam order eliminating mismatches.
- Significantly enhances report creation workflow when integrated with optional *Cerner ProVision PACS Workstation*. This provides a single point of entry which inherently links the images, order and voice file for patient safety and maximum productivity.

Major Features

- Automatic synchronization of voice file to the order eliminates mismatched information and ensures patient safety.
- Voice file playback is available within the *Radiology Desktop Integration Software* to enable validation of typed report to dictated report.
- Prior voice files can be accessed for comparative studies. (The storage of on-line voice files is configurable by the user)
- Configurable transcriptionist worklists allow the user to select studies based on a range of criteria to speed workflow.

Availability

HNA Cerner Millennium®, Revision HNAM.2003

Special Licensing Considerations

This solution is a one-time licensing fee across an organization's radiology enterprise.

Software Prerequisites

Radiology Management (RA-20135)

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

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RadNet: Integrated Digital Dictation Integration Software

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General Availability

RadNet

Integrated Digital Dictation

Description

Integrated Digital Dictation is a supporting RadNet solution that provides the capabilities to perform digital dictation of radiology reports from the Radiology Desktop. *Integrated Digital Dictation* is added to the Radiology Desktop to create a powerful tool for radiologists and transcriptionists to dramatically streamline workflow. Integrating this solution within the Radiology Desktop, inherently links the patient demographic information with the dictated report, virtually eliminating mismatching errors, and streamlining the report creation process for more efficient report turnaround. *Integrated Digital Dictation* eliminates the need for an interface with a standalone dictation system, thus eliminating maintenance costs. In addition, the voice files created by *Integrated Digital Dictation* are accessible by authorized users for emergent review prior to transcription . An optional unique speech microphone is available to eliminate desktop clutter by incorporating microphone, mouse control and barcode reader into a single integrated device for control of the RadNet Radiology Desktop and *Integrated Digital Dictation.*

Client Benefits

Increases efficiency by combining the tools required for dictation into a single, easy to use application within *RadNet*

Creates a simplified and standardized workflow process for radiologists and transcriptionists by providing configurable worklists.

Supports on-line communication between radiologists and Transcriptionist to minimize errors and optimize corrections

Maximizes patient safety and transcriptionists productivity by automatically linking the voice file to the exam order eliminating mismatches.

Significantly enhances report creation workflow when integrated with optional *Cerner ProVision PACS Workstation*. This provides a single point of entry which inherently links the images, order and voice file for patient safety and maximum productivity.

Major Features

Automatic synchronization of voice file to the order eliminates mismatched information and ensures patient safety.

Voice file playback is available within the *Radiology Desktop* to enable validation of typed report to dictated report.

Prior voice files can be accessed for comparative studies. (The storage of on-line voice files is configurable by the user)

Configurable transcriptionist worklists allow the user to select studies based on a range of criteria to speed workflow.

Availability

HNA Millennium, Revision HNAM.2003.

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Special Licensing Considerations

This solution is licensed on a per-device basis; one license is required for each radiologist and transcriptionist workstation. A minimum of four device licenses is required.

Software Prerequisites

Radiology Management – Cerner Millennium (RA-20135) and *Digital Dictation Integration Software* (RA-22252) are required.

Technical Environment Requirements

Refer to the *Understanding HNA Millennium Technical and Support Requirements* document for information about the technical environment.

Communication Materials

Cerner provides comprehensive user documentation for its software products in the form of online Help, web-based end-to-end reference material.

Cerner also provides product-specific brochures, flyers and other communications in print. This information may also be accessed through our website at www.cerner.com or through our sales organization at (816) 201-0054.

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General Availability

CareAware

CERNER

Temporary Bedside Device Data Storage

Description

Temporary Bedside Device Data Storage is used in conjunction with *CareAware MDBus* medical device connectivity. This bedside medical device connectivity provides the ability to electronically receive data transactions from bedside medical devices for storage in a scratch database via *Temporary Bedside Device Data Storage*. This data is available for viewing and subsequent entry into the medical record via forms and flowsheets used with the licensure of *CareAware MDBus for Bedside Medical Devices* (CW-200800) and its required *Millennium* licensure. These applications manage the retention, storage, and purging or offline transfer of locally stored data.

Client Benefits

- Productivity is improved by system support of automatic data acquisition from bedside medical devices with insertion of data into flowsheets and forms.
- Accuracy of data collection is increased with automatic retrieval from bedside devices because it eliminates/reduces a manual process of entering result information.

Major Features

- With *Temporary Bedside Device Data Storage*, the system acquires bedside medical device data automatically.
- Data from bedside devices acquired via *Temporary Bedside Device Data Storage* is not automatically incorporated into the patient's medical record. The data is stored in a scratch database and is available for viewing and subsequent entry into the medical record via forms and flowsheets. The information becomes part of the medical record once the clinician has verified the information.

Availability

Cerner Millennium Release 2000, version 2000.01

Special Licensing Considerations

A *Temporary Bedside Device Data Storage* license is required for every bed in an acute care setting that will need local storage on the PC. In addition, a license for *CareAware MDBus for Bedside Medical Devices* (CW-200800) and its required *Millennium* licensure also is required to connect to a device.

Software Prerequisites

The following solutions are required:

- CareAware MDBus for Bedside Medical Devices (CW-200800)

In addition to one of the following Cerner Critical Care or SurgiNet line items:

- INet (IC-20389)
- Advanced Care Documentation (CA-22346)

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- Anesthesia Management (SU-20320)

Technical Environment Requirements

Refer to the *Understanding Cerner Millennium Technical and Support Requirements* document for information about the technical environment.

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution:

- CareAware MDBus for Bedside Medical Devices (CW-200800)
- INet (IC-20389)
- SurgiNet Anesthesia Management (SU-20320)
- Advanced Care Documentation (CA-22346).

Communication Materials

Cerner provides user documentation for its software solutions in the form of online Help and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through our website at www.cerner.com or through our sales organization at (816) 201-0054.

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Instant Access: Cerner Instant Access

Description

The *Cerner Instant Access*™ solution optimizes the workflow experience for the clinician and reduces the time it takes to get to the point of productivity in his/her workflow, while ensuring patient privacy and organizational security compliance are maintained.

Client Benefits

- Enhances clinician satisfaction by reducing time to point of productivity
- Integrates seamlessly with the user's workflow
- Enhances patient safety through greater use of the electronic medical record (EMR)
- Reduces IT administration cost by creating a simple and scalable infrastructure
- Encourages clinicians to document patient care at or near the point of care

Major Features

Reduces the time clinicians spend logging into multiple workstations by enabling seamless clinician sessions to provide a consistent a user experience

Enables Advanced Authentication

Provides the necessary security to meet regulations required for all healthcare organizations

Fast client access and user switching for Citrix applications

Correlated reports in P2Sentinel provides a clear picture of user audit information

Cerner Millennium Integration Benefits

Benefits of using *Cerner Instant Access* in the *Cerner Millennium*® environment include the following:

Accelerate EMR adoption

Improve clinical outcomes through superior efficiencies

Availability

Cerner Millennium Release 2007 or later

Special Licensing Considerations

Any Non-Cerner sublicense software required to implement *Cerner Instant Access* is not included and needs to be licensed separately.

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Open Port: PC Encoder Interface

Description

The *PC Encoder Interface* is an Open Port medical device interface that provides a communication link between an encoder and *Cerner Health Information Management* (HIM) (MR-20400). This bidirectional interface supports both the transmission of patient demographics to the encoder from *Cerner HIM* and the return of coded and DRG data from the encoder.

The interactive interface is designed as a timesaving device, allowing numeric and alphanumeric results to be recorded automatically in the *Cerner Millennium®* system. These results are then made available for inquiry, printing or communication to other systems.

Client Benefits

- Improves efficiency with demographic data downloaded to the encoder and results recorded automatically during the encoding process
- Makes encoded data immediately available to other systems
- Reduces chances for error with manual processes performed only once
- Simplifies work queue management with work assignments automatically generated
- Eliminates redundancy

Major Features

- Demographic data is downloaded to the encoder and coded and abstracted data is uploaded from the encoder
- Work queues are created for charts to be coded
- Cumulative performance reporting is available
- A customized transaction layout is defined based on the third-party encoding system
- Optionally, account balances, received via an interface from the financial system, can be used for prioritization, with licensing of *Open Account Balances Incoming* (IF-29140).
- Coded data and signature indicators optionally can be passed via a foreign system interface to non-Cerner systems, with licensing of *Abstracted/Coded Data Outgoing* (IF-29325).

Special Licensing Considerations

A foreign encoder system PC is required. Some suppliers require special software or licensing considerations, in order for their encoders to be interfaced. Cerner Corporation is not responsible for the hardware, software licensing, pricing or installation requirements of the encoder PC. The specific encoder provider should be contacted directly for pricing and configuration.

Availability

For *Cerner Health Information Management*: *Cerner Millennium* Release 2000.01

Software Prerequisites

The following solutions are required: *Cerner Health Information Management* (MR-20400).

Technical Environment Requirements

Refer to the *Understanding Cerner Millennium Technical* and *Support Requirements* document for information about the technical environment.

Related Solutions

The following Cerner software solution(s) significantly extend the functionality of this solution: *Abstracted/Coded Data Outgoing* (IF-29325).

Installation Considerations

The *PC Encoder Interface* can be installed during the initial implementation engagement of *Cerner Health*

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Open Port: PC Encoder Interface

Information Management or the installation can be subsequently performed as an add-on implementation engagement. Since each interface is customized, the design, installation, testing, and sign-off period will vary for each client. Clients are required to participate in the installation and testing process.

Communication Materials

Cerner provides comprehensive user documentation for its software solutions in the form of online Help, web-based end-to-end reference material and computer-based training (CBT).

Cerner also provides solution-specific brochures, flyers and other communications in print. This information may also be accessed through our website at www.cerner.com.

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ATTACHMENT D

JHIS INTERFACES

ATTACHMENT D
JHIS INTERFACES

Capitalized terms used in this Attachment D without definition have the meaning given to such terms in the body of the Agreement and if not defined therein, in the body of this Exhibit A (Statement of Work).

1. Interfaces consist of two categories:

   (1) Medical Devices Interfaces (MDIs)

   (2) External systems Interfaces

2. MDIs

   MDIs consist of the capture and storage of patient, quality control, and standard test result data from the following medical device:

   (1) Telcor QML Point of Care(for blood glucose)

3. External Systems Interfaces

   An external system Interface is characterized by three attributes. The first attribute is the pair of systems exchanging data. The second attribute is the specific transaction that defines the data to be exchanged and the format of the exchange. The third attribute is the nature of the data exchange timing requirement which may be either real time (asynchronous) or batch (e.g., SFTP or EDI).

   (1) Phase 1 System Interfaces

   The following external systems Interfaces shall be provided by CONTRACTOR as part of Phase 1, and are referred to as "Phase 1 Interfaces":

   A. COUNTY's Automated Jail Information System (AJIS),

   B. COUNTY's Jail Information Management System (JIMS)

   C. Automed Drug Packaging Interface

   D. Quest Reference Lab Interface

   E. PACS Interface

   F. 3M coding interface

(2) Phase 2 System Interfaces

The Phase 2 Interfaces shall be designed by CONTRACTOR as part of this Statement of Work (Exhibit A).

A. COUNTY's Pyxis System,

B. Patient Accounting Interfaces

i. Remittance Incoming

ii. General Ledger Outgoing

iii. Electronic Healthcare Claims Out_Professional

iv. Electronic Healthcare Claims Out_Institutional

v. ADT Demographics Outgoing

C. Abstracting Data Incoming from 3M

(3) Phase 3 System Interfaces

No interfaces are planned for phase 3

(4) Optional System Interfaces

The following external systems Interfaces are referred to as "Optional Phase Interfaces." For each Optional Phase Interface, CONTRACTOR shall not provide such Optional Phase Interface unless and until Amendment has been entered into in accordance with Subparagraph 6.3 of the body of the Agreement with respect to such Optional Phase Interface:

A: COUNTY"S eCAPS System Interfaces for Supply Chain for Pharmacy

B: Cardinal System Interface for Supply Chain for Pharmacy

C. Temporary Bedside Device Storage(iBus)

External systems Interfaces consist of two categories:

(1) External systems Interfaces which are proprietary to COUNTY, consisting of COUNTY's Automated Jail Information System (AJIS) and COUNTY's Jail Management Information System (JIMS).

(2) External systems Interfaces which are not proprietary to COUNTY, consisting of Automed Drug Packaging Interface, Cardinal Drug Wholesaler Interface, , Quest Reference Lab Interface, PACS

Interface, COUNTY's Pyxis System, Patient Accounting Interfaces, eCAPS inventory management system, 3M interfaces

External systems Interfaces include the transfer of data between JHIS and other software systems, both within and external to COUNTY. Schedule I (External System Interfaces) of this Attachment D of Exhibit A (Statement of Work) specifies each Interface by the three defining attributes. Some Interface transactions will be performed on-line in near real time and other Interfaces will be performed on a batch basis.

Regardless of what interface engine is identified by the COUNTY as its preferred engine, in accordance with standards established in writing by the COUNTY's Project Director, the CONTRACTOR's Open Engine (OE) software will be used to enable external systems Interfaces to and from JHIS. Industry standard interfaces including those of Health Level 7 (HL7), American Society for Testing and Materials (ASTM), American National Standards Institute Accredited Standards Committee X-12 (ANSI ASC X-12), and other Standards Development Organizations (SDOs) designated from time to time by the Federal Department of Health and Human Services, or generally accepted in the Healthcare Information Technology Industry, shall be used where applicable.

Phase 1 System Interfaces:

(1) COUNTY's Automated Jail Information System (AJIS) – Interfaces with COUNTY's Automated Jail Information System (AJIS) are required to track inmates' admission, registration, demographics, moves and transfers, location, classification, discharge, release and other data. This Interface shall be uni-directional and near real time.

(2) COUNTY's Jail Management Information System (JIMS) – Interfaces with COUNTY's Jail Management Information System (JIMS) are for the transfer of medical co-payment data for health care services provided to JIMS to debit the inmate's fund account.

(3) 3M Interfaces
Interfaces with Health Information Management for sending coding information outbound to 3M.

(4) Automed Drug Packaging Interface
Interfaces with Inpatient Pharmacy for the transmission of patient demographic information and pharmacy orders from Cerner PharmNet Inpatient to the AutoMed System.

(5) Quest Reference Lab Interface

Bidirectional interface between PathNet Laboratory and Quest reference lab system to pass laboratory orders and results information.

(6) PACS Interfaces
Interfaces with Fuji diagnostic Xray equipment and Cerner PACS.

Phase 2 System Interfaces:

(1) Pyxis System - Interface to the COUNTY's Pyxis med station is required to track unit dose. This bidirectional interface supports transmission of Pharmacy orders and medication profiles to the Pyxis console from PharmNet's Inpatient Pharmacy. The interface supports the generation of charging transactions generated from dispensing events from Pyxis back to PharmNet

(2) Patient Accounting Interfaces
These interfaces provide for the transmission of healthcare claims outbound to insurance payer organizations or a clearinghouse, and for the receipt of remittance advice information inbound from insurance payer organizations regarding the payment of Health Care Claims. It will be determined during the design phase if it is necessary to interface to the eCAPS system to support the transfer of general ledger data outbound from the Patient Accounting sub-ledger system to eCAPS.

(3) 3M Abstracting Incoming
Interfaces with the Health Information Management System to receive electronically transmitted abstracted patient data(results) inbound from the 3M encoding system.

Optional System Interfaces:

(1) COUNTY"S eCAPS System Interface for Clinically Driven Supply Chain for Pharmacy
Interfaces either directly between Patient Accounting and eCAPS or through the COUNTY GHX system to eCAPS. Will be decided in the design phase if this interface will transfer general ledger data outbound from the Clinically Driven Supply Chain for Pharmacy sub-ledger system directly to eCAPS or through GHX to eCAPS.

(2) Cardinal Drug Wholesaler System Interface with Clinically Driven Supply Chain for Pharmacy
Interfaces either between Cardinal Drug Wholesaler and Pharmacy Supply Chain to pass purchasing order and advanced shipping information. It will be determined in the design phase whether the interfaces will be directly between the JHIS and Cardinal or if they will go through the COUNTY GHX system.

(3) Medical Device interface for iBus
Interface between iBus and medical devices which include bedside monitors, respirators, infusion pumps, laboratory devices, smart beds, nurse call etc.

Schedule I: External System Interfaces

Phase 1 System Interfaces

Outbound from	Inbound to	Transaction/Function
AJIS	JHIS	ADT/Registration/Movement
JHIS	JIMS	Billing Batch for Medical Co-Payment Data for Inmate Health Care Delivery
JHIS	3M	Code information from Health Information Management (HIM)
JHIS	Automed Drug Packaging System	Custom device interface receives patient demographic and order transactions
Quest Reference Lab Interface	JHIS	Results ORU
JHIS	Quest Reference Lab Interface	Orders ORM
Telcor	JHIS	Direct connect device interface for point of care results
Fuji Diagnostic X-ray	JHIS PACS	Direct connect- not an HL7 interface

Phase 2 System Interfaces

Outbound from	Inbound to	Transaction/Function
JHIS	Pyxis	Pharmacy orders and medication profiles. Pass through ADT from AJIS to Pxyis
Pyxis	JHIS	Charging transactions
JHIS	Payers(Commercial Insurers, Government) Clearinghouse	X12 HCFA 1450 Institutional and X12 HCFA 1500 Professional Claims
Payers(Commercial Insurers, Government or Clearinghouse)	JHIS	Remittance advice from all commercial and government payers
3M	JHIS	Abstracted patient data- ADT, OBX, DRG
JHIS	eCAPs	General ledger data transferred by batch FTP in comma delimited .CVS file. HL7 ADT

Optional System Interfaces

Outbound from	Inbound to	Transaction/Function
JHIS	eCAPS Inventory Management System	ADT, General Ledger
JHIS	Cardinal Drug Wholesaler System	Purchase Orders(850)
Cardinal Drug Wholesaler	JHIS	ANSI X12 EDI transactions Purchase Order acknowledgment (855) Advanced Shipment(856)*OPTIONAL* Electronic Invoice(810)
Medical Devices- respirators, pumps, smart beds, laboratory devices, bedside monitors	JHIS	Results

ATTACHMENT E

JHIS TRAINING

Capitalized terms used in this Attachment E without definition have the meaning given to such terms in the body of the Agreement and if not defined therein, in the body of this Exhibit A (Statement of Work).

Class	Training Title	TASK Cross Reference	Training Objectives Description	Estimated Course Duration	Class Attendees
1	COUNTY Executive Session	Task 2	This session is designed to initiate leadership into the COUNTY System implementation at their health system, and to energize, educate, set expectation and inform executives about opportunities for their involvement in the project and provide technical review of domain requirements and hardware status. The objectives of this session are: ▪ Energize and educate leaders about the project in general and provide specific knowledge, such as timelines, expectations, and expected benefits. ▪ Encourage leadership to become involved in the project. ▪ Inform leadership as to how they can effectively lead the project and successfully achieve its desired outcomes ▪ Clarify leadership's vision for the future and how the System will help enable it. ▪ Review with leadership recommended strategies for leading the project ▪ Provide opportunity for discussion of attendee questions	Estimated 8 hours	COUNTY personnel who are engaged in the project leadership (PLT)
2	Project Preparation Session and Project Kick-Off	Task 3	Project Kickoff consists of three distinct activities: The Project Kickoff presentation, Current State Analysis, and Scope Review Sessions. Provide COUNTY with a high-level overview of the concepts behind documenting current state,	Estimated 80 hours	COUNTY personnel responsible for current state, process improvements, and future state design

Class	Training Title	TASK Cross Reference	Training Objectives Description	Estimated Course Duration	Class Attendees
			identifying process improvement opportunities, and designing future state. Participate in a hands-on process improvement activity to build comfort and knowledge in how to determine opportunities for process improvement. Discover the benefits and inherent values in conducting process re-design. Develop an understanding of how to use Method M and Bedrock during the process design stage of the implementation project. Assist the COUNTY project team in determining the appropriate next learning steps following the Project Preparation Session (e.g., PC basics, Project Management Workshop, Project Team Workshop, Solution and Tools Introduction and Millennium Fundamentals).		
3	Process Demo. for each Application Software Module	Task 2 Task 3 Task 4	Provide the COUNTY a high-level overview of some of the CONTRACTOR'S recommended "best practices" for how the Application Software can improve their processes. Guide the COUNTY to look for features of the Application Software they want to incorporate in their design. Demonstrate the possibilities of what the Application Software can do, but not how to use the Application Software.	Estimated 2 hours each for each Application Software Module	COUNTY personnel who are responsible for designing future state processes and who are responsible for deciding product database configurations.
4	Design Consulting Session for each Application	Task 2 Task 3 Task 4	Provide the COUNTY the opportunity to analyze the current state results, consider identified areas of improvement opportunities, and to begin consideration of future state design	Estimated 8 hours each for each Application	COUNTY personnel who are responsible for assisting in design

Class	Training Title	TASK Cross Reference	Training Objectives Description	Estimated Course Duration	Class Attendees
	Software Module		processes. Prepare the COUNTY to begin designing future state.	Software Module	of the future state process workflows.
5	Database Build Workshop	Task 2 Task 3 Task 4	Introduce the COUNTY to CONTRACTOR'S database building tools and how to effectively utilize them for decision making purposes. Define the "order of the build" for each Application Software module. Populate the database tables with valid information. Define a review process for monitoring and controlling the database build.	Estimated 4 hours each for each Application Software Module	COUNTY personnel who are responsible for deciding product database configurations
6a	System Review Workshop	Task 2 Task 3 Task 4	Define roles & responsibilities of COUNTY technical team. Review technical architecture. Discuss CONTRACTOR standards & terminology. System demonstration Establish context for Data Collection Materials Identify and discuss Integration topics Organize assignments and discuss next steps Review the Outcomes established for the COUNTY	Estimated 40 hours	COUNTY Technical Team

Class	Training Title	TASK Cross Reference	Training Objectives Description	Estimated Course Duration	Class Attendees
6b	Design Review Workshop	Task 2 Task 3 Task 4	Present the design decisions to date for each solution and confirm these decisions are accurate. Review global database decisions including security. Provide initial application education. Provide an understanding of workflow using the Cerner system. Establish, and/or continue to establish context for Data Collection Materials. Deliver and discuss Data Collection Materials. Identify and discuss Integration topics. Review the Event Summary and Sign-off process. Organize assignments and discuss next steps. Review the Outcomes established for the client.	Estimated 40 hours	COUNTY personnel who are responsible for assisting in design
7	System Validation Session	Task 2 Task 3 Task 4	Provide recommendations to COUNTY regarding testing. Identify the COUNTY agencies which will play a role in System validation testing. Develop a Validation Strategy. Create a test plan which includes recommended components. Develop a Testing Plan for each phase of	Estimated 20 hours for each solution area, across 4-5 days	All COUNTY team members responsible for conducting the User Acceptance Tests. Individuals who assisted in the design and build of the System.

Class	Training Title	TASK Cross Reference	Training Objectives Description	Estimated Course Duration	Class Attendees
			testing. Develop COUNTY-specific unit and System test scripts. Design drafts of testing scripts. Define issue tracking process.		
8	Train the Trainer Workshop for Phase 1 Enhancements and Applications Software modules, such as, but not limited to the following: P2Sentinel and 724Access Downtime Viewer.	Task 3	Provide education to the designated COUNTY User trainers. Introduce the COUNTY trainers to the role of the Application Software module. Identify the work steps that support the workflow processes for this Application Software module. Provide recommendations on how to effectively implement and manage large-volume training requirements. Assist the COUNTY trainers in developing effective facilitation skills.	Up to 8 hours each Application Software module.	Designated COUNTY User trainers.
9	Train the Trainer Workshop for Care Delivery Documentation, such as, but not limited to the following Application Software modules:CareNet : (PowerChart, Care Documentation,	Task 3	Provide education to the designated COUNTY User trainers. Introduce the COUNTY trainers to the role of the Application Software module. Identify the work steps that support the workflow processes for this Application Software module. Provide recommendations on how to effectively implement and manage large-volume training requirements.	Up to 24 hours each Application Software module.	Designated COUNTY User trainers.

Class	Training Title	TASK Cross Reference	Training Objectives Description	Estimated Course Duration	Class Attendees
	Women's Health, and Patient Accounting).		Assist the COUNTY trainers in developing effective facilitation skills.		
10	Train the Trainer Workshop for Transaction services, Eligibility Management and Address Validation	Task 3	Provide education to the designated COUNTY User trainers. Introduce the COUNTY trainers to the role of the Application Software module. Identify the work steps that support the workflow processes for these Application Software modules. Provide recommendations on how to effectively implement and manage large-volume training requirements. Assist the COUNTY trainers in developing effective facilitation skills.	Up to 8 hours..	Designated COUNTY User trainers.
11	Train the Trainer Workshop for Ancillary Systems such as, but not limited to the following Application Software modules: PharmNet (Inpatient Pharmacy and Outpatient Pharmacy).	Task 3	Provide education to the designated COUNTY User trainers. Introduce the COUNTY trainers to the role of the Application Software module. Identify the work steps that support the workflow processes for this Application Software module. Provide recommendations on how to effectively implement and manage large-volume training requirements. Assist the COUNTY trainers in developing effective facilitation skills.	Estimated 24 to 40 hours each Application Software module.	Designated COUNTY User trainers.
11	Train the Trainer Workshop	Task 3	Provide education to the designated COUNTY User trainers.	Estimated 24 to 40 hours each	Designated COUNTY User

Class	Training Title	TASK Cross Reference	Training Objectives Description	Estimated Course Duration	Class Attendees
	for Medication Management, such as, but not limited to the following Application Software modules: Point of Care Adminstration, eMAR and changes to CPOE		Introduce the COUNTY trainers to the role of the Application Software module. Identify the work steps that support the workflow processes for this Application Software module. Provide recommendations on how to effectively implement and manage large-volume training requirements. Assist the COUNTY trainers in developing effective facilitation skills.	Application Software module.	trainers.
12	Train the Trainer Workshop for imaging Applications Software modules such as, but not limited to CPDI,CareAware Multi-Media Digital Object, eSignature and PowerChart ECG	Task 3	Provide education to the designated COUNTY User trainers. Introduce the COUNTY trainers to the role of the Application Software module. Identify the work steps that support the workflow processes for this Application Software module. Provide recommendations on how to effectively implement and manage large-volume training requirements. Assist the COUNTY trainers in developing effective facilitation skills.	Up to 16 hours	Designated COUNTY User trainers.
13	Train the Trainer Workshop for Knowledge Content and Patient Education, such as, but not limited to the following	Task 3	Provide education to the designated COUNTY User trainers. Introduce the COUNTY trainers to the role of the Application Software module. Identify the work steps that support the workflow processes for this Application Software module.	Up to 8 hours	Designated COUNTY User trainers.

Class	Training Title	TASK Cross Reference	Training Objectives Description	Estimated Course Duration	Class Attendees
	Application Software modules: Cerner Knowledge Content for Ambulatory.		Provide recommendations on how to effectively implement and manage large-volume training requirements. Assist the COUNTY trainers in developing effective facilitation skills.		
14	Train the Trainer Workshop for Lighthouse Application Software modules.	Task 4	Provide education to the designated COUNTY User trainers. Introduce the COUNTY trainers to the role of the Application Software module. Identify the work steps that support the workflow processes for this Application Software module. Provide recommendations on how to effectively implement and manage large-volume training requirements. Assist the COUNTY trainers in developing effective facilitation skills.	Estimated 24 to 40 hours each Application Software module.	Designated COUNTY User trainers.
15	Train the Trainer Workshop for PowerInsight Application Software module.	Task 4	Provide education to the designated COUNTY User trainers. Introduce the COUNTY trainers to the role of the Application Software module. Identify the work steps that support the workflow processes for this Application Software module. Provide recommendations on how to effectively implement and manage large-volume training requirements. Assist the COUNTY trainers in developing effective facilitation skills.	Estimated 16 to 24 hours each Application Software module.	Designated COUNTY User trainers.

Class	Training Title	TASK Cross Reference	Training Objectives Description	Estimated Course Duration	Class Attendees
16	Train the Trainer Workshop for any of the Optional Phase Software Modules, upon full execution of an Amendment by the COUNTY.	Task 2 Task 3 Task 4	Provide education to the designated COUNTY User trainers. Introduce the COUNTY trainers to the role of the Application Software module. Identify the work steps that support the workflow processes for this Application Software module. Provide recommendations on how to effectively implement and manage large-volume training requirements. Assist the COUNTY trainers in developing effective facilitation skills.	Estimated 24 to 40 hours ea. Optional Application Software Module.	Designated COUNTY User trainers.

ATTACHMENT F

OTHER PROFESSIONAL SERVICES FEE SCHEDULE

Capitalized terms used in this Attachment F without definition have the meaning given to such terms in the body of the Agreement and if not defined therein, in the body of this Exhibit A (Statement of Work).

Other professional services as described in Subparagraph 7.5 (Other Professional Services of the body of the Agreement and in connection with the provision of Optional Phase Systems shall be provided to COUNTY based upon the CONTRACTOR's Publishing Rate Schedule at the time of quotation or the following schedule, whichever is lowest. Adjustments to the hourly rate, if any shall be calculated in accordance with Paragraph 70 (Cost of Living Adjustment) of the body of the Agreement.

Item #	CONTRACTOR Staff Level	Agreement Effective Date Maximum Hourly Rate
1	Practice Director	$465.00
2	Project Executive	$380.00
3	Consulting Architect	$425.00
4	Project Architect	$305.00
5	Project Manager	$340.00
6	Senior Application Specialist-Installation	$255.00
7	Application Specialist-Installation	$205.00
8	Entry Level Application Specialist-Installation	$150.00
9	Consulting Executive	$425.00
10	Physician Executive	$595.00
11	Consulting Manager	$340.00
12	Senior Consultant	$295.00
13	Consultant	$255.00
14	Technical Practice Director	$465.00
15	Technical Project Manager	$375.00
16	Senior Technical Consultant	$375.00
17	Technical Consultant	$315.00
18	Lead Systems Engineer	$295.00
19	Senior Systems Engineer	$255.00
20	Systems Engineer	$210.00
21	Lead Systems Analyst – FSI	$295.00
22	Senior Systems Analyst – FSI	$255.00
23	Systems Engineer	$210.00
24	Lead Systems Analyst – MDI	$255.00

Item #	CONTRACTOR Staff Level	Agreement Effective Date Maximum Hourly Rate
25	Senior Systems Analyst – MDI	$205.00
26	Systems Engineer	$210.00
27	Lead Technical Engineer	$220.00
28	Senior Technical Engineer	$200.00
29	Technical Engineer	$175.00
30	Learning Project Manager	$340.00
31	Senior Learning Consultant	$255.00
32	Learning Consultant	$255.00
33	Senior Multi-media Developer	$295.00
34	Multi-media Developer	$255.00

ATTACHMENT G
COUNTY Facility: COUNTY Facilities

As used herein, the term "COUNTY Facility" shall mean any one, and the term "COUNTY Facilities" shall mean any two or more, of the facilities listed below. Capitalized terms used in this Attachment G without definition have the meaning given to such terms in the body of the Agreement and if not defined therein, in the body of this Exhibit A (Statement of Work).

Los Angeles Sheriff's Headquarter Offices:

MSB Headquarters	450 Bauchet Street	Los Angeles, CA 90012
Sheriff's Headquarters	4700 Ramona Boulevard	Monterey Park, CA 91754
DSB Headquarters	12440 East Imperial Highway	Norwalk, CA 90650

Medical Services Bureau Facilities

Century Regional Detention Facility	11705 South Alameda Street	Lynwood, CA 90262
Correctional Treatment Center (TTCF/CTC)	450 Bauchet Street	Los Angeles, CA 90012
East Facility (PDC/EF)	29340 The Old Road	Saugus, CA 91350
Inmate Receptions Center (TTCF/IRC)	450 Bauchet Street	Los Angeles, CA 90012
Men's Central Jail (MCJ)	441 Bauchet Street	Los Angeles, CA 90012
Mira Loma Detention Center (MLDC)	45100 North 60th Street West	Lancaster, CA 93536
North County Correctional Facility (PDC/NCCF)	29340 The Old Road	Saugus, CA 91350
North Facility (PDC/NF)	29340 The Old Road	Saugus, CA 91350
Ranch Facility (PDC/RF)	29340 The Old Road	Saugus, CA 91350
South Facility (PDC/SF)	29340 The Old Road	Saugus, CA 91350
Tower 1 (TTCF/T1)	450 Bauchet Street	Los Angeles, CA 90012
Tower 2 (TTCF/T2)	450 Bauchet Street	Los Angeles, CA 90012

Data Systems Bureau Facilities

Sheriff's Data Center	12440 East Imperial Highway	Norwalk, CA 90650

Department of Health Services Facilities

LAC+USC Medical Center Jail Ward (LCMC)	1200 North State Street	Los Angeles, CA 90033
LAC+USC Medical Center (LAC+USC)	1200 North State Street	Los Angeles, CA 90033

In addition to the list of facilities above, any other location and/or custody facilities operated by the Sheriff's Department or facility contracted to house Los Angeles Sheriff's Department inmate patients, and the location of these facilities may be moved at any time at the sole discretion of the Los Angeles Sheriff's Department to any other location within Los Angeles County.

EXHIBIT B

SCHEDULE OF PAYMENTS

EXHIBIT B

SCHEDULE I: SCHEDULE OF PAYMENTS BY DELIVERABLE

Capitalized terms used in this Exhibit B without definition have the meaning given to such terms in the body of the Agreement and if not defined therein, in the body of Exhibit A (Statement of Work).

System Deliverable				
Deliverable Number	**Deliverable Description**	**Deliverable Fixed Price**	**Holdback Amount**	**Payment Upon Approved Invoice**
1.1 (Key)	**Project Control Document (PCD)**	$84,000	$8,400	$75,600
1.2	Project Status Reports			
1.3	System Operations Plan			
1.4	Business Continuity Plan			
2.1 (Key)	**Production Use of System with Remote Hosting Services**	$75,000	$7,500	$67,500
2.2	Optimized Production System			
2.3	System Migrated to Upgraded Technical Environment			
2.4.1	Installed and Configured PACS Hardware for Phase 1 System Upgrade			
2.4.2	Unit Tested Phase 1 System			
2.4.3	Successful System Tests for Phase 1 System			
2.4.4	System Cutover and Conversion Plan for Phase 1 System			
2.4.5 (Key)	**Successfully Conducted User Acceptance Testing for Phase 1 System**	$150,000	$15,000	$135,000

System Deliverable				
Deliverable Number	**Deliverable Description**	**Deliverable Fixed Price**	**Holdback Amount**	**Payment Upon Approved Invoice**
2.4.6	Training Materials and Trained COUNTY Trainers for Phase 1 System			
2.4.7 (Key)	**Production Use of Phase 1 System at all COUNTY Facilities**	$75,000	$7,500	$67,500
2.4.8	Post-Implementation Review of Phase 1 System			
2.4.9 (Key)	**Production Use of Phase 1 System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities (Including Holdback for Phase 1)**	$77,272		$77,272
2.5.1	Production Use of Automated Ambulatory Code Updates			
2.5.2	Production Use of RadNet Ultrasound Module			
2.5.3 (Key)	**Production Use of CPDI Enhancements**	$140,774	$14,077	$126,697
2.6.1	Application Management Services Operational Plan			
2.6.2 (Key)	**Set up and Configured Application Management Services (AMS)**	Included in Schedule V (AMS Fees) of this Exhibit B.		
2.7	Set up and Configured P2Sentinel Security Enterprise			
2.8.1	Documented Technical Configuration and Plan for Use of the 724Access Downtime Viewer Application Software Module			
2.8.2	Installed, Configured, and Tested 724Access Downtime Viewer Application Software Module			
2.8.3	Trained COUNTY Trainers			
2.8.4 (Key)	**Production Use of 724Access Downtime Viewer Application Software Module**	$357,250	$35,725	$321,525

System Deliverable				
Deliverable Number	**Deliverable Description**	**Deliverable Fixed Price**	**Holdback Amount**	**Payment Upon Approved Invoice**
3.1.1	Phase 2 Project Preparation Session			
3.1.2	CONTRACTOR Installed, Tested, and Certified Phase 2 System Application Software Modules			
3.2	MethodM Phase 2 Project Kickoff Event			
3.3.1 (Key)	**Design Documentation for each Phase 2 System Application Software Module**	$1,000,000	$100,000	$900,000
3.3.2	Built and Unit Tested each Phase 2 System Application Software Module			
3.3.3	System Tested each Phase 2 System Application Software Module			
3.4.1	Integration Test Plans and Test Scripts for the Phase 2 System			
3.4.2 (Key)	**Successful Integration Test Results for the Phase 2 System**	$500,000	$50,000	$450,000
3.5.1	System Cutover and Conversion Plan for the Phase 2 System			
3.5.2	Verified System Cutover and Conversion Plan for the Phase 2 System			
3.6.1	Documented Training Classes and Training Materials for the Phase 2 System			
3.6.2	Trained COUNTY Trainers for the Phase 2 System			

System Deliverable				
Deliverable Number	**Deliverable Description**	**Deliverable Fixed Price**	**Holdback Amount**	**Payment Upon Approved Invoice**
3.7	Reference Documentation for the Phase 2 System			
3.8 (Key)	**Successfully Conducted User Acceptance Testing of the Phase 2 System**	$1,000,000	$100,000	$900,000
3.9 (Key)	**Production Use of the Phase 2 System at all COUNTY Facilities**	$1,000,000	$100,000	$900,000
3.10	Post-Implementation Review Report for the Phase 2 System			
3.11 (Key)	**Production Use of Phase 2 System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities (Including Holdback for Phase 2)**	$1,695,952		$1,695,952
4.1.1	Phase 3 Project Preparation Session			
4.1.2	CONTRACTOR Installed, Tested, and Certified Phase 3 System Application Software Modules			
4.2	MethodM Phase 3 Project Kickoff Event			
4.3.1 (Key)	**Design Documentation for each Phase 3 System Application Software Module**	$200,000	$20,000	$180,000
4.3.2	Built and Unit Tested each Phase 3 System Application Software Module			
4.3.3	System Tested each Phase 3 System Application Software			

System Deliverable				
Deliverable Number	**Deliverable Description**	**Deliverable Fixed Price**	**Holdback Amount**	**Payment Upon Approved Invoice**
	Module			
4.4.1	Integration Test Plans and Test Scripts for the Phase 3 System			
4.4.2 (Key)	**Successful Integration Test Results for the Phase 3 System**	$100,000	$10,000	$90,000
4.5.1	System Cutover and Conversion Plan for the Phase 3 System			
4.5.2	Verified System Cutover and Conversion Plan for the Phase 3 System			
4.6.1	Documented Training Classes and Training Materials for the Phase 3 System			
4.6.2	Trained COUNTY Trainers for the Phase 3 System			
4.7	Reference Documentation for the Phase 3 System			
4.8 (Key)	**Successfully Conducted User Acceptance Testing of the Phase 3 System**	$200,000	$20,000	$180,000
4.9 (Key)	**Production Use of the Phase 3 System at all COUNTY Facilities**	$200,000	$20,000	$180,000
4.10	Implementation Review Report for the Phase 3 System			
4.11 (Key)	**Production Use of Phase 3 System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities (Including Holdback for Phase 3)**	$150,950		$150,950
5.1	System Cutover and Conversion Plan for Post-Phase 2 Upgraded Applications Software			

System Deliverable				
Deliverable Number	**Deliverable Description**	**Deliverable Fixed Price**	**Holdback Amount**	**Payment Upon Approved Invoice**
5.2	Unit Tested Post-Phase 2 Upgraded Applications Software			
5.3	Successful System Tests for Post-Phase 2 Upgraded Applications			
5.4 Key)	**Successfully Conducted User Acceptance Testing for Post-Phase 2 Upgraded Applications Software**			
5.5	Training Materials and Trained COUNTY Trainers for Post-Phase 2 Upgraded Applications Software			
5.6 (Key)	**Production Use of Post-Phase 2 Upgraded Applications Software**			
5.7 (Key)	**Production Use of Post-Phase 2 Upgraded Applications Software for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities**	All Task 5 deliverable fees are included in Schedule IV of this Exhibit B.		
6.1	System Cutover and Conversion Plan for Post-Phase 2 Upgraded Applications Software			
6.2	Unit Tested Post-Phase 3 Upgraded Applications Software			
6.3	Successful System Tests for Post-Phase 3 Upgraded Applications			
6.4 (Key)	**Successfully Conducted User Acceptance Testing for Post-Phase 3 Upgraded Applications Software**			

System Deliverable				
Deliverable Number	**Deliverable Description**	**Deliverable Fixed Price**	**Holdback Amount**	**Payment Upon Approved Invoice**
6.5	Training Materials and Trained COUNTY Trainers for Post-Phase 3 Upgraded Applications Software			
6.6 (Key)	**Production Use of Post-Phase 3 Upgraded Applications Software**			
6.7 (key)	**Production Use of Post-Phase 3 Upgraded Applications Software for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities**	All Task 6 deliverable fees are included in Schedule IV of this Exhibit B.		
7.1	CONTRACTOR shall document the change management plan			
8.1	System Design Reports for Custom Programming Modifications and Additional Interfaces			
8.2	Built and tested Custom Programming Modifications and Additional Interfaces			
8.3	Production Use of Custom Programming Modifications and Additional Interfaces			
	Sum of Deliverables	$7,006,198	$508,202	$6,497,996
	Aggregate System Maintenance Fees [1]	$9,893,006		
	Aggregate Remote Hosting Fees [2]	$10,384,670		

[1] Aggregate for Initial Term. See Paragraph 8.0 (Invoices and Payments) of the body of the Agreement and Schedule II of this Exhibit B (Schedule of Payments) for payment terms.
[2] Aggregate for Initial Term. See Paragraph 8.0 (Invoices and Payments) of the body of the Agreement and Schedule III of this Exhibit B (Schedule of Payments) for payment terms.

System Deliverable				
Deliverable Number	**Deliverable Description**	**Deliverable Fixed Price**	**Holdback Amount**	**Payment Upon Approved Invoice**
	Aggregate Application Upgrade and ImageAware Fitness Fees [3]	$1,404,270		
	Aggregate Application Management Services Fees [4]	$2,832,405		
	Maximum Out-Of-Pocket Fixed Price Fees [5]	$302,892		
	Total (Before Pool Dollars)	**$31,823,441**		
	Pool Dollars (Approximately 15% of Total)	$4,728,082		
	Contract Sum	**$36,551,523**		

[3] Aggregate for Initial Term. See Paragraph 8.0 (Invoices and Payments) of the body of the Agreement and Schedule IV of this Exhibit B (Schedule of Payments) for payment terms.
[4] Aggregate for Initial Term. See Paragraph 8.0 (Invoices and Payments) of the body of the Agreement and Schedule V of this Exhibit B (Schedule of Payments) for payment terms.
[5] Aggregate for Initial Term. See Paragraph 8.0 (Invoices and Payments) of the body of the Agreement and Schedule VI of this Exhibit B (Schedule of Payments) for payment terms.

SCHEDULE II: SCHEDULE OF SYSTEM MAINTENANCE FEES

Item	Initial Application Software Modules	Months 1 through 12	Months 13 through 24	Months 25 through 36	Months 37 through 48	Months 49 through 60
1	PowerChart (PowerOrders, Clinical Data Repository, PowerNote)	$47,628	$49,057	$50,529	$52,044	$53,606
2	CareNet (Care Documentation, MAR, PowerPlan, and CareCompass)	$16,566	$17,063	$17,575	$18,102	$18,645
3	Access Management (Registration Management and Scheduling Management)	$4,243	$4,370	$4,501	$4,636	$4,776
4	PathNet (General Laboratory, Microbiology, Anatomic Pathology, CAP SNOWNED III international for Pathology)	$5,980	$6,159	$6,344	$6,535	$6,731
5	PharmNet (Inpatient Pharmacy, Outpatient Pharmacy, and Departmental Clinical Supply Chain for Pharmacy)	$11,407	$11,749	$12,102	$12,465	$12,839
6	RadNet (Radiology Management)	$11,226	$11,563	$11,910	$12,267	$12,6635
7	Health Information Management	$3,166	$3,261	$3,359	$3,460	$3,563
8	Supply Chain (Materials Management)	N/A	N/A	N/A	N/A	N/A
9	Open Engine	N/A	N/A	N/A	N/A	N/A
10	CareAware Multi-Media Foundation (CPDI, eSignature, Worklist Manager (PACS), CAMM DICOM (PACS), Cerner Provision Workstation (PACS), CAMM Image Distribution)	$4,794	$4,938	$5,086	$5,239	$5,396
11	PowerInsight Explorer	N/A	N/A	N/A	N/A	N/A
12	Telemedicine – INet Virtual	$175	$180	$186	$191	$197
13	Open Port - AutoMed FDS Interface	$753	$776	$799	$823	$848

Item	Initial Application Software Modules	Months 1 through 12	Months 13 through 24	Months 25 through 36	Months 37 through 48	Months 49 through 60
14	Open Port Interfaces (Billing Outgoing, Unidirectional Device Interface, PC Encoder Interface)	$1,650	$1,700	$1,750	$1,803	$1,857
	Subtotal Initial Application Software Maintenance Support Fees	**$109,398**	**$112,680**	**$116,061**	**$119,543**	**$123,129**

Fees above for Production Use through the end of the Initial Term include a 3% annual increase. If the term of the Agreement is extended beyond the Initial Term in accordance with Paragraph 5 of the Agreement, the Application Software module support can be renewed at the last monthly rate charged plus a 3% annual increase.

Item	Initial Third Party Software	Months 1 through 12	Months 13 through 24	Months 25 through 36	Months 37 through 48	Months 49 through 60
1	Cedara (PACS)	$797	0	0	0	0
2	CPDI – ApplicationXtender Server (EMC)	$2,250	$2,318	$2,387	$2,459	$2,532
3	CPDI - AX License (EMC)	$134	$138	$142	$146	$151
4	CPDI – Integrated Full Station (Kofax)	$782	$805	$828	$855	$880
5	VSG Internet Encryption (InfoExpress) (QC-VSGA9-AA)	$179	$184	$190	$196	$201
	Subtotal Initial Third Party Maintenance Support Fees	**$4,142**	**$3,445**	**$3,549**	**$3,655**	**$3,765**

If the term of the Agreement is extended beyond the Initial Term in accordance with Paragraph 5 of the Agreement, the Third Party Software module will require a quote to determine renewal fees.
Cedara fees terminate upon acceptance of Deliverable 2.4.7 (Production Use of Phase 1 System at all COUNTY Facilities) in Exhibit A (Statement of Work).

Item	Phase 1 New Application Software Modules	Production Use ("Prod") Through 12 Months	Prod + 12 Months through Prod +24 Months	Prod + 24 Months through Prod +36 Months	Prod + 36 Months through Prod +48 Months	Prod + 48 Months through Prod +60 Months
1	P2 Sentinel Enterprise	$1,562	$1,609	$1,657	$1,707	$1,758
2	724 Access – Downtime Viewer	$3,667	$3,777	$3,890	$4,007	$4,127
3	Open Port – Automed Drug Packaging Interface (Six (6) New licenses)	$780	$803	$827	$852	$878
	Subtotal Phase 1 Application Software	**$6,009**	**$6,189**	**$6,375**	**$6,566**	**$6,763**

Fees above for Production Use through the end of the Initial Term include a 3% annual increase. If the term of the Agreement is extended beyond the Initial Term in accordance with Paragraph 5 of the Agreement, the subscription based Application Software module support can be renewed at the last monthly rate charged plus a 3% annual increase.

Item	Phase 1 New Third Party Software	Production Use ("Prod") Through 12 Months	Prod + 12 Months through Prod +24 Months	Prod + 24 Months through Prod +36 Months	Prod + 36 Months through Prod +48 Months	Prod + 48 Months through Prod +60 Months
1	Golden Gate License for 724DT	$917	$945	$973	$1,002	$1,032
2	P2 Sentinel – Sensage Critical Enterprise 12 core – 1 collector	$2,218	$2,285	$2,353	$2,424	$2,496
3	Merge Port Software Interface Kit	$174	$179	$185	$190	4196
	Subtotal Phase 1 System Third Party Maintenance Support Fees	**$3,309**	**$3,408**	**$3,511**	**$3,616**	**$3,724**

If the term of the Agreement is extended beyond the Initial Term in accordance with Paragraph 5 of the Agreement, the Third Party Software module will require a quote to determine renewal fees.

Item	Phase 1 Subscription Based Application Software Modules	Production Use ("Prod") Through 12 Months	Prod + 12 Months through Prod +24 Months	Prod + 24 Months through Prod +36 Months	Prod + 36 Months through Prod +48 Months	Prod + 48 Months through Prod +60 Months
1	CPT (Codes and Medical Terminology)	$13.50 (annual)				
2	Ambulatory Content Package (Medisource Foundation for Ambulatory, PowerNote for Ambulatory, CMT Ambulatory, and Executable Knowledge Foundation Ambulatory)	$7,875	$8,111	$8,385	$8,605	$8,863

Fees above for Production Use through the end of the Initial Term include a 3% annual increase. If the term of the Agreement is extended beyond the Initial Term in accordance with Paragraph 5 of the Agreement, the subscription based Application Software module support can be renewed at the last monthly rate charged plus a 3% annual increase.

Item	Phase 2 Application Software Modules	Production Use ("Prod") Through 12 Months	Prod + 12 Months through Prod +24 Months	Prod + 24 Months through Prod +36 Months	Prod + 36 Months through Prod +48 Months	Prod + 48 Months through Prod +60 Months
1	CareAware Multi-Media Foundation (CPDI, eSignature, Worklist Manager (PACS), CAMM DICOM (PACS), Cerner Provision Workstation (PACS), CAMM Image Distribution, Digital Objects)	$4,432	$4,565	$4,702	$4,843	$4,988
2	Power Point of Care	$4,336	$4,466	$4,600	$4,738	$4,880
3	Patient Accounting	$7,015	$7,225	$7,442	$7,665	$7,895
4	Womens Health (Powerchart Maternity)	$50	$52	$53	$55	$56

Item	Phase 2 Application Software Modules	Production Use ("Prod") Through 12 Months	Prod + 12 Months through Prod +24 Months	Prod + 24 Months through Prod +36 Months	Prod + 36 Months through Prod +48 Months	Prod + 48 Months through Prod +60 Months
5	Open Port Interfaces (Pyxsis)	$260	$268	$276	$284	$293
6	CareNet (Advanced Care Documentation)	$3,289	$3,388	$3,489	$3,594	$3,702
	Subtotal Phase 2 Application Software	**$19,382**	**$19,963**	**$20,562**	**$21,179**	**$21,815**

Fees above for Production Use through the end of the Initial Term include a 3% annual increase. If the term of the Agreement is extended beyond the Initial Term in accordance with Paragraph 5 of the Agreement, the subscription based Application Software module support can be renewed at the last monthly rate charged plus a 3% annual increase.

Item	Phase 2 Third Party Software	Production Use ("Prod") Through 12 Months	Prod + 12 Months through Prod +24 Months	Prod + 24 Months through Prod +36 Months	Prod + 36 Months through Prod +48 Months	Prod + 48 Months through Prod +60 Months
1	CPDI – ApplicationXtender Server, (EMC)	$1,394	$1,436	$1,479	$1,523	$1,569
2	CPDI - AX License (EMC)	$854	$880	$906	$933	$961
3	ESIG Support	$3,573	$3,680	$3,791	$3,904	$4,021
4	Mortara ECG Viewer	$267	$275	$283	$292	$301
	Subtotal Phase 2 System Third Party Maintenance Support Fees	**$6,088**	**$6,271**	**$6,459**	**$6,653**	**$6,852**

If the term of the Agreement is extended beyond the Initial Term in accordance with Paragraph 5 of the Agreement, the Third Party Software module will require a quote to determine renewal fees.

Item 4 (Mortara ECG Viewer) will be pre-paid annually upon initiation of Task 3 (Phase 2 System Application Software Development) of Exhibit A (SOW) based upon the monthly rates as shown in this Exhibit B.

Item	Phase 2 Subscription-Based And Transaction Services Application Software Modules	Production Use ("Prod") Through 12 Months	Prod + 12 Months through Prod +24 Months	Prod + 24 Months through Prod +36 Months	Prod + 36 Months through Prod +48 Months	Prod + 48 Months through Prod +60 Months
1	Eligibility and Benefits Verification (16,000 monthly eligibility transactions)	$3,520	$3,626	$3,734	$3,846	$3,962

Fees above for Production Use through the end of the Initial Term include a 3% annual increase. If the term of the Agreement is extended beyond the Initial Term in accordance with Paragraph 5 of the Agreement, the subscription based Application Software module support can be renewed at the last monthly rate charged plus a 3% annual increase.

Item	Phase 3 Application Software Modules	Production Use ("Prod") Through 12 Months	Prod + 12 Months through Prod +24 Months	Prod + 24 Months through Prod +36 Months	Prod + 36 Months through Prod +48 Months	Prod + 48 Months through Prod +60 Months
1	PowerInsight Explorer	$7,135	$7,349	$7,570	$7,797	$8,031

Fees above for Production Use through the end of the Initial Term include a 3% annual increase. If the term of the Agreement is extended beyond the Initial Term in accordance with Paragraph 5 of the Agreement, the subscription based Application Software module support can be renewed at the last monthly rate charged plus a 3% annual increase.

Item	Phase 3 Third Party Software Modules	Production Use ("Prod") Through 12 Months	Prod + 12 Months through Prod +24 Months	Prod + 24 Months through Prod +36 Months	Prod + 36 Months through Prod +48 Months	Prod + 48 Months through Prod +60 Months
1	SAP Business Objects Runtime License for PowerInsight	$938	$966	$995	$1,025	$1,056

If the term of the Agreement is extended beyond the Initial Term in accordance with Paragraph 5 of the Agreement, the Third Party Software module will require a quote to determine renewal fees.

Item	Phase 3 Subscription Based Application Software Modules	Production Use ("Prod") Through 12 Months	Prod + 12 Months through Prod +24 Months	Prod + 24 Months through Prod +36 Months	Prod + 36 Months through Prod +48 Months	Prod + 48 Months through Prod +60 Months
1	Lighthouse: Falls Prevention	$919	$947	$975	$1,004	$1,034
2	Lighthouse: Pressure Ulcer Prevention	$1,540	$1,586	$1,634	$1,683	$1,733
3	Lighthouse: Delirium	$696	$717	$738	$761	$783
4	Lighthouse: Restraints	$696	$717	$738	$761	$783
5	Lighthouse: Glycemic Control	$1,627	$1,676	$1,726	$1,778	$1,831
6	Lighthouse: Sepsis	$2,401	$2,473	$2,547	$2,624	$2,702
7	Lighthouse: Emergent Stroke and TIA Management w/e Submission	$1,850	$1,905	$1,963	$2,022	$2,082
8	Lighthouse: Anticoagulation Management	$1,265	$1,303	$1,342	$1,382	$1,424
9	Lighthouse: Activity Intolerance and Impaired Mobility	$696	$717	$738	$761	$783
	Subtotal Subscription-Based Phase 3 System	**$11,690**	**$12,041**	**$12,402**	**$12,774**	**$13,157**

Fees above for Production Use through the end of the Initial Term include a 3% annual increase. If the term of the Agreement is extended beyond the Initial Term in accordance with Paragraph 5 of the Agreement, the subscription based Application Software module support can be renewed at the last monthly rate charged plus a 3% annual increase.

Item	Optional Application Software Modules	Production Use ("Prod") Through 12 Months	Prod + 12 Months through Prod +24 Months	Prod + 24 Months through Prod +36 Months	Prod + 36 Months through Prod +48 Months	Prod + 48 Months through Prod +60 Months
1	iAware (CareAware Infusion Mgt and CareAware iAware platform)	$1,032	$1,063	$1,095	$1,128	$1,162
2	CareAware iBus (Standard iBus, AlertLink, VitalsLink)	$13,020	$13,411	$13,813	$14,227	$14,654
3	mPages Development Kit	$2,399	$2,471	$2,545	$2,621	$2,700
4	Digital Dictation	$473	$487	$502	$517	$532
5	Open Port Interfaces (Temporary Bedside Device Storage (iBus)	$290	$299	$308	$317	$326
	Subtotal Optional Application Software Modules	**$17,214**	**$17,730**	**$18,262**	**$18,810**	**$19,375**

Fees above for Production Use through the end of the Initial Term include a 3% annual increase. If the term of the Agreement is extended beyond the Initial Term in accordance with Paragraph 5 of the Agreement, the subscription based Application Software module support can be renewed at the last monthly rate charged plus a 3% annual increase.

Item	Optional Third Party Software	Production Use ("Prod") Through 12 Months	Prod + 12 Months through Prod +24 Months	Prod + 24 Months through Prod +36 Months	Prod + 36 Months through Prod +48 Months	Prod + 48 Months through Prod +60 Months
1	CareAware iAware platform	$2,400	$2,472	$2,546	$2,623	$2,701
2	CareAware iBus	$2,500	$2,575	$2,652	$2,732	$2,814
3	iAccess – Single Sign On	$1,970	$2,029	$2,090	$2,153	$2,217
	Subtotal Optional Third Party Software Maintenance Support Fees.	**$6,870**	**$7,076**	**$7,288**	**$7,507**	**$7,732**

If the term of the Agreement is extended beyond the Initial Term in accordance with Paragraph 5 of the Agreement, the Third Party Software module will require a quote to determine renewal fees.

Item	Optional Subscription-Based Application Software Modules	Production Use ("Prod") Through 12 Months	Prod + 12 Months through Prod +24 Months	Prod + 24 Months through Prod +36 Months	Prod + 36 Months through Prod +48 Months	Prod + 48 Months through Prod +60 Months
1	iBus - Cerner Device Manager Library	$1,016	$1,046	$1,078	$1,110	$1,144
	Subtotal Optional Subscription-Based Software Modules [2 and 3]	**$1,016**	**$1,046**	**$1,078**	**$1,110**	**$1,144**

Fees above for Production Use through the end of the Initial Term include a 3% annual increase. If the term of the Agreement is extended beyond the Initial Term in accordance with Paragraph 5 of the Agreement, the subscription based Application Software module support can be renewed at the last monthly rate charged plus a 3% annual increase.

SCHEDULE III:

REMOTE HOSTING SERVICES FEES

Remote Hosting Services Fees for System

Item	System	Effective Date Through Month 12	Month 13 through Month 24	Month 25 through Month 36	Month 37 through Month 48	Month 49 through Month 60
	Monthly Remote Hosting Services (Recurring Fees)	$163,000	$167,890	$172,927	$178,115	$183,458
	Total Annual Remote Hosting Services Fees	**$1,956,000**	**$2,014,680**	**$2,075,120**	**$2,137,374**	**$2,201,495**

Fees above for Effective Date through the end of the Initial Term include a 3% annual increase. If the term of the Agreement is extended beyond the Initial Term in accordance with Paragraph 5 of the Agreement, the Remote Hosting Services can be renewed at the last monthly rate charged plus a 3% annual increase.

Scope of use expansion for Remote Hosting Services may be subject to additional fees. CONTRACTOR will provide quote(s) for scope of use expansion pricing when necessary and the Agreement will be updated accordingly in accordance with Paragraph 6 of the Agreement.

SCHEDULE IV:

APPLICATION UPGRADE AND IMAGEAWARE FITNESS FEES

Item	System	Effective Date Through Month 12	Month 13 through Month 24	Month 25 through Month 36	Month 37 through Month 48	Month 49 through Month 60
1	One-Time Application Upgrade Fee	$138,900				
2	Monthly Application Upgrade Fees	$14,700	$14,700	$14,700	$14,700	$14,700
3	Monthly ImageAware Fitness Fees	$6,390.50	$6,390.50	$6,390.50	$6,390.50	$6,390.50
4	Total Monthly Application Upgrade and ImageAware Fitness Fees	$21,090.50	$21,090.50	$21,090.50	$21,090.50	$21,090.50
	Total Annual Application Upgrade and ImageAware Fitness Fees	**$391,974**	**$253,074**	**$253,074**	**$253,074**	**$253,074**

Maximum total fees through the Initial Term for Application Upgrade is $1,020,900 and maximum total fees through the Initial Term for ImageAware Fitness is $383,370 for total aggregate fees of $1,404,270.

SCHEDULE V:

APPLICATION MANAGEMENT SERVICES (AMS) FEES

Item	System	Effective Date through Month 6	Month 7 through Month 20	Month 21 through Month 28	Month 29 through Initial Term	Maximum AMS Fees
1	One-Time Set-up Fees	$142,155				
2	Monthly AMS Fees[6]	$25,000	$37,500	$48,750	$51,000	
	Maximum AMS Fees					**$2,832,405**

Fees increase in month 6 when CONTRACTOR provides one full-time AMS staff resource on-site at COUNTY Facilities. Fees increase again subsequent to Production Use of Phase 2 System scheduled for Month 21 after the Effective Date as shown in this Schedule V. Fees increase again in the month subsequent to Production Use of Phase 3 System scheduled for Month 29 after the Effective Date as shown in this Schedule V. If the term of the Agreement is extended beyond the Initial Term in accordance with Paragraph 5 of the Agreement, the Application Software module support can be renewed at the last monthly rate charged plus a 3% annual increase.
Scope of use expansion for Application Management Services may be subject to additional fees. CONTRACTOR will provide quotes for scope of use expansion pricing when necessary and the Agreement will be updated accordingly in accordance with Paragraph 6 of the Agreement.

[6] CONTRACTOR shall invoice COUNTY for Application Management Service (AMS) fees at the rate of indicated per month for a total amount not to exceed the Aggregate sum as specified in Exhibit B of this Agreement (60 months) for such service.

SCHEDULE VI:

OUT-OF POCKET (OOP) FEES

Item	Phase	Estimated Fees	Basis for Estimated Fees
1	Estimated Phase 1 Fees	$15,996	Up to 31 on-site travel days.
2	Estimated Phase 2 Fees (including Post-Phase 2 Upgrade)	$302,892	Up to 587 on-site travel days.
3	Estimated Phase 3 Fees (including Post-Phase 3 Upgrade)	$39,216	Up to 76 on-site travel days.
	Estmated Total for OOP Fees	**$358,104**	Up to 694 on-site travel days.
	Non-Reimbursable Fees	**$55,212**	Up to 107 on-site travel days.
	Reimbursable Fees	**$302,892**	Up to 587 days at $516 per day for Out-Of-Pocket Fixed Price Expenses.

Fees for reimbursement of travel expenses for CONTRACTOR are at the Out-Of-Pocket Fixed Price of $516 per day not to exceed a total of $302,892 and shall be reimbursed as specified in Paragraph 8 (Invoices and Payments) of this Agreement. Additional on-site travel by CONTRACTOR of 107 days shall not be reimbursed.

Scope of use expansion for OOP may be subject to additional fees. CONTRACTOR will provide quotes for scope of use expansion pricing when necessary and the Agreement will be updated accordingly in accordance with Paragraph 6 of the Agreement.

EXHIBIT C

PROJECT SCHEDULE

EXHIBIT C
PROJECT SCHEDULE

Capitalized terms used in this Exhibit C without definition have the meaning given to such terms in the body of the Agreement and if not defined therein, in the body of Exhibit A (Statement of Work).

I. Delivery Schedule

Deliverable	Description	Weeks After Effective Date	Associated Milestone
1.1 (Key)	**Project Control Document (PCD)**	**6**	**1-9**
1.2	Project Status Reports	Monthly	1-9
1.3	System Operations Plan	4	1
1.4	Business Continuity Plan	4	1
2.1 (Key)	**Production Use of System with Remote Hosting Services**	**4**	**1**
2.2	Optimized Production System	8	1
2.3	System Migrated to Upgraded Technical Environment	16	2
2.4.1	Installed and Configured PACS Hardware for Phase 1 System Upgrade	16	2
2.4.2	Unit Tested Phase 1 System	24	2
2.4.3	Successful System Tests for Phase 1 System	28	2
2.4.4	System Cutover and Conversion Plan for Phase 1 System	28	2
2.4.5 (Key)	**Successfully Conducted User Acceptance Testing for Phase 1 System**	**30**	**2**
2.4.6	Training Materials and Trained COUNTY Trainers for Phase 1 System	32	2
2.4.7 (Key)	**Production Use of Phase 1 System at all COUNTY Facilities**	**34**	**2**
2.4.8	Post-Implementation Review of Phase 1 System	36	3

Deliverable	Description	Weeks After Effective Date	Associated Milestone
2.4.9 (Key)	**Production Use of Phase 1 System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities**	**40**	**3**
2.5.1	Production Use of Automated Ambulatory Code Updates	8	2
2.5.2	Production Use of RadNet Ultrasound Module	8	2
2.5.3 (Key)	**Production Use of CPDI Enhancements**	**12**	2
2.6.1	Application Management Services Operational Plan	4	2
2.6.2 (Key)	**Set up and Configured Application Management Services (AMS)**	**12**	**2**
2.7	Set up and Configured P2Sentinel Security Enterprise	28	2
2.8.1	Documented Technical Configuration and Plan for Use of the 724Access Downtime Viewer Application Software Module	32	3
2.8.2	Installed, Configured, and Tested 724Access Downtime Viewer Application Software Module	37	3
2.8.3	Trained COUNTY Trainers	38	3
2.8.4 (Key)	**Production Use of 724Access Downtime Viewer Application Software Module**	**40**	**3**
3.1.1	Phase 2 Project Preparation Session	42	4
3.1.2	CONTRACTOR Installed, Tested, and Certified Phase 2 System Application Software Modules	44	4
3.2	MethodM Phase 2 Project Kickoff Event	46	4

Deliverable	Description	Weeks After Effective Date	Associated Milestone
3.3.1 (Key)	**Design Documentation for each Phase 2 System Application Software Module**	**58**	**4**
3.3.2	Built and Unit Tested each Phase 2 System Application Software Module	66	4
3.3.3	System Tested each Phase 2 System Application Software Module	72	4
3.4.1	Integration Test Plans and Test Scripts for the Phase 2 System	64	4
3.4.2 (Key)	**Successful Integration Test Results for the Phase 2 System**	**76**	**4**
3.5.1	System Cutover and Conversion Plan for the Phase 2 System		
3.5.2	Verified System Cutover and Conversion Plan for the Phase 2 System		
3.6.1	Documented Training Classes and Training Materials for the Phase 2 System		
3.6.2	Trained COUNTY Trainers for the Phase 2 System		
3.7	Reference Documentation for the Phase 2 System		
3.8 (Key)	**Successfully Conducted User Acceptance Testing of the Phase 2 System**	**82**	**4**
3.9 (Key)	**Production Use of the Phase 2 System at all COUNTY Facilities**	**88**	**4**
3.10	Post-Implementation Review Report for the Phase 2 System	92	5
3.11 (Key)	**Production Use of Phase 2 System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities**	**92**	**5**
4.1.1	Phase 3 Project Preparation Session	108	6

Deliverable	Description	Weeks After Effective Date	Associated Milestone
4.1.2	CONTRACTOR Installed, Tested, and Certified Phase 3 System Application Software Modules	110	6
4.2	MethodM Phase 3 Project Kickoff Event	112	6
4.3.1 (Key)	**Design Documentation for each Phase 3 System Application Software Module**	**116**	**6**
4.3.2	Built and Unit Tested each Phase 3 System Application Software Module		
4.3.3	System Tested each Phase 3 System Application Software Module		
4.4.1	Integration Test Plans and Test Scripts for the Phase 3 System		
4.4.2 (Key)	**Successful Integration Test Results for the Phase 3 System**	**120**	**6**
4.5.1	System Cutover and Conversion Plan for the Phase 3 System		
4.5.2	Verified System Cutover and Conversion Plan for the Phase 3 System		
4.6.1	Documented Training Classes and Training Materials for the Phase 3 System		
4.6.2	Trained COUNTY Trainers for the Phase 3 System		
4.7	Reference Documentation for the Phase 3 System		
4.8 (Key)	**Successfully Conducted User Acceptance Testing of the Phase 3 System**	**124**	**6**
4.9 (Key)	**Production Use of the Phase 3 System at all COUNTY Facilities**	**130**	**6**
4.10	Post-Implementation Review Report for the Phase 3 System		

Deliverable	Description	Weeks After Effective Date	Associated Milestone
4.11 (Key)	**Production Use of Phase 3 System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities**	**134**	**7**
5.1	System Cutover and Conversion Plan for Post-Phase 2 Upgraded System		
5.2	Unit Tested Post-Phase 2 Upgraded System		
5.3	Successful System Tests for Post-Phase 2 Upgraded System		
5.4 (Key)	**Successfully Conducted User Acceptance Testing for Post-Phase 2 Upgraded System**	**102**	**8**
5.5	Training Materials for Post-Phase 2 Upgraded System		
5.6 (Key)	**Production Use of Post-Phase 2 Upgraded System**	**104**	**8**
5.7 (Key)	**Production Use of Post-Phase 2 Upgraded System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities**	**108**	**8**
6.1	System Cutover and Conversion Plan for Post-Phase 3 Upgraded System		
6.2	Unit Tested Post-Phase 3 Upgraded System		
6.3	Successful System Tests for Post-Phase 3 Upgraded System		
6.4 (key)	**Successfully Conducted User Acceptance Testing for Post-Phase 3 Upgraded System**	**180**	**9**
6.5	Training Materials for Post-Phase 3 Upgraded System		
6.6 (Key)	**Production Use of Post-Phase 3 Upgraded System**	**182**	**9**

Deliverable	Description	Weeks After Effective Date	Associated Milestone
6.7 (Key)	**Production Use of Post-Phase 3 Upgraded System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities**	**186**	**9**
7.1	CONTRACTOR shall document the change management plan.		
8.1	System Design Reports for Custom Programming Modifications and Additional Interfaces		
8.2	Built and Tested Custom Programming Modifications and Additional Interfaces		
8.3	Production Use of Custom Programming Modifications and Additional Interfaces		

EXHIBIT C
PROJECT SCHEDULE

II. Milestone Definitions

Milestone	Definition
1	Production Use of System with Remote Hosting Services in accordance with Subtask 2.1 (Perform System Cutover to Remote Hosting Services) of this Statement of Work (Exhibit A).
2	Production Use of the Phase 1 System at all COUNTY Facilities in accordance with Subtask 2.4.7 (Implement the Phase 1 System for Production Use at all COUNTY Facilities) following successful User Acceptance Testing of the Phase 1 System as set forth in Subparagraph 9.3 (User Acceptance Tests) of the Agreement and Subtask 2.4.5 (Conduct User Acceptance Testing of the Phase 1 System) of this Statement of Work (Exhibit A).
3	Maintenance of Production Use of the Phase 1 System for thirty (30) consecutive days with no Deficiencies as set forth in Subtask 2.4.9 (Maintain Production Use of Phase 1 System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities) of this Statement of Work (Exhibit A).
4	Production Use of the Phase 2 System at all COUNTY Facilities in accordance with Subtask 3.8 (Implement the Phase 1 System for Production Use at all COUNTY Facilities) following successful User Acceptance Testing of the Phase 2 System as set forth in Subparagraph 9.3 (User Acceptance Tests) of the Agreement and Subtask 3.8 (Conduct User Acceptance Testing of the Phase 2 System) of this Statement of Work (Exhibit A).
5	Maintenance of Production Use of the Phase 2 System for thirty (30) consecutive days with no Deficiencies as set forth in Subtask 3.11 (Maintain Production Use of Phase 2 System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities) of this Statement of Work (Exhibit A).
6	Production Use of the Phase 3 System at all COUNTY Facilities in accordance with Subtask 4.9 (Implement the Phase 3 System for Production Use at all COUNTY Facilities) following successful User Acceptance Testing of the Phase 3 System as set forth in Subparagraph 9.3 (User Acceptance Tests) of the Agreement and Subtask 4.8 (Conduct User Acceptance Testing of the Phase 3 System) of this Statement of Work (Exhibit A).

Milestone	Definition
7	Maintenance of Production Use of the Phase 3 System for thirty (30) consecutive days with no Deficiencies as set forth in Subtask 4.11 (Maintain Production Use of Phase 3 System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities) of this Statement of Work (Exhibit A).
8	For the Post-Phase 2 System Upgrade, maintenance of Production Use of Post-Phase 2 Upgraded System for thirty (30) consecutive days with no Deficiencies as set forth in Subtask 5.7 (Maintain Production Use of Post-Phase 2 Upgraded System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities) of this Statement of Work (Exhibit A).
9	For the Post-Phase 3 System Upgrade, maintenance of Production Use of Post-Phase 3 Upgraded System for thirty (30) consecutive days with no Deficiencies as set forth in Subtask 6.7 (Maintain Production Use of Post-Phase 3 Upgraded System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities) of this Statement of Work (Exhibit A).

EXHIBIT C
PROJECT SCHEDULE

III. Chronology Table for Completion of Key Deliverables

Week from Effective Date	Task Number	Description
4	2.1	Production Use of System with Remote Hosting Services
6	1.1	Project Control Document
12	2.5.3	Production Use of CPDI Enhancements
12	2.6.2	Set up and Configured Application Management Services
30	2.4.5	Successfully Conducted User Acceptance Testing for Phase 1 System
34	2.4.7	Production Use of the Phase 1 System at all COUNTY Facilities
40	2.4.9	Production Use of the Phase 1 System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities
40	2.8.4	Production Use of 724Access Downtime Viewer Application Software Module
58	3.3.1	Design Documentation for each Phase 2 System Application Software Module
76	3.4.2	Successful Integration Test Results for the Phase 2 System
82	3.8	Successfully Conducted User Acceptance Testing for Phase 2 System
88	3.9	Production Use of the Phase 2 System at all COUNTY Facilities
92	3.11	Production Use of the Phase 2 System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities
102	5.4	Successfully Conducted User Acceptance Testing for Post-Phase 2 Upgraded System
104	5.6	Production Use of the Post-Phase 2 Upgraded System at all COUNTY Facilities
108	5.7	Production Use of the Post-Phase 2 Upgraded System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities
116	4.3.1	Design Documentation for each Phase 3 System Application Software Module

Week from Effective Date	Task Number	Description
120	4.4.2	Successful Integration Test Results for the Phase 3 System
124	4.8	Successfully Conducted User Acceptance Testing for Phase 3 System
130	4.9	Production Use of the Phase 3 System at all COUNTY Facilities
180	6.4	Successfully Conducted User Acceptance Testing for Post-Phase 3 Upgraded System
182	6.6	Production Use of the Post-Phase 3 Upgraded System at all COUNTY Facilities
186	6.7	Production Use of the Post-Phase 3 Upgraded System for Thirty (30) Consecutive Days with No Deficiencies at all COUNTY Facilities

EXHIBIT D

SERVICE LEVEL AGREEMENT

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EXHIBIT D

SERVICE LEVEL AGREEMENT

SOFTWARE MAINTENANCE, REMOTE HOSTING SERVICES,
UPGRADES IMPLEMENTATION SERVICES,
AND APPLICATION MANAGEMENT SERVICES

This Exhibit D (together with all Schedules hereto, "Service Level Agreement" or "SLA") is attached to, and defines the services levels to be provided under, that certain Agreement dated _____ by and between County of Los Angeles (COUNTY) and Cerner Corporation (CONTRACTOR) for a Jail Health Information System (together with all Exhibits and Attachments, the "Agreement"), for COUNTY's Sheriff's Department and health care providers serving inmates residing in its jail facilities.

Capitalized terms used in this SLA without definition have the meanings given to such terms in the body of the Agreement and if not defined therein, in the body of Exhibit A (Statement of Work) of the Agreement. As used herein, the following terms have the following meanings:

"1st Level Help Desk" shall have the meaning set forth in Section VI.A.(2)(d) of this SLA.

"2nd Level Help Desk Services" shall have the meaning set forth in Section IV.A.(5) of this SLA.

"Approved Change Management Plan" shall have the meaning set forth in Section V.A.(1)(b) of this SLA.

"Approved Upgrade Plan" shall have the meaning set forth in Section III.A.(1)(g) of this SLA.

"Availability," "Availability Warranty" shall have the meaning set forth in Schedule I (Service Level Commitments) to this SLA.

"Back-end System" shall have the meaning as set forth in Section II.C.(3) of this SLA.

"Build Domain" shall have the meaning set forth in Exhibit A of the Agreement.

"Certification Domain" shall have the meaning set forth in Exhibit A of the Agreement.

"Change Management Plan" shall mean Deliverable 7.1 of the Statement of Work of the Agreement.

"Corrective Maintenance" shall have the meaning set forth in Section I.A.(1) of this SLA.

"COUNTY Representative" shall have the meaning as defined in the introductory of this SLA.

"Domain" shall have the meaning set forth in Exhibit A of the Agreement.

"Front-end System" shall have the meaning as set forth in Section II.C.(4) of this SLA.

"LAN" shall mean Local Area Network.

"Major System Change" shall mean a backend upgrade, operating system upgrade, Upgrade, SAN upgrade, or Oracle®1 database upgrade.

"Mock Upgrade" shall mean the process of creating, when necessary, and managing the domain(s) and performing a mock test resulting from the installation of an Upgrade.

"P2Sentinel " shall have the meaning set forth in Section II.C.(2)(i) of this SLA.

PLT shall mean the LASD Project Leadership Team consisting of executives and key staff within the Correctional Services Division and the Technical Services Division that provide oversight and establish policy for the JHIS project.

"Production Domain" shall have the meaning set forth in the SOW of the Agreement.

"Report Management" shall have the meaning as set forth in Section IV.A.(4) of this SLA.

"Response Time" shall mean the elapsed time for a User's execution of a transaction which has an associated Response Time Management System standard when using the Production Domain, rounded up to the nearest second.

"Response Time Management System" or "RTMS" shall mean the Response Time measurement tool installed by CONTRACTOR and enabled on the Production Domain.

"Response Time Warranty" shall have the meaning set forth in Schedule I (Service Level Commitments) to this SLA.

"RRD" shall mean remote report distribution.

[1] Oracle is a registered trademark of Oracle Corporation and/or its affiliates.

"Scheduled Downtime" shall mean the aggregate total duration in minutes of scheduled or planned System Downtime set forth in the System Operations Plan approved by COUNTY as Deliverable 1.3 of Exhibit A (Statement of Work) or as otherwise mutually agreed by the COUNTY's Project Director and CONTRACTOR. With respect to any quarter and excluding COUNTY-requested Scheduled Downtime, if Scheduled Downtime in such quarter exceeds the limits set forth in JHIS Technical and Operational Requirements to Exhibit A (Statement of Work), then such excess shall be considered Unscheduled Downtime.

"Security Incident" shall have the meaning set forth in Exhibit J(CONTRACTOR'S Obligations As a "Business Associate" Under Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the Health Information Technology for Economic and Clinical Health Act (HITECH)) of the Agreement.

"Service Package" (sometimes "Patch") shall mean an Update supplied as a fix or enhancement of a specific hosted System Component.

"Severity Level" shall have the meaning set forth in Schedule I (Service Level Commitments) to this SLA.

"System Software Support" shall have the meaning set forth in Section I.A.(1) of this SLA.

"System Stabilization Period" shall mean the seventy-two (72) hour period following each of i) first Production Use of the Phase 1 System, Phase 2 System, or Phase 3 System and ii) implementation of a Major System Change.

"System Availability" shall have the meaning set forth in Schedule I (Service Level Commitments) of this SLA.

"Mock Domain" shall have the meaning set forth in Exhibit A of the Agreement.

"Update" shall have the meaning set forth in Section I.A.(6) of this SLA.

"Upgrade" shall have the meaning set forth in Section I.A.(6) of this SLA.

"Unscheduled Downtime" shall mean all Downtime occurring in the Production Domain other than Scheduled Downtime. Unscheduled Downtime includes, but is not limited to, Downtime resulting from a problem that has not been resolved as is required by this SLA.

"WAN" shall mean Wide Area Network.

CONTRACTOR shall provide the following "Services" in respect of the System and described in more detail in the remaining provisions of this SLA:

- System Maintenance (Section I),
- Remote Hosting Services (Section II),
- UPGRADES Implementation Services (Section III), and
- Application Management Services (AMS) (Section IV)

In general, these Services provide all maintenance, support, hosting, Upgrade implementation and application management services required for the System and each applicable Phase and Optional Phase System to operate (and to be operated by all Users at all COUNTY Facilities) in accordance with the Specifications and otherwise with the Agreement. Without limiting the foregoing, the Services include maintenance of the System's and each applicable Phase or Optional Phase System's compliance with the Response Time and Availability Warranties as provided in this SLA.

Additionally without limiting the foregoing, CONTRACTOR shall provide, manage, monitor, control, and report on System security in accordance with the Specifications as provided in Section II (Security Requirements) of (JHIS Technical and Operational Requirements) of Exhibit A (Statement of Work) of the Agreement. In addition to the reporting requirements set forth in Exhibit J (CONTRACTOR'S Obligations As a "Business Associate" Under Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the Health Information Technology for Economic and Clinical Health Act (HITECH)) to the Agreement, CONTRACTOR shall notify COUNTY's Project Managers upon reason to believe a security threat may exist to County data/information within four (4) hours of identification of the security threat. Following notification, CONTRACTOR shall also report to COUNTY's Project Manager all other Security Incidents for which CONTRACTOR has knowledge that JHIS is subject to similar threats. Such reports shall include the nature of the incident, the steps taken to remediate the associated threat or vulnerability, and any residual risk. (CONTRACTOR'S Obligations As a "Business Associate" Under Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the Health Information Technology for Economic and Clinical Health Act (HITECH)).

In addition, on a monthly basis, CONTRACTOR shall summarize any non-County related Security Incidents of which CONTRACTOR has knowledge that have occurred during the period and their remediation at a high level with COUNTY Project Manager using telephone or email communications, as determined by CONTRACTOR in its sole discretion. These high level summaries shall include the nature of the incident(s), steps taken to remediate the associated threat(s) or vulnerability(ies), and any residual risk(s). The summaries shall not include any information that could reveal the customer(s) affected directly by the incident.
Paragraph 6 (Change Notices and Amendments) of the body of the Agreement provides the overall change management procedures for the Agreement. Without limiting said provisions, CONTRACTOR shall manage changes relative to this SLA as specified in

Section V below and the Change Management Plan accepted by the COUNTY as Deliverable 7.1 (Change Management Plan) of Exhibit A (Statement of Work) of the Agreement. COUNTY and CONTRACTOR acknowledge that both shall participate in regular change control meetings and that the approved Change Management Plan will control all System change processes, including workflows and parameter or other changes that impact System performance.

Also defined herein are services that involve active participation of COUNTY. Unless otherwise specified herein as a COUNTY obligation, CONTRACTOR shall perform all Services as defined herein.

CONTRACTOR shall deliver all Upgrades and Updates, all Documentation and all other Deliverables required under this SLA to COUNTY in accordance with Subparagraph 4.6 (Delivery of Work) of the body of the Agreement. Further, as of the Effective Date, no hardware or other equipment is being purchased from CONTRACTOR by COUNTY pursuant to this Service Level Agreement or under other professional services or otherwise.

With respect to all Services defined herein, COUNTY will identify three alternates (in addition to COUNTY's Project Manager) to serve as COUNTY's support contacts (hereafter referred to as the "COUNTY Representatives"). Only COUNTY's Representatives shall be authorized to request Services defined herein (when in accordance with this SLA, the Services require an explicit COUNTY request to initiate their delivery) on behalf of COUNTY. COUNTY may change its Representative(s) by written notice to CONTRACTOR.

In addition to the four COUNTY Representatives identified in the paragraph immediately above, COUNTY will identify a Security Representative to provide COUNTY security services and information including but not limited to identity management, User provisioning, role definitions, group management, and other security services required of COUNTY in respect to CONTRACTOR's provision of the Remote Hosting Services (as defined below) and COUNTY"S provision in support of the Remote Hosting Services.

In respect to the Services specified in this Service Level Agreement, CONTRACTOR's Project Director shall designate the single point of contact for all communications, including, without limitation, the methods, telephone numbers, email and other addresses to be used by COUNTY to communicate with CONTRACTOR's staff providing such Services.

The fees that COUNTY will pay to CONTRACTOR in consideration of the Services defined herein are specified in Exhibit B (Schedule of Payments). These fees specify the monthly and, if applicable, one-time and/or annual fees payable by COUNTY in accordance with this SLA and otherwise with the Agreement for CONTRACTOR's provision of the Services defined herein. These fees also specify those amounts, specified in Schedule III herein, that COUNTY will pay to CONTRACTOR in the event that COUNTY

exceeds the Response Time and Availability Warranty assumptions specified in Schedule I to this SLA.

I. SYSTEM MAINTENANCE

Without limiting the introductory portions of this SLA or otherwise the provisions of the Agreement, CONTRACTOR shall provide the following System maintenance services:

A. SUPPORT SERVICES

(1) CONTRACTOR shall: (a) correct the failure of the System Software to operate in accordance with Specifications and otherwise with this Agreement (such correction of the System Software is hereafter referred to as "Corrective Maintenance") and (b) provide Upgrades and Updates of the System Software as defined in Section I.A(6) below. Hereafter, Corrective Maintenance, Upgrades and Updates are collectively referred to as "System Software Support". Corrective Maintenance shall be either of a critical support nature or of a routine support nature. For purposes of System Software Support, Interfaces shall be deemed part of Application Software and shall receive the same System Software Support services.

(2) CONTRACTOR shall assist COUNTY with problem (a.k.a. Deficiency) determination and resolution. Problem determination describes, without limitation, the activities associated with engaging in a service request, checking background and change management information, reviewing service activity, assessing issues, trouble shooting, and developing a problem statement. The problem statement is used to determine the category of service required to further investigate the problem, develop a resolution, communicate the resolution, execute the resolution, and confirm the results. Problem determination and resolution activities may be initiated by COUNTY via telephone or email to CONTRACTOR's designated single point of communication or by posting to the designated eService area of Cerner.com. Problems exclusively related to COUNTY'S provision in support of the Remote Hosting Services are excluded.

CONTRACTOR shall provide a web based designated area in Cerner.com where COUNTY can submit, review, update, or request closure for a service request from CONTRACTOR, as well as determine when a service request is assigned, owner of the service request, and the time the service request is assigned. CONTRACTOR will provide reports of service requests, upon request from COUNTY and shall also make such reports available to COUNTY on the designated area. Such

reports shall include, at a minimum, the complete history of each service request from submittal by COUNTY to resolution and including all updates.

CONTRACTOR's investigation of every problem shall continue as needed, with a goal of restoring performance of the applicable System Component in accordance with the Specifications and otherwise with the Agreement, in accordance with the timeframes set forth in Table 1 of Schedule I (Service Level Commitments) to this SLA, based upon the Severity Level.

If it is determined in accordance with Section I.A(8) below that a problem is caused by an item listed in Section I.A(8), then except as expressly provided in this SLA, CONTRACTOR shall not be obligated to provide Corrective Maintenance to remedy such problem. COUNTY may request that CONTRACTOR provide further Corrective Maintenance in respect of such problem as other professional services pursuant to Subparagraph 7.5 (Other Professional Services) of the body of this Agreement. Notwithstanding the foregoing, CONTRACTOR shall, at no further cost to the COUNTY, consult and collaborate with COUNTY staff and any provider of the Specified Hardware, Specified Operating Software and/or any interfacing external COUNTY system in connection with such problem.

(3) CONTRACTOR shall furnish and perform critical support services twenty-four (24) hours per day, seven (7) days per week, every day of each year for support of the System Software. Critical problems are those categorized as Severity Levels 1 and 2 as defined in Table 1 of Schedule I (Service Level Commitments) to this SLA.

CONTRACTOR shall meet the service levels commitments with respect to resolving critical problems, as identified on Table 1 of Schedule I (Service Level Commitments) to this SLA, for ninety-five percent (95%) of COUNTY's service requests identified by COUNTY as Severity Level 1 or 2. Less than five percent (5%) of requests may require longer resolution times. In the event that the assigned resolution times are not met by CONTRACTOR, CONTRACTOR shall immediately submit to COUNTY a written action plan and status report and shall take other actions as set forth in Section A (System Software Support Service Level Commitments) of Schedule I (Service Level Commitments) to this SLA. Each plan is subject to the written approval of COUNTY Project Director. If CONTRACTOR does not resolve the problem within the time set forth in said approved action plan, then the period immediately following the submittal of the Severity Level 1 or 2 service request through the date of resolution of the problem shall au-

tomatically constitute Unscheduled Downtime and credits shall apply as provided in Schedule I.

(4) Routine support services are non-critical. CONTRACTOR shall provide routine support services during the hours specified in Deliverable 1.3 (System Operations Plan) of Exhibit A (Statement of Work) of the Agreement and onsite support as needed. Non-critical problems are those categorized as Severity Levels 3 and 4 as defined in Table 1 of Schedule I (Service Level Commitments) to this SLA.

CONTRACTOR shall meet the service level commitments with respect to resolving non-critical problems, as identified on Table 1 of Schedule I (Service Level Commitments) to this SLA, for ninety-five percent (95%) of COUNTY's service requests identified by COUNTY as Severity Level 3 or 4 problems. Less than five percent (5%) of requests may require longer resolution times. In the event that the assigned resolution time standards are not met by CONTRACTOR, CONTRACTOR shall immediately submit to COUNTY a written action plan and report and take such other actions as set forth in Section A (System Software Support Service Level Commitments) of Schedule I (Service Level Commitments) to this SLA. Each plan is subject to the written approval of COUNTY Project Director. If CONTRACTOR does not resolve the service request within the time set forth in said approved action plan, except in the case where the reason for CONTRACTOR inability to so resolve is attributable to necessary modification of Baseline Software code (subject to COUNTY's ability to reassign a severity level to such service request as described in Schedule I), then the period immediately following the submittal of the Severity Level 3 or 4 service request through the date of resolution of the problem shall automatically constitute Unscheduled Downtime and credits shall apply as provided in Schedule I.

(5) Corrective Maintenance shall be performed as follows:

(a) For Severity Levels 1 or 2, CONTRACTOR shall initiate or COUNTY may request Corrective Maintenance by CONTRACTOR's designated telephone number or posting to the designated area in Cerner.com.

(b) For Severity Levels 3 or 4, County may request Corrective Maintenance by posting to the designated area in Cerner.com.

(c) As part of Corrective Maintenance, COUNTY will provide CONTRACTOR with information and assistance reasonably requested by CONTRACTOR as necessary to detect, simulate

and correct the failure of the System to operate in accordance with the Specifications and the Agreement.

(d) CONTRACTOR shall provide COUNTY with revised and installed System Components and avoidance procedures to correct program errors when such procedures are within COUNTY's capability to control or perform. In the case of client hosted System Components CONTRACTOR shall provide recommendations for corrective action.

(e) At CONTRACTOR's option and expense, CONTRACTOR may perform Corrective Maintenance at COUNTY Facility(ies).

(f) CONTRACTOR shall provide Corrective Maintenance for the then current and three (3) most recent prior Upgraded versions of the System Software for the term of the Agreement. With respect to Specified Hardware and Specified Operating Software Compatibility problems, CONTRACTOR's obligations to provide Corrective Maintenance shall be subject to Subparagraph 10.1 of the body of the Agreement.

(6) Except as expressly set forth in this Section I.A(6), "Upgrades" shall mean major releases and/or versions of the System Software made available to CONTRACTOR's other customers pursuant to support arrangements similar to the support arrangements provided to COUNTY, regardless of whether such other customers use Remote Hosting Services. "Updates" shall mean updates, corrections, service packs/packages, modifications and/or new releases and versions of the System Software other than Upgrades, in each case, made available to CONTRACTOR's other customers pursuant to support arrangements similar to the support arrangements provided to COUNTY, regardless of whether such other customers use Remote Hosting Services. "Upgrades" and "Updates" also include but are not limited to the following:

(a) California (State) adopts or amends laws or issues regulations which are deemed necessary by the State governing body, and when COUNTY notifies CONTRACTOR of such in writing or which CONTRACTOR otherwise learns of, including, but not limited to, changes to Title 15 or Title 24 of the California Code of Regulations and/or the Welfare and Institutions Code.

(b) Federal agencies adopt regulations which are deemed necessary by and/or through Federal agencies (examples include but are not limited to, the Federal regulations issued by Internal Revenue Service (IRS), Drug Enforcement Administration

(DEA), Centers for Medicare and Medicaid Services (CMS), Federal Drug Administration (FDA), and/or the Office of the National Coordinator for Health Information Technology (ONCHIT)).

(c) Standards Development Organizations (SDOs) publish changes of standards used in the System for general use which CONTRACTOR adopts and implements for its customers. Such SDOs include the Certification Commission for Health Information Technology (CCHIT) and the National Commission for Correctional Health Care (NCCHC), Health Level 7 (HL7), and/or ANSI X.12;

provided that the item giving rise to such Updates or Upgrades impacts at least one of CONTRACTOR's customers (excluding other Los Angeles County departments) pursuant to support arrangements similar to the support arrangements provided to COUNTY, regardless of whether such other customers use Remote Hosting Services.

Solely with respect to Third Party Software, COUNTY acknowledges that CONTRACTOR's ability to provide Updates and Upgrades are limited to those Updates and Upgrades that CONTRACTOR is authorized to distribute. Such acknowledgement in no way limits CONTRACTOR's other obligations under the Agreement with respect to such Third Party Software, including but not limited to CONTRACTOR's warranty obligations under Subparagraph 10.1 of the body of the Agreement and CONTRACTOR's obligations under this SLA to provide Corrective Maintenance.

(7) At no additional cost to COUNTY other than the applicable fees identified in Exhibit B (Schedule of Payments) CONTRACTOR shall install, configure, Tailor, integrate and convert such number of Upgrades and Updates as further specified in Exhibit A (Statement of Work) Section III (Upgrades Implementation Services) and/or Section IV (Application Management Services) of this Service Level Agreement.

(8) CONTRACTOR is not required to perform Corrective Maintenance with respect to System failures to the extent directly caused by:

(a) COUNTY use of the System inconsistent with the terms of the Agreement, including usage levels that exceed limits specified in Attachment A (JHIS Technical and Operational Requirements) and/or Attachment B (Schedule of JHIS Software) of Exhibit A (Statement of Work) and/or the Response Time and Availability Warranty assumptions set forth in Schedule I (Service Level Commitments) of this SLA, as initially determined by

COUNTY but subject to Paragraph 46 (Dispute Resolution Procedure) of the body of this Agreement.

(b) Use of User or network devices and/or software, or connection methods and/or changes of COUNTY WAN/LAN connectivity not approved by CONTRACTOR in writing before such Use, or malware or any malicious act that affects the System and is introduced by COUNTY, as initially determined by COUNTY but subject to Paragraph 46 (Dispute Resolution Procedure) of the body of the Agreement. The parties understand and agree that Specified Hardware and Operating Software have already been approved by CONTRACTOR. Modifications to the Sheriff's Data Network (SDN) will not require CONTRACTOR approval unless directly related to points of demarcation, or JHIS connectivity to SDN.

(c) Specified Hardware or Operating Software failures (other than Compatibility issues and Deficiencies of Specified Hardware or Operating Software caused by System Software), but solely to the extent the System Software or performance Deficiency is caused by or results directly from a failure of Specified Hardware or Operating Software, as determined by CONTRACTOR, to COUNTY's Project Director's reasonable satisfaction.

(d) Failure of COUNTY to authorize CONTRACTOR to implement an update or upgrade of the Front-End System or Back-End System recommended by CONTRACTOR subject to the provisions of the approved Deliverable7.1 (Change Management Plan), provided such change does not modify Specified Hardware and Operating Software and that CONTRACTOR assures that the change enables the System to operate in accordance with the Specifications and otherwise the Agreement.

(e) Failure of external COUNTY systems (other than Compatibility issues and Deficiencies of external COUNTY systems caused by System Software), that operate within an Interface provided by the System operating in the Production Domain, including changes of the interfaced external COUNTY system not approved by CONTRACTOR that affect the Interface or fail to comply with the Interface Specifications provided by CONTRACTOR and approved by COUNTY as specified in Exhibit A (Statement of Work) of the Agreement, as initially determined by COUNTY but subject to Paragraph 46 (Dispute Resolution Procedure) of the body of this Agreement.

(f) Documented introduction by COUNTY of a System change that adversely affects System performance and was not introduced in accordance with the Change Management Plan approved as Deliverable 7.1 (Change Management Plan) of Exhibit A (Statement of Work), as initially determined by COUNTY but subject to Paragraph 46 (Dispute Resolution Procedure) of the body of this Agreement.

(9) CONTRACTOR shall provide Upgrades and Updates to the System Software pursuant to the terms of this SLA, provided COUNTY is paying maintenance and support fees in accordance with the Agreement. CONTRACTOR will not be responsible for the installation or "retrofitting" of those Upgrades and Updates to Application Software modules which contain modifications which CONTRACTOR has previously identified to COUNTY's Project Director in writing and in advance of making such modification, as incompatible with Baseline Software, unless COUNTY elects to request and CONTRACTOR agrees to provide such service as other professional services pursuant to Subparagraph 7.5 (Other Professional Services) of the body of the Agreement.

(10) Without limiting Subparagraph I.A(5)(f) above, in the event CONTRACTOR intends to discontinue System Software Support of any Application Software module, CONTRACTOR shall provide COUNTY with a minimum of two (2) years prior written notice and shall continue System Software Support during such period.

II. REMOTE HOSTING SERVICES

Without limiting the introductory paragraphs of this SLA or otherwise the provisions of the Agreement, CONTRACTOR shall provide the following five (5) services as "Remote Hosting Services," as necessary to operate JHIS 24 hours per day, 7 days per week, every day of each year in accordance with the Specifications, including but not limited to the Remote Hosting Specifications described in Section II (Remote Hosting Services) of Attachment A(JHIS Technical and Operational Requirements) of Exhibit A (Statement of Work), and otherwise with the Agreement, in accordance with the Response Time and Availability Warranties set forth on Schedule I (Service Level Commitments) to this SLA.

- Facility Management (operation and management of CONTRACTOR's high availability concurrently maintainable and fault tolerant physical facilities in Kansas City, MO identified below).

- Network Management (operation and management of CONTRACTOR's Local Area and Wide Area Networks (LAN/WAN))

- System Management (operation and management of the data processing systems and equipment required for System operation)

- Database Management (administration of the data base management system required for System operation)

- Interface Management (monitoring and managing medical devices and external systems Interfaces)

CONTRACTOR shall host JHIS at its high availability, concurrently maintainable and fault tolerant Cerner Technology Centers ("CTC") located at:

777 NW Blue Parkway	3200 N Rockcreek
Lee's Summit MO	Kansas City, MO 64117

A. FACILITY MANAGEMENT

CONTRACTOR shall provide and manage the facilities necessary to operate JHIS in accordance with the Specifications and otherwise with this Agreement. CONTRACTOR's provision and management of the facilities shall include, but not be limited to, the following:

(1) CTC Environment

CONTRACTOR shall provide the CTC identified above to host the computing and network environment. CONTRACTOR shall provide the CTC equipment, operating software, and other software, regardless by whom produced or supplied, required to operate JHIS in accordance with the Specifications and otherwise with the Agreement.

CONTRACTOR shall manage, monitor and control each CTC and shall provide all Domains consisting of PROD, CERT, TRAIN, BUILD, and MOCK Domains.

(2) CTC Management and Monitoring

CONTRACTOR shall operate and maintain each CTC, in accordance with concurrently maintainable and fault tolerant standards. CONTRACTOR shall manage, monitor, control and activate each CTC, including but not limited to such CTC physical structure and environment, power supplies and generators, chiller systems (pressure, temperature, alarm, standby), electrical rooms (moisture, Uninterrupted Power Supply (UPS)), computer room air-conditioning units (air conditioning, power, moisture, humidity and temperature), Auto Transfer Switches, and UPS/generator system as incoming power dictates.

(3) CTC Physical Security

CONTRACTOR shall provide physical security in each CTC as specified in "Security Requirements" (Section I) of Attachment A (JHIS Technical and Operational Requirements) of Exhibit A (Statement of Work) of the Agreement. CONTRACTOR shall monitor security events and notify COUNTY's Project Manager upon reason to believe a security threat may exist to County data/information within four (4) hours of identification of the security threat. Following notification, CONTRACTOR shall also report to COUNTY's Project Manager all other Security Incidents for which CONTRACTOR has knowledge that JHIS is subject to similar threats. Such reports shall include the nature of the incident, the steps taken to remediate the associated threat or vulnerability, and any residual risk in accordance with the terms set forth in Exhibit J (CONTRACTOR'S Obligations As a "Business Associate" Under Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the Health Information Technology for Economic and Clinical Health Act (HITECH)). In addition, on a monthly basis, CONTRACTOR shall summarize any non-County related Security Incidents of which CONTRACTOR has knowledge that have occurred during the period and their remediation at a high level with COUNTY Project Manager using telephone or email communications, as determined by CONTRACTOR in its sole discretion. These high level summaries shall include the nature of the incident(s), steps taken to remediate the associated threat(s) or vulnerability(ies), and any residual risk(s). The summaries shall not include any information that could reveal the customer(s) affected directly by the incident.

(4) Disaster Recovery

In the event of a disaster affecting any CTC providing services to COUNTY under this Agreement, CONTRACTOR shall invoke an alternate data center and shall recover the Production Domain as first priority, followed by non-Production Domains in accordance with COUNTY assigned priorities. COUNTY shall activate the 724 Access Downtime Viewer component of the System Software in the event of a disaster affecting any CTC providing services to COUNTY under this Agreement.

CONTRACTOR, with participation and support by COUNTY as needed, shall mobilize an emergency response team. The system backups will be used to recover the System in the Production Domain in such alternate data center. CONTRACTOR shall test the restored environment and notify COUNTY to begin its testing and validation process for System acceptance and return to the Users.

B. NETWORK MANAGEMENT

CONTRACTOR shall provide, support, monitor, manage, and control the communications between the CTC and the COUNTY necessary to operate JHIS in accordance with the Specifications and otherwise with the Agreement with the exception of the COUNTY"S provision in support of the Remote Hosting Services. This shall include, but not be limited to, the following:

(1) CTC Network Operation

CONTRACTOR shall provide, support, monitor and maintain high-availability (99.9%) networks designed to remain fully operational in the event of any single equipment failure, such as, but not limited to, routers, switches, load balancers, redundant power circuits, power distribution, and firewalls in each CTC. CONTRACTOR shall provide, operate, monitor, manage and control all network equipment, operating software, all software and console systems at the CTCs necessary to host the System and support the servers and databases required for the System to operate in accordance with the Specifications and otherwise with the Agreement. The COUNTY"S provision in support of the Remote Hosting Services is excluded.

CONTRACTOR shall:

(a) Install, manage, configure, support, and maintain WAN circuits and WAN equipment in the CTC as required for JHIS to operate in accordance with the Specifications and otherwise with the Agreement;

(b) Monitor Response Times of the Phase 1 System, Phase 2 System, and Phase 3 System, including round trip latency, as required for JHIS to operate in accordance with the Specifications and otherwise with the Agreement.

(2) CONTRACTOR-provided WAN communications.

CONTRACTOR shall provide, monitor, manage, support, and control the WAN communications network infrastructures and operations required to operate JHIS in accordance with the Specifications and otherwise with the Agreement, including primary and secondary communications circuits between the CTCs and dual points of demarcation at COUNTY Facilities, which shall be readily and commercially available via public carrier.

CONTRACTOR shall:

(a) Provide and provision WAN circuits in a manner that maximizes existing physical circuit diversity consistent with the best practice for obtaining physical circuit diversity, provide circuits that are sized for the System and each applicable Phase or Optional Phase System in accordance with industry best practices for appropriate bandwidth, quality of service and responsiveness and the Specifications and provision and manage all circuits in conjunction with CONTRACTOR's communications carriers (this process does not guarantee physical diversity; but rather provides the best practice for obtaining physical diversity);

(b) Provide all communications equipment necessary to terminate these WAN circuits and provide secure connection at COUNTY's dual points of demarcation and provide ongoing monitoring, management, and support including but not limited to routers, switches, firewalls, out-of-band-management consoles and power reboot switches as well as channel service unit (CSU) and data service unit (DSU) circuit termination equipment;

(c) Provide monitoring systems, device management and polling systems necessary to manage and control the network, monitor and control CONTRACTOR-provided network routers, including utilization, memory, exception reporting, syslog, configuration management and access control list (ACL) hits/denies;

(d) Monitor and control CONTRACTOR-provided WAN links ups/downs, error thresholds, bandwidth, and committed information rate packet flow/loss, and monitor and control COUNTY gateway ups/downs, routers, switches, and power supplies.

C. SYSTEM MANAGEMENT

CONTRACTOR shall provide and manage secure computing systems necessary to operate JHIS as provided in the System Operations Plan (Deliverable1.3) of Exhibit A (Statement of Work) of the Agreement and in accordance with the Specifications and otherwise with the Agreement.

CONTRACTOR's System Management shall include, but not be limited to the following.

(1) System Management

CONTRACTOR shall:

(a) Provide, configure, support, manage, monitor and control all components of the System, required to continue and maintain System Response Time and Availability levels as provided in this SLA. The COUNTY's provision in support of the Remote Hosting Services is excluded.

(b) Use appropriate management methods, resources, and tools needed to meet or exceed System Response Time and Availability Specifications as provided in this SLA, including, but not limited to, System capacity analysis and planning, use of appropriate software necessary to monitor the System, best practice internal change management processes and procedures for systems management, and the System Software Support and problem management processes, procedures and escalation guidelines in accordance with the provisions of this Service Level Agreement, including but not limited to Schedule I (Service Level Commitments).

(c) Monitor System performance and tune System components to ensure System Response Time and Availability levels as provided in this SLA.

(d) Monitor, manage, and control the computing systems to report and alert on compromised System health, security, Availability and/or capacity, and act to prevent and/or correct Deficiencies, by taking such actions as rebooting Systems on a recurring schedule to optimize Domain performance, performing System level daylight savings time management, applying operating software service packs to the System and/or infrastructure as required to maintain System health, security, Availability, performance, and capacity, including but not limited to executing any special instructions necessary for such service packs.

(2) Security Management

CONTRACTOR shall provide and manage the System to ensure security in accordance with the Specifications and this Agreement.

CONTRACTOR shall:

(a) Promptly report to COUNTY's Project Managers upon reason to believe a security threat may exist to County data/information within four (4) hours of identification of the security threat. Following notification, CONTRACTOR shall also report to COUNTY's Project Managers all other Security Incidents for which CONTRACTOR has knowledge that JHIS is subject to similar threats. Such reports shall include the nature of the incident, the steps taken to remediate the associated threat or vulnerability, and any residual risk.in accordance with the terms set forth in Exhibit J (CONTRACTOR'S Obligations As a "Business Associate" Under Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the Health Information Technology for Economic and Clinical Health Act (HITECH)). In addition, on a monthly basis, CONTRACTOR shall summarize any non-County related Security Incidents of which CONTRACTOR has knowledge that have occurred during the period and their remediation at a high level with COUNTY Project Manager using telephone or email communications, as determined by CONTRACTOR in its sole discretion. These high level summaries shall include the nature of the incident(s), steps taken to remediate the associated threat(s) or vulnerability(ies), and any residual risk(s). The summaries shall not include any information that could reveal the customer(s) affected directly by the incident.

(b) Provide security software and equipment security controls, provide and maintain updated Virus detection and correction, provide logical security using lockdown procedures post Production Use, provide URL access to COUNTY approved Internet sites, implement and monitor network intrusion detection systems throughout the CTCs' networks, monitor and report System security errors, exceptions and attempted violations to COUNTY as dictated by standard procedures and as provided by periodic reporting schedules established by the COUNTY's Project Director in collaboration with CONTRACTOR's Project Director.

(c) Secure backup media with check-in and check-out procedures, store COUNTY's backup media in a manner that will protect the confidentiality of the data stored on them and ensure that such data remain COUNTY's property including provision of secure environment(s) for on-site and off-site backup storage.

(d) Appoint a corporate IT Security Manager and other security personnel as mutually agreed by the COUNTY's Project Director and CONTRACTOR's Project Director to monitor and enforce security procedures and resolve exception report issues.

(e) Provide, implement, and support the COUNTY domain controllers located in the CTC.

(f) Provide anti-virus protection, service management, and service monitoring agents on domain controllers located in the CTC.

(g) Provide a secured environment for the COUNTY's Primary Domain Controllers operating in CTC.

(h) Install and provide the enterprise level audit logging, tracking, and reporting services enabled by the P2Sentinel security solution to support COUNTY's requirements as specified in Exhibit A (Statement of Work) of this Agreement.

- Provide connectivity and network services as necessary for the COUNTY to utilize the P2Sentinel solution;
- Work with COUNTY to implement an appropriate selection of audited transactions;
- Work with COUNTY to define and configure the reports to be delivered together with custom and ad-hoc reporting capabilities; and
- Advise COUNTY as appropriate on advisable monitoring and action procedures regarding P2Sentinel tracking and reports.

(3) Back-End System Management

CONTRACTOR shall provide, install, manage, maintain, support and control all hardware, operating software, including operating system and database software, and resources needed to access the System and execute the System Software, in order for the Phase 1 System, Phase 2 System, and Phase 3 System for which remote hosting services apply to operate in the CTCs in accordance with the Specifications and otherwise with the Agreement (herein, sometimes the "Back-end System").

CONTRACTOR shall:

(a) Provide Back-end System computing including CPUs, memory and data storage.

(b) Acquire, provide, install, manage and maintain operating software and related licenses for the Back-end System required to operate the required Domains(s), including, but not limited to, payment of ongoing maintenance and support fees required for such operating software and related licenses.

(4) Front-End System Management

CONTRACTOR shall provide, install, manage, maintain, support and control required front-end software such as without limitation Microsoft and Citrix Software, necessary to facilitate COUNTY and User access to the Domains in accordance with the Specifications and otherwise with the Agreement (herein, sometimes the "Front-end System")

CONTRACTOR shall:

(a) Manage, maintain, control and operate the Front-end System equipment, and any and all front-end software, computing systems and associated infrastructure as required for the System for which remote hosting services apply to operate in accordance with the Specifications, in accordance with manufacturer-recommended and supported practices.

(b) Provide, manage, control and operate processes and resources needed to monitor the Front-end System and to report, alert on, and correct compromised system health, security, capacity, and Availability.

(c) Provide, manage, control and operate Front-end System servers required to facilitate printing excluding COUNTY-owned print servers required for local printing on COUNTY site.

(d) Provide, support, manage, maintain and control the Microsoft terminal server database operations and security.

(e) Provide and ship to COUNTY the CONTRACTOR-provided COUNTY site equipment necessary to provide the Remote Hosting Services, and manage such equipment remotely from the CTCs.

(f) Provide COUNTY with a list of validated devices including but not limited to printers and scanners suitable for local use with JHIS.

(g) Acquire, manage, maintain, and control storage for all the Domains as necessary for the System to operate in accordance with the Specifications and otherwise with the Agreement.

D. DATABASE MANAGEMENT

CONTRACTOR shall provide, administer, support, maintain, manage and control the System database and database management software as necessary to operate JHIS 24 hours per day, 7 days per week, and every day of each year in accordance with the Specifications and otherwise with the Agreement at the Response Time and Availability levels provided in this SLA. CONTRACTOR shall implement and maintain database access, Response Time and Availability in a consistent and efficient manner across all system Domains. Such CONTRACTOR's database management services shall include, but not be limited to the following.

(1) Database Installation and Upgrade

CONTRACTOR shall:

(a) Acquire, install, operate, maintain, support, and upgrade Database Management Systems software.

(b) Provide appropriate database management methodologies, resources and tools to manage, troubleshoot, back up and recover the database in all Domain(s).

(2) Database Performance Management and Monitoring

CONTRACTOR shall:

(a) Monitor and report on database security, performance and capacity.

(b) Provide, manage, and control database storage required to operate and maintain JHIS.

(c) Maintain offsite backup of the System and COUNTY data. Such backup shall operate and perform in a manner compa-

rable to CTC with respect to both System and COUNTY data.

(d) Monitor alert logs, monitor and control number of extents remaining, free space, free space deficits, file and table space, instance status, lock conflicts, space available in table space, status of listeners, and performance characteristics such as SGA and I/O.

(e) Reorg/defragment database objects/table space as necessary to maintain performance.

(f) Monitor and control purge job activity to ensure purges are completing successfully.

(3) Database Backup, Restore, and Recovery

CONTRACTOR shall:

(a) Define, maintain, document and enforce backup requirements as needed.

(b) Define and enforce System-wide recovery and backup requirements, perform System backups as specified in CONTRACTOR's standard backup procedure, provide tape rotation, verify backup logs, coordinate offsite storage functions, including logging, tracking, labeling, ordering, receiving and sending tapes, replacing tapes and disks in storage required in accordance with the prescribed schedule to ensure System performance, availability and reliability, and restoring System data as required.

(c) Schedule and test routine recovery procedures.

E. INTERFACE MANAGEMENT

CONTRACTOR shall provide and manage Interfaces necessary to operate JHIS 24 hours per day, 7 days per week, every day of each year in accordance with the Specifications and otherwise with the Agreement. CONTRACTOR shall implement and maintain Interface management services and support in a consistent and efficient manner across all Domains. All external system Interfaces and medical devices Interfaces (MDIs) shall connect via COUNTY-provided LAN/WAN into the CONTRACTOR provided and provisioned WAN circuit(s) via the dual points of demarcation.

(1) Interface Monitoring

CONTRACTOR shall:

Monitor CONTRACTOR inbound cycle times over-threshold alarms, external system Interfaces connectivity, and CONTRACTOR outbound Interface queue counts and over-threshold alarms.

(2) Interface Management

CONTRACTOR shall:

(a) Notify COUNTY of Interface issues that affect service.

(b) Work with COUNTY to identify and correct Interface operational or performance problems in accordance with Section IV, "Application Management Services (AMS)" of this SLA.

F. REMOTE HOSTING SERVICES TERM AND FEES

(1) For the System, CONTRACTOR shall provide and COUNTY shall receive Remote Hosting Services commencing upon the Effective Date, and continuing for the term of the Agreement, unless otherwise terminated in accordance with the provisions of the Agreement.

For each Phase subsequent to Phase 3 System where COUNTY determines that Remote Hosting Services apply and elects to implement a Phase, CONTRACTOR shall provide and COUNTY shall receive Remote Hosting Services commencing upon execution of the applicable Change Notice or Amendment under Paragraph 6 (Change Notices and Amendments) of the Agreement and continuing for the term of the Agreement, unless otherwise terminated in accordance with the provisions of the Agreement.

(2) Payments for Remote Hosting Services for the Phase 1 System from the Effective Date shall be in accordance with Exhibit B (Schedule of Payments). Monthly Remote Hosting Services fees for the System shall commence on the COUNTY's written approval of Deliverable 2.1 (Production Use of System with Remote Hosting Services) of Exhibit A (Statement of Work) of the Agreement and shall be payable monthly in advance, unless otherwise provided herein. The amount of the monthly Remote Hosting Services fees shall be in accordance with Exhibit B (Schedule of Payments).

III. UPGRADES IMPLEMENTATION SERVICES

Without limiting the introductory portions of this SLA or otherwise the provisions of the Agreement, CONTRACTOR shall provide all professional services and Remote Hosting Services infrastructure necessary to complete up to three (3) Upgrades of the System during the term of the Agreement when the COUNTY elects, as directed by the COUNTY's Project Director in his sole judgment, to implement such Upgrade of the System and/or each Optional Phase System, provided by CONTRACTOR consistent with Sections I.A(6), ("Upgrades Implementation Services"). CONTRACTOR shall upgrade the System to the most recent generally available code level in accordance with the Specifications, the Specifications described in Section III (Remote Hosting Services) of Attachment A (JHIS Technical, and Operational Requirements) of Exhibit A (Statement of Work) and otherwise with the Agreement. Upgrades Implementation Services includes, without limitation, acquisition, creation, implementation and support of the necessary Domains at the CTC, installation, configuration and Tailoring of each Application Software module, and all reports associated with such module, and recommended changes, if any, to the Specified Hardware and Operating Software. Upon implementation of each Upgrade as provided in this Section III of this SLA and Exhibit A (Statement of Work), the resulting System shall automatically be subject to all provisions of this Agreement, including but not limited to the provisions of each Section of this SLA. (Professional services necessary to implement updates are described below, in Section IV (Application Management Services).

A. UPGRADE SERVICES

(1) UPGRADE IMPLEMENTATION SERVICES PROJECT PLANNING AND MANAGEMENT

CONTRACTOR shall provide Upgrade project planning and management services in writing to ensure that the Upgraded System operates in accordance with the Specifications and otherwise with the Agreement.

CONTRACTOR shall:

(a) Update and maintain the Specifications (including but not limited to System functionality and Tailoring of the System Software, relevant Remote Hosting Services Specifications such as but not limited to capacity of Production and non-Production Domains (in particular Mock Upgrade and Certification Domains), and requirements for Specified Hardware and Specified Operating Software), Project Plan, Domain strategy, Project Control Document ("PCD"), Communications Plan and Cutover Plan for the System.

(b) Determine and document initial package requirements, including but not limited to the data base build requirements and the identification and resolution of potential issues with Tailoring of the System, implementation of user-defined components, and issues with installed code.

(c) Document the testing plan in accordance with Subparagraph 9.2 (CONTRACTOR Tests) of the Agreement. CONTRACTOR shall coordinate testing as provided in the updated PCD including, but not limited to, definition of testing requirements, identification of appropriate testers, and engagement of appropriate resources to complete the build and testing.

(d) Identify, document and mitigate Upgrade project risks and identify and secure project resources.

(e) Ensure that CONTRACTOR provided Tailoring, previously implemented Upgrades and Updates, Cerner Command Language (CCL) scripts and custom reports, are identified, modified, and repackaged as necessary to ensure that the Upgraded System will operate in accordance with the Specifications and the Agreement.

(f) Ensure that appropriate CONTRACTOR resources are scheduled for Upgrade and post Upgrade support.

(g) Obtain COUNTY approval for the updated PCDof this Agreement and its attachments, Risk Mitigation Plan, Test Plan, Communications Plan, and Cutover Plan (the "Approved Upgrade Plan").

(2) UPGRADE PROJECT IMPLEMENTATION SERVICES

CONTRACTOR shall implement the Upgrade of the System in accordance with the Approved Upgrade Plan developed and approved by COUNTY as defined in Section III.A(1) (Upgrade Implementation Services Project Planning And Management) of this SLA and Exhibit A (Statement of Work).

CONTRACTOR shall:

(a) Acquire, install, implement, configure and enable the Domain(s) and then-current related resources such as the Lights On network®, MethodM®, Bedrock®, and software necessary to complete, test, and validate the Upgrades to be

implemented in accordance with the provisions of the Agreement.

(b) Ensure that no updates to the System are implemented affecting the Production Domain during the Upgrade project.

(c) Perform non-passive build steps, and application security merges for all Domains.

(d) Configure Interfaces for Non-Production Domains in accordance with the Domain strategy and Approved Upgrade Plan.

(e) Validate Non-Production Domains that will be Upgraded in order to ensure that such Domains are true copies of the Production Domain prior to performing Upgrade activities.

(f) Upgrade Non-Production Domains per Domain strategy and the Approved Upgrade Plan, including but not limited to loading Front-end System code warehouse and configuring the Multum, remote report distribution ("RRD"), and charting servers.

(g) Upgrade Front-End System devices in the Production Domain (including but not limited to Multum, charting, RRD).

(h) Upgrade the Production Domain in accordance with the Approved Upgrade Plan.

(i) Perform CONTRACTOR tests in accordance with the provisions of Subparagraph 9.2 of the Agreement (CONTRACTOR Tests) and the Approved Upgrade Plan.

(j) Refresh COUNTY's Certification Domain in accordance with the Approved Upgrade Plan.

(k) Manage Upgrade project issues list and work with COUNTY to achieve issue resolution until code moved to Production Use.

(l) Provide training updates to COUNTY trainers related to the Upgraded System as specified in Subtask 2.4.6, Subtask 5.5, and Subtask 6.5 of Exhibit A (Statement of Work).

(m) Provide mentoring, knowledge transfer, and resources to COUNTY as specified in Subtask 2.4.6, Subtask 5.5, and Subtask 6.5 of Exhibit A (Statement of Work).

(3) IMAGEAWARE FITNESS SERVICES

CONTRACTOR shall implement the ImageAware Fitness services for ongoing monitoring and Upgrade of the PACS/CAMM Application Software in accordance with the Approved Upgrade Plan developed and approved by COUNTY as defined in Section III.A(1) (Upgrade Implementation Services Project Planning And Management) of this SLA and Exhibit B (Statement of Work). CONTRACTOR shall implement the Upgrade Services for PACS/CAMM in conjunction with Upgrade services for other Application Software modules as defined in Section III.A(2) and in Task 2, Task 5, and Task 6 of Exhibit B (Statement of Work).

CONTRACTOR shall, without limitation, perform the following:

(a) Upgrade Front-End System devices including four (4) CAMM servers and three (3) Cerner Provision Workstations (CPW) with each Upgrade, as required,

(b) Conduct a technical assessment of the PACS/CAMM Front-End System devices as part of each Upgrade,

(c) Perform a workflow analysis of PACS/CAMM for each modality as part of each Upgrade,

(d) Conduct training for technologists workflow, one-on-one training for three (3) radiologists, and image distribution training with each Upgrade,

(e) Provide CPW post-conversion support services including a three-day on-site visit with each Upgrade,

(f) Provide quarterly reviews of PACS/CAMM Application Software with recommended Updates for System optimization.

B. UPGRADES IMPLEMENTATION SERVICES TERM AND FEES

(1) For the System, CONTRACTOR shall provide and COUNTY shall receive Upgrade Implementation Services commencing upon COUNTY's written approval of Deliverable 2.1 (Production Use of System with Remote Hosting Services) of Exhibit A (Statement of Work), and continuing for the term of the Agreement, unless otherwise terminated in accordance with the provisions of this Agreement.

For the System, monthly Upgrade Implementation Services fees shall commence upon COUNTY's written approval of Deliverable 2.1 (Production Use of System with Remote Hosting Services) of Exhibit A (Statement of Work) and shall be payable monthly in advance, unless otherwise provided herein. The amount of the monthly Upgrade Implementation Services fees shall be in accordance with Schedule IV (Application Upgrade and ImageAware Fitness Fees) of Exhibit B (Schedule of Payments).

IV. APPLICATION MANAGEMENT SERVICES (AMS)

Without limiting the introductory portions of this SLA or otherwise the provisions of the Agreement, CONTRACTOR shall further support the System by providing Application Management Services ("AMS") as defined in this Section of this Service Level Agreement in order to ensure that the System operates in accordance with the Specifications and otherwise with the Agreement. CONTRACTOR shall provide as part of AMS, professional services that enable the COUNTY to continue in operation and to use the System at its highest levels of functionality and efficiency, without requiring COUNTY to initiate a service request, or to hire third parties and/or assign COUNTY staff to perform routine System performance tuning, content management activities and additional or modified Tailoring, and/or reports requested by Users.

CONTRACTOR shall provide the AMS services as specified in Schedule II of this SLA. CONTRACTOR AMS services shall include, but not be limited to, the following:

1. System Operations Monitoring (monitor and report on System performance and on published CONTRACTOR notifications and alerts)

2. System Content Management (continuous Updates of content including, but not limited to, codes and code sets, rules, and decision support and service packages)

3. Monitoring and support of Cerner Command Language (CCL) reports in addition to standard reports supplied with the System

4. 2nd Level Help Desk Services for preventive and troubleshooting activities that cannot be resolved locally by COUNTY's 1st Level Help Desk as defined in this SLA.

The services provided by CONTRACTOR as part of AMS supplement, but do not replace or substitute for, those services provided for in Section I (System Maintenance) of this SLA. CONTRACTOR shall provide these AMS on a full time basis, 24 hours per day, 7 days per week, every day of each year during the term of this

Agreement. CONTRACTOR shall fully staff these AMS and shall provide and manage these services in addition to and in collaboration with CONTRACTOR's delivery of System Software Support as specified in Section I of this SLA, Remote Hosting Services as specified in Section II and Upgrade Implementation Services as specified in Section III.

CONTRACTOR AMS service responsibilities are identified in Schedule II of this SLA and further specified in this Section IV of the SLA.

A. APPLICATION MANAGEMENT SERVICES

CONTRACTOR shall provide professional services required to ensure that the System and each Phase System is available for Users.

(1) SYSTEM OPERATIONS MONITORING

CONTRACTOR shall:

(a) In connection with support of JHIS, ensure that COUNTY receives all announcements, alerts, trouble messages, and resolution recommendations from any component of CONTRACTOR's operations that are relevant to System, such as but not limited to flashes, illuminations, and distributions published by CONTRACTOR for its customers, together with CONTRACTOR's recommendations for COUNTY and/or CONTRACTOR action.

(b) Monitor the System operating in the Production Domain and correct operations when warranted to ensure Response Time and Availability in accordance with this SLA.

(c) On a scheduled periodic basis, monitor and report on orphaned/incorrect/incomplete journal transactions and advise COUNTY of appropriate means of preventing the occurrence and persistence of such orphaned/incorrect/incomplete transactions, including Corrective Maintenance as provided in Section I of this SLA and/or such additional Tailoring or modification of System as may be required.

(d) Monitor System notifications (i.e., flashes, advisories, application and system guides, knowledge base articles, etc.) and take necessary action as indicated to ensure the System continues to operate in accordance with the Specifications and otherwise with the Agreement, as approved in writing by the COUNTY's Project Director.

(e) Maintain remote report distribution settings, develop work-flow documentation, build and maintain reference databases, perform event code/event set changes as required, monitor and correct errors with Interfaces, chart servers, operations jobs, RRD, and printing.

(f) Document operations jobs performance and completion timings and create operations profiles to inventory and baseline transaction volumes.

(g) Notify COUNTY help desk of issues found that affect service that are within COUNTY control to correct or prevent.

(h) Take appropriate corrective and/or preventive action when notified by CONTRACTOR or COUNTY of anomalies found in the review of posting and error logs and/or System in-bound/outbound Interface queue counts.

(i) Ensure that active Interfaces are operational and monitor and cycle inbound Interfaces as required to establish connections and start transactions, and maintain CTC side of external system and medical device Interfaces.

(j) Take appropriate corrective and/or preventive action when notified by CONTRACTOR, COUNTY, or System of anomalies in monitored chart queue status, chart volume trends, and errors in chart servers, configurations, and/or formats.

(k) Monitor charting and RRD for successful completion, document and map RRD queues, verify chart status, monitor print queue for successful completion, restart print queue upon failed print jobs, re-submit unsuccessful charts, and retransmit failed RRD requests.

(l) Inventory, document, and review operations jobs for efficient use of System resources, and take appropriate corrective and/or preventive action when CONTRACTOR, COUNTY, or System reports anomalies or non-completion of monitored operations, and restart jobs when required.

(2) SYSTEM CONTENT MANAGEMENT

CONTRACTOR shall provide continuous Updates of System content including but not limited to each of Multum/Medisource, ICD-9 (as well as ICD 10 when implemented), CPT-4, code content included in Service Packages, when the publishers of such packages or content issue Updates and COUNTY, in the sole discretion of the

COUNTY's Project Director, elects to install them as provided in Section III of Attachment A (JHIS Technical, And Operational Requirements) of Exhibit A (Statement of Work).

With respect to such COUNTY election, CONTRACTOR shall:

(a) Maintain standard content updates in accordance with the COUNTY elections.

(b) Install and test subscription updates, service packages and fixes and assure the integrity of the resulting data, perform Front-end System special instructions for service package-loads, and perform service package certification guidelines as needed.

(c) Design and conduct CONTRACTOR tests as described in Subparagraph 9.2 (CONTRACTOR Tests) of the body of the Agreement, of the Tailored System as needed to ensure the integrity of the System and its continued operation in accordance with the Specifications and otherwise with the Agreement.

(3) REPORT MANAGEMENT

CONTRACTOR shall provide continuous management and support of reports that are operating in the Production Domain as of Final System Acceptance for the System and/or each Phase System, to ensure that the System continues to operate in accordance with the Specifications and otherwise with the Agreement ("Report Management"). In the context of this Section IV.A(4), the following kinds of reports are included:

- Reports supplied by the System without Tailoring or development using CCL;

- Tailored standard reports and reports other than those supplied by the standard System without Tailoring or development of CCL; and

- Reports developed using Discern Expert and Discern Explorer Reports, rules, and/or alerts.

In respect to such continuous management and support, CONTRACTOR shall:

(a) Create and maintain the inventory of all reports that are used in the System and Phase and Optional Phase System and maintain such reports.

(b) Tailor such reports and/or rules to address changes requested by COUNTY.

(c) Tailor and test such reports and rules and/or alerts to address changes required for content updates, and troubleshoot reports operating in the Production Domain as required by COUNTY or as required by Updates.

(4) 2nd LEVEL HELP DESK SERVICES

CONTRACTOR shall provide a fully staffed and comprehensive Help Desk Services for any requests that are determined by the COUNTY's Project Director, in his sole judgment, to be outside the scope of issues that can be resolved by COUNTY's help desk ("2nd Level Help Desk Services"). In respect to the 2nd Level Help Desk Services, CONTRACTOR shall:

(a) Answer questions regarding System usage.

(b) Recommend short-term and long-term problem prevention and resolution practices and procedures to COUNTY for practices and procedures within COUNTY's control.

(c) Troubleshoot and resolve external system and medical device Interface errors on the CONTRACTOR-side of Interfaces.

(d) Manage COUNTY requests and report periodically on status to COUNTY and COUNTY's PLT.

(5) OPERATIONS MANAGEMENT

CONTRACTOR shall assist COUNTY as follows:

(a) Add/remove operations jobs.

(b) Set purge jobs and schedule jobs to run, set up and review purges and operations jobs, and monitor purge jobs to ensure purges are completing successfully.

B. APPLICATION MANAGEMENT SERVICES TERM AND FEES

(1) For the System, CONTRACTOR shall provide and COUNTY shall receive AMS commencing upon Effective Date and continuing for the term of the Agreement, unless otherwise terminated in accordance with the provisions of this Agreement.

(2) For the System, monthly AMS fees shall commence upon Effective Date and shall be payable monthly in advance, unless otherwise provided herein. The amount of the monthly AMS fees shall be in accordance with Schedule V (Application Management Services Fees) of Exhibit B (Schedule of Payments).

V. CHANGE MANAGEMENT

This SLA specifies the details of CONTRACTOR services to be provided in connection with System Support Services, Remote Hosting Services, Upgrades Implementation Services, and Application Management Services. In providing these Services, taken as a whole, CONTRACTOR shall provide all System functions and services necessary for COUNTY and Users to receive the benefits of the System and its continued Use with minimal assigned COUNTY or third party staffing. CONTRACTOR shall manage and deliver these services consistently over time in addition to and in collaboration with each service so that COUNTY receives the benefit of all Services specified herein to enable the System to operate and continue to operate in accordance with the Specifications and the provisions of the Agreement.

CONTRACTOR shall manage change with respect to such Services in accordance with the provisions of Paragraph 6 (Change Notices and Amendments) of the Agreement. Without limiting said provisions, CONTRACTOR shall further manage changes relative to this SLA as specified in the approved Deliverable 7.1 (Change Management Plan) of the Statement of Work (Exhibit A) of the Agreement and this Section V of this Service Level Agreement.

Also described herein are certain roles and responsibilities of COUNTY with respect to change management, such as appropriate notice of change requirements to CONTRACTOR. Unless explicitly assigned to COUNTY, all roles and responsibilities with specified in this Service Level Agreement, including, without limitation, change management roles and responsibilities, shall be the responsibility of CONTRACTOR.

A. CHANGE MANAGEMENT PROCESS

(1) Change Management Procedure and Control

(a) CONTRACTOR shall provide a copy of CONTRACTOR's standard change management procedure to COUNTY. This change management procedure shall, without limitation, inte-

grate and provide for all CONTRACTOR's change management as it affects the following Services specified in this Service Level Agreement: System Maintenance (Section I), Remote Hosting Services (Section II), Upgrades Implementation Services (Section III), and Application Management Services (Section IV) taken together and as a whole.

(b) CONTRACTOR's Project Director and COUNTY's Project Director will collaborate on determining a final format and procedure for change management that is based on and extends as necessary on Deliverable 7.1 (Change Management Plan) and i) ensures that changes occur in a controlled environment so that all parties understand the potential impact of an impending change, ii) identifies potentially affected Systems and processes prior to implementation of the change(s), iii) provides for appropriate CONTRACTOR testing and COUNTY validation, and iv) is implemented to ensure that System operates and continues to operate in accordance with the Specifications and the Agreement. CONTRACTOR shall document such process and submit them for COUNTY review and approval of COUNTY's Project Director. Once approved, this Document shall be the "Approved Change Management Plan".

(c) CONTRACTOR shall ensure that all changes that affect Production Domains have been approved in writing by COUNTY's Project Director before implementation, which approval shall not be unreasonably withheld. COUNTY agrees to provide reasonable and appropriate maintenance windows and to participate in the testing of all changes as reasonably required.

(d) CONTRACTOR shall provide and maintain an automated change management system for the centralized reporting and tracking of changes as authorized by the COUNTY's Project Director.

(e) CONTRACTOR shall conduct scheduled change management meetings.

(f) CONTRACTOR shall perform post-mortem reviews on problems that affect service level standards, as well as root cause analysis if possible.

(g) CONTRACTOR shall notify COUNTY's help desk of issues that affect service and may be within the scope of COUNTY's ability to prevent or resolve.

(h) CONTRACTOR shall provide and maintain a method for proper escalation of problems within CONTRACTOR's management.

(i) CONTRACTOR shall log all incidents and problems in accordance with documented processes.

(j) CONTRACTOR shall ensure proper notification and escalation in accordance with CONTRACTOR's standard operating procedures as approved by COUNTY's Project Director.

(2) Certification Domain

(a) CONTRACTOR shall provide, equip, configure and maintain a Certification Domain.

(b) CONTRACTOR shall maintain, provision and monitor the Certification Domain as needed for Upgrades, Updates and/or ongoing System testing so that said Certification Domain is continuously available to CONTRACTOR and COUNTY for use in validation and testing as necessary to operate the System in accordance with the Specifications and otherwise with the Agreement.

(3) Change Management

CONTRACTOR shall manage change and the change management process as provided in this section and in the Approved Change Management Plan.

(a) CONTRACTOR shall lead and attend change management meetings.

(b) CONTRACTOR shall provide, communicate, and maintain risk management analysis.

(c) CONTRACTOR shall test and COUNTY will validate all System changes in accordance with the provisions of Approved Change Management Plan prior to moving them to Production Use.

(d) CONTRACTOR shall test Upgrades and Updates in order to assure the integrity of the resulting data and continued operation of the System in accordance with the Specifications and otherwise with the Agreement.

VI. COUNTY ROLES AND RESPONSIBILITIES

COUNTY recognizes that CONTRACTOR provides services defined in this SLA based on the assumption that COUNTY will participate actively and discharge its responsibilities as defined in this Section. COUNTY will provide governance and staffing, certain facilities and equipment, and certain services requiredto enable the System to operate in accordance with Specifications and the Agreement.

A. GOVERNANCE AND STAFFING

(1) Governance

COUNTY will:

(a) Continue to provide and maintain the PLT

(b) Provide and manage internal COUNTY communications with all COUNTY agencies and officials

(c) Provide decision-making and decision support when necessary to direct certain COUNTY options, such as the election to implement an Optional Application Software module, how to host System Components, Upgrade project planning and approval, prioritization of System changes, and/or purchase of other professional services as provided in Subparagraph 7.5 of the Agreement.

(d) Collaborate with CONTRACTOR to ensure orderly and controlled change processes that ensure the change process operates as provided in Paragraph 6 (Change Notices and Amendments) of the body of the Agreement, the approved Deliverable 7.1 (Change Management Plan) of the Statement of Work (Exhibit A) of the Agreement and this Section VI of this Service Level Agreement.

(e) Collaborate with CONTRACTOR to establish a compliance review function of the PLT in the event that either COUNTY or CONTRACTOR, as the case may be, determines that a compliance review is necessary under the applicable of clause (i) or (ii) below. Subject to PLT governance and process

- Should CONTRACTOR have knowledge to believe that COUNTY is not in compliance with any applicable Federal, State or local law, rule or regulation as it relates to COUNTY's use of the System in the Production Domain, and CONTRACTOR reasonably believes that such non-compliance poses a significant legal or financial risk to CONTRACTOR, then CONTRACTOR shall provide written

notification to COUNTY detailing the specific area of non-compliance and proposing an agenda for review of such area of non-compliance. At a mutually agreed upon time and pursuant to a mutually agreed upon agenda, COUNTY agrees to review with CONTRACTOR at no additional cost to COUNTY, the specific area of non-compliance. Should the parties jointly determine that COUNTY is not in compliance with any applicable Federal, State or local law, rule or regulation, CONTRACTOR and COUNTY agree to work together to develop a mutually agreed upon remediation plan, including a timeframe for completion thereof. Development of the remediation plan shall be at no additional cost to COUNTY. If a remediation plan has not been completed within the applicable timeframe, then the parties will discuss the risk and/or impact to CONTRACTOR and COUNTY in continuing the Remote Hosting Services relationship.

- In addition, if either party determines that CONTRACTOR is not in compliance with any applicable Federal, State or local law, rule or regulation as it relates to Remote Hosting Services, that (a) is particular to this Agreement, and (b) was either enacted or modified after the Effective Date, and CONTRACTOR reasonably determines that the cost for CONTRACTOR to achieve compliance with such applicable law, rule or regulation will result in CONTRACTOR incurring additional costs in an excess of ten (10%) of CONTRACTOR's costs for providing Remote Hosting Services as of the date of the determination (such costs being documented to COUNTY's satisfaction), then CONTRACTOR shall submit a proposal to COUNTY identifying commercially reasonable options for CONTRACTOR to continue to provide the Remote Hosting Services, which may include (i) any resulting changes to the Remote Hosting Services fees, or (ii) any resulting changes in the service level commitments described in this Exhibit D. Any changes to the Agreement required as a result of the parties agreeing to implement one of the proposed options shall be in accordance with Paragraph 6 (Change Notices and Amendments) of the body of the Agreement. If the parties are unable to reach agreement within one hundred and eighty (180) days of CONTRACTOR's submission of the options, CONTRACTOR and COUNTY will discuss the risk and/or impact to CONTRACTOR and COUNTY in continuing the Remote Hosting Services relationship notwithstanding CONTRACTOR's non-compliance.

- Following all of the steps set forth in the applicable of clause (i) or (ii) above, including but not limited to the risk and/or impact discussions, if the parties agree that it is not feasible to continue with the Remote Hosting Services relationship, then CONTRACTOR shall work with COUNTY to identify an alternative hosting solution for COUNTY. CONTRACTOR and COUNTY will work together to develop a migration plan and CONTRACTOR shall provide COUNTY with a quote for any additional work required beyond the Remote Hosting Services, which may include the following: (a) any equipment and third party software necessary; (b) any associated maintenance services; and (c) professional services necessary for such transition. COUNTY reserves the right to acquire any foregoing from a vendor other than CONTRACTOR. CONTRACTOR and COUNTY will also execute a mutually-agreeable Amendment to this Agreement to accommodate the change in operation of the System Software, which Amendment shall be executed in accordance with Paragraph 6 (Change Notices and Amendments) of the body of the Agreement. When the transition is complete and all CONTRACTOR-provided on-site equipment returned, COUNTY will no longer be obligated to pay the Remote Hosting Services fees for the transitioned System Software, and such services will be terminated; however, CONTRACTOR will continue to provide System Software support so long as COUNTY continues to pay the associated System Software support fees in accordance with the Agreement.

(f) Attend meetings as appointed by the COUNTY's Project Managers.

(2) Staffing

COUNTY will:

(a) Provide three full time contact staff in addition to the Project Managers. Their principal role will be to act as representatives in communication of service requests and issues to CONTRACTOR and as COUNTY liaison for all CONTRACTOR services. The duties of these positions are: reviewing and approving CONTRACTOR's project plans, scheduling Upgrade events, testing, monitoring COUNTY equipment and services, and providing CONTRACTOR with necessary information regarding COUNTY equipment and configurations.

(b) Provide a sixth staff person (in addition to the five identified in (a)) to act as a security specialist. The duties of this position are: definition of roles and groups, establishing User profiles, and notifying CONTRACTOR of User profile and/or role changes, new accounts, and major expected environmental changes.

(c) Provide, supervise and provision super Users to support System Software. The duties of these Users are: requesting and prioritizing changes such as modifications to Custom Command Language (CCL) reports, changes of rules and alert triggers, and providing the description of the requirements and mock-up of the expected changes, and validation of changes before requesting COUNTY's Project Director's authorization to move them to the Production Domain.

(d) Provide an internal COUNTY help desk that will serve as the first point of contact for Users and also communicate planned outages and other status events to Users ("1st Level Help Desk").

B. FACILITIES AND EQUIPMENT

(1) Facilities

COUNTY will:

(a) Provide the address of the points of demarcation to CONTRACTOR upon request.

(b) Provide space and a temperature controlled environment and rack space for CONTRACTOR provided equipment (such as wide area network equipment, replication and imaging servers, and other necessary equipment) installed at COUNTY Facilities.

(c) Notify CONTRACTOR of any issues or concerns associated with connections such as equipment to COUNTY network.

(d) Provide dual uninterrupted power supply, separate power circuits, and connectivity, adequate power, cooling and physical security for such CONTRACTOR provided equipment.

(2) Equipment

COUNTY will:

(a) Provide and manage Specified Hardware and Operating Software, including:

- Provide and manage COUNTY's LAN and WAN connectivity to Users and all devices necessary to connect Users to the System, on COUNTY's side of the points of demarcation.
- Provide out-of-band management access to CONTRACTOR in the form of a dedicated analog line and a Plain Old Telephone Service (POTS) line for out of band management.
- Provide and manage COUNTY systems, software and connectivity that are not part of JHIS (e.g.: Microsoft Word, Excel® spreadsheet software, Access™ database software, and Microsoft client access licenses (CALs) for COUNTY's devices, and others used to display or analyze data at the user desktop).
- Provide peripheral technologies certified by CONTRACTOR or selected in consultation with CONTRACTOR's Project Director and approved by COUNTY's Project Director.
- Manage, maintain and control COUNTY's peripheral devices and device configurations.

(b) Provide, install and maintain Specified Hardware or Operating Software in the event of an Upgrade in accordance with the Approved Upgrade Plan to COUNTY provided Equipment.

C. SERVICES

(1) Notification and Information to CONTRACTOR

COUNTY will:

(a) Provide not less than 6 month notice to CONTRACTOR of material changes to COUNTY growth impacting the scope of use and Response Time/Availability assumptions set forth in Schedule 1 (Service Level Commitments) to this SLA (e.g., order volumes, number of Concurrent Users, Interface transactions).

(b) Notify CONTRACTOR of COUNTY planned events that will affect the System such as outages.

(c) Provide operator guides and support contact information for COUNTY provided equipment and software.

(d) Provide local network and host information including the addresses of demarcation, exchange ID, and local adapter addresses.

(e) Provide CONTRACTOR with virtual access to peripherals and Interfaces as needed to support System.

(f) Provide CONTRACTOR with a permanent local administrator account and password on COUNTY's PDCs located in the CTC, and permit CONTRACTOR's agents to be installed and run on the COUNTY's PDCs.

(g) Set purge and retention criteria based on COUNTY's clinical requirements, and schedule purge jobs for CONTRACTOR to run in.

(h) Provide the content information for the Microsoft Terminal Server Database.

(i) Notify CONTRACTOR when cycling Interfaces and/or when Interfaces fail to operate in accordance with Specifications.

(j) Grant physical access and assistance in accordance with the Agreement as needed to CONTRACTOR and provide as-needed occasional support for CONTRACTOR's equipment installed at COUNTY Facilities.

(k) Consult with CONTRACTOR in connection with any planned changes affecting the System such as potential Compatibility issues and/or performance implications.

(l) When notifying CONTRACTOR of problems distinguish between network and System Software problems to the extent feasible given information about the System available to COUNTY's technical staff.

(2) Configuration of Specified Hardware and Operating Software

COUNTY will:

(a) Operate, maintain, manage and control JHIS front end technology owned by COUNTY.

(b) Operate, maintain, manage and control JHIS technology provided by COUNTY to meet COUNTY's security requirements.

(c) Define, setup, and verify printers for Non-Production Domains.

(d) Define and manage printer routings.

(e) Configure COUNTY side of Interfaces, medical devices, fire-walls, PACS, and local devices such as print servers, printers and scanners when relevant to the System.

(f) Purchase and install any third party enhancements to COUNTY equipment or network connected to System whether or not available in the public domain, to comply with State and Federal regulatory requirements.

(3) Testing

COUNTY will:

(a) Ensure that COUNTY introduces no changes to Specified Hardware and Operating Software affecting the Production Domain during an Upgrade project.

(b) Test and validate COUNTY side of Interfaces

(c) Perform User Acceptance Tests of Upgrades, with appropriate CONTRACTOR guidance, as specified in Exhibit A (Statement of Work).

(d) Authorize changes that affect the Production Domain, and validate all changes to the System and/or each Phase or Optional Phase System prior to authorizing CONTRACTOR to move them to Production, including without limitation Upgrades and Updates.

(4) Monitoring and Control

COUNTY will:

(a) Provide CONTRACTOR with notice, within three days of occurrence of a problem being reported, with a general description of the problem.

(b) Schedule maintenance windows in collaboration with CONTRACTOR's Remote Hosting Services.

(c) Backup Specified Hardware and Operating Software and verify restored environments controlled by COUNTY.

(d) Analyze and tune Tailored components or Custom Reports provided by COUNTY with the assistance of AMS.

(e) Monitor Interfaces and Interface connectivity and cycle as necessary.

(f) Review posting and error logs and take appropriate action with the assistance of AMS.

(g) Identify and resolve COUNTY's LAN and WAN problems (confirmed by the COUNTY's Project Director in consultation with CONTRACTOR's Project Director to be solely within control of COUNTY).

(h) Monitor charting, remote report distribution, and printing services that rely solely on COUNTY equipment and correct or resubmit failed jobs.

(i) Escalate issues and problems within COUNTY.

(5) Training

COUNTY will:

(a) Plan training programs as needed for Upgrades, identify resources, arrange for CONTRACTOR support including Train the Trainers, and communicate the program to Users.

(b) Conduct User training.

VII. COUNTY FACILITIES

COUNTY Facilities for which the Service Level Agreement, including System Maintenance (Section I), Remote Hosting Services (Section II), Upgrades Implementation Services (Section III), and Application Management Services (Section IV) taken singly and together as a whole shall be provided by CONTRACTOR are those listed in Attachment G (COUNTY Facilities) to Exhibit A (Statement of Work) of the Agreement.

VIII. OPTION TO TERMINATE SERVICE LEVEL AGREEMENT

In addition to any other termination provisions stated in the body of this Agreement, COUNTY may, at its sole option, elect to terminate all or any part of the Services included in this Service Level Agreement, including:

- System Maintenance (Section I),
- Remote Hosting Services (Section II),
- Upgrades Implementation Services (Section III), and
- Application Management Services (AMS) (Section IV).

A. COUNTY shall provide at least ninety (90) days written notice to CONTRACTOR of such election prior to the effective date of termination under this Section VIII. In the event of such a termination, CONTRACTOR shall be entitled to seek payment for Deliverables completed by CONTRACTOR and approved by COUNTY in accordance with this Agreement prior to the effective date of such termination, as is provided under Subparagraph 32.3 with respect to COUNTY's termination for convenience.

B. If, in accordance with this Agreement COUNTY desires to transition the System Software to its own facility at the end of term of this Agreement or upon termination of Remote Hosting Services, COUNTY will notify CONTRACTOR in writing of such intent to transition concurrently with its notice of termination of the Remove Hosting Services. Upon such notice, CONTRACTOR and COUNTY will work together to develop a migration plan and CONTRACTOR shall provide COUNTY with a quote for any additional work required beyond the Remote Hosting Services, which may include the following: (a) any equipment and third party software necessary; (b) any associated maintenance services; and (c) professional services necessary for such transition. COUNTY reserves the right to acquire any foregoing from a vendor other than CONTRACTOR. CONTRACTOR and COUNTY will also execute a mutually-agreeable Amendment to this Agreement to accommodate the change in operation of the System Software, which Amendment shall be executed in accordance with Paragraph 6 of the body of the Agreement. CONTRACTOR will not be required to begin any of the foregoing obligations relating to the transition unless or until COUNTY is current in paying any amounts payable hereunder in accordance with this Agreement as of the date CONTRACTOR receives COUNTY's notice of transition. When the transition is complete and all CONTRACTOR-provided on-site equipment returned, COUNTY will no longer be obligated to pay the Remote Hosting Services fees for the transitioned System Software, and such services will be terminated; however, CONTRACTOR will continue to provide System Software support so long as COUNTY continues to pay the associated System Software support fees in accordance with this Agreement.

SCHEDULE I

SERVICE LEVEL COMMITMENTS

In addition to CONTRACTOR's other obligations under this SLA and otherwise in the Agreement, this Schedule I further specifies the service level commitments for the following:

A. SYSTEM SOFTWARE SUPPORT SERVICE LEVEL COMMITMENTS

B. RESPONSE TIME AND AVAILABILITY SERVICE LEVEL COMMITMENTS

(1) Response Time and Availability Service Level Assumptions

(2) Response Time Service Level Commitments

(3) Availability Service Level Commitments

C. REMEDIES AND CREDITS

I. SYSTEM SOFTWARE SUPPORT SERVICE LEVEL COMMITMENTS

A COUNTY Representative will assign one of the Severity Levels described in Table 1 immediately below to each COUNTY service request. In Table 1, "Criterion" describes the condition leading to COUNTY's service request to CONTRACTOR. "Resolution Time" shall mean the duration of the period from the time of COUNTY submittal of said service request to the implementation of a validated solution and/or acceptable work around approved by COUNTY's Project Director, less the time during resolution requiring action by the COUNTY. With respect to any service request, COUNTY shall have the right to reassign a Severity Level based upon the situation underlying such service request.

In the event that the duration of CONTRACTOR resolution time exceeds the standards set forth in Table 1 (Service Request Resolution Duration Standards) below, COUNTY will notify CONTRACTOR's Project Director of the inadequate response time and the CONTRACTOR's Project Director shall correct it. In the event that the duration of CONTRACTOR resolution time exceed the standards set forth in Table 1, CONTRACTOR shall immediately submit to COUNTY a written action plan and status report which shall i) describe the original problem encountered in the service request, ii) explain why CONTRACTOR was not able to correct the problem within the specified resolution time standard, iii) propose corrective action and a revised plan for resolution. CONTRACTOR shall be available for discussion with COUNTY regarding possible workarounds and any other issues of concern via telephone, email, chat forum, or Cerner.com.

Table 1: Service Request Resolution Duration Standards

Severity Level	Criterion	Resolution Time Standard
1	Immediate All COUNTY Facilities lose System Availability or functionality, or critical data are missing or incorrect, or patient care and safety are impacted, and no workaround is known to COUNTY that both COUNTY and CONTRACTOR have agreed to implement.	Within 4 hours
2	High One or more COUNTY Facilities experience loss of System Component Availability or System Response Time is degraded. System processing is severely impacted and no acceptable workaround is known to COUNTY. Patient care is impacted and patient safety will be impacted if the situation is permitted to continue, and no workaround is known to COUNTY that both COUNTY and CONTRACTOR have agreed to implement.	Within 12 hours
3	Moderate Loss of some System Component functionality or procedural use with no immediate impact on patient care or safety or an acceptable workaround is known to COUNTY, and can be or has been implemented by Users. The loss of functionality may impact patient care if the situation is permitted to continue. Issues that would have been considered Severity Levels 1 or 2 that have a workaround as described in the criterion for Severity Levels 1 and 2 above will be reassigned as a Severity Level 3.	Within 3 business days

Severity Level	Criterion	Resolution Time Standard
4	Minor All questions related to implemented features, questions of a complex nature, and other service requests that do not affect patient care or safety.	Within 6 business days

II. RESPONSE TIME AND AVAILABILITY SERVICE LEVEL COMMITMENTS

A. RESPONSE TIME AND AVAILAIBLITY SERVICE LEVEL COMMITMENT ASSUMPTIONS

The Response Time and Availability Warranties set forth on this Schedule I are subject to the assumptions contained in this Section B(1). CONTRACTOR asserts and COUNTY agrees that CONTRACTOR shall size the Production Domain (as defined in Exhibit A (Statement of Work)) based on the data set forth below as provided by COUNTY.

Should these specified assumptions be exceeded during any Response Time or Availability measurement period, CONTRACTOR shall notify COUNTY of the changes and COUNTY will pay additional fees as described in Schedule III of this SLA in accordance with the Agreement. Should COUNTY determine that the assumptions will be permanently exceeded, COUNTY will so notify CONTRACTOR and CONTRACTOR shall recommend remediation steps that will restore Response Time and Availability in accordance with the provisions of Paragraph 6 (Change Notices and Amendments) of the Agreement.

(1) The Response Time and Availability Warranties are subject to Section I.A(8) of the body of this SLA.

(2) COUNTY will maintain 625 Peak Concurrent Logons (as defined in Exhibit A) or less.

(3) COUNTY will receive Remote Hosting Services on the System and any Phase System as specified in Exhibit A (Statement of Work).

(4) COUNTY will require Domains as specified in Attachment A (JHIS Technical and Operational Requirements) of Exhibit A (Statement of Work).

(5) COUNTY's use of Open Engine is limited only to JHIS.

(6) COUNTY's use of CPDI will not exceed the following assumptions:

- Terabytes of images added per year
- CONTRACTOR's CAMM server based solution
- Batch capture (assumes all COUNTY Facilities share same set of batch services)
- Database servers (located at CTC) (2 production (clustered) and 1 test)
- ACIS Servers (located at CTC) (1 production and 1 test)
- Ascent Capture Server (located at a COUNTY Facility) (3 production and 1 test)

B. RESPONSE TIME WARRANTY

(1) During all periods within each month when the System is operating in Steady State in the Production Domain, and so long as COUNTY is paying the applicable Remote Hosting Services and Application Management Services fees in accordance with the Agreement, CONTRACTOR warrants that the Response Times for 90% of all executed transactions, which have a corresponding RTMS timer, shall not exceed two (2) seconds ("Response Time Warranty"). The Response Time Warranty shall be subject to the assumptions stated in B.(1) of this Schedule I.

If CONTRACTOR fails to meet the Response Time Warranty for a given month, then a "Performance Issue" will be deemed to exist.

With respect to any Performance Issue, COUNTY reserves the right to categorize the Severity Level of such Performance Issue as described in Section A of this Schedule I. In all such cases, CONTRACTOR shall remedy such failures within the applicable timeframe set forth in this Schedule I for such Severity Level. If CONTRACTOR does not resolve the problem within the time set forth in said approved action plan, then the period of such failure to meet the Response Time Warranty shall automatically constitute Unscheduled Downtime, measured from the time the COUNTY Project Director assigned a Severity Level to said failure and the time of resolution, and credits shall apply as provided in Section I.C(1) of this Schedule I (Service Level Commitments).

(2) Response Time Measurement

(a) Response Time performance shall be measured by CONTRACTOR's Response Time Management System enabled on the COUNTY's Production Domain.

(b) CONTRACTOR shall be responsible for the enablement and operations of the Response Time Management System.

(c) The Response Time Management System shall collect measurements continuously and shall write those transactions to enable continuous monitoring and reporting sufficient for COUNTY to determine compliance with the Response Time Warranty.

(3) Response Time Reporting and Analysis

(a) Standard monthly Response Time performance reports shall be available through CONTRACTOR's self-service Lights On Network dashboard reporting system which is accessible to COUNTY via www.cerner.com.

(b) CONTRACTOR shall provide COUNTY access to CONTRACTOR's self-service Lights On Network dashboard reporting system for COUNTY to have access to monthly response time reports.

(c) CONTRACTOR shall train COUNTY's Project Director, or designee on how to access monthly response time reports.

(d) COUNTY will work with CONTRACTOR on establishing and reporting issues.

C. AVAILABILITY SERVICE LEVEL COMMITMENT

(1) Formula and Monitoring

"System Availability" shall mean the percentage of time the System or any System Component is Available during a specific month and shall be calculated as follows, expressed as a percentage:

- Twenty-four (24) hours multiplied by sixty (60) minutes multiplied by the number of days in the applicable month (A) minus the total number of minutes of Unscheduled Downtime during the month (B) divided by

- Twenty-four (24) hours multiplied by sixty (60) minutes multiplied by the number of days in the applicable month.

"Available" shall mean that the System and each System Component is available and operational in accordance with the Specifications and otherwise with this Agreement.

CONTRACTOR shall monitor and report System Availability. In addition, CONTRACTOR shall monitor and evaluate CONTRACTOR's logs of COUNTY service requests that show a resolution relating to System Availability. For purposes of tracking Unscheduled Downtime duration, the Unscheduled Downtime will begin at the earlier of (a) appearance of a System Availability issue on CONTRACTOR's monitoring tools and (b) COUNTY's report of such System Availability issue to CONTRACTOR in accordance with this SLA. Unscheduled Downtime ends at the point in time when Users have the ability to access and use the System in accordance with the Specifications and otherwise with this Agreement.

(2) Availability Warranty

During all periods within each month when the System is operating in Steady State in the Production Domain, and so long as COUNTY is paying the applicable Service Level Agreement fees in accordance with the Agreement CONTRACTOR represents and warrants that the System and each System Component shall be Available 99.9% of the time, during each month ("Availability Warranty"). The Availability Warranty shall be subject to the assumptions listed above in Section B(1) of this Schedule I.

(3) Availability Corrective Action

A period of Unscheduled Downtime shall be corrected in accordance with the provisions of this SLA. For the period of Unscheduled Downtime, credits shall begin to accrue in accordance with Section C(1) of this Schedule I. Unscheduled Downtime shall commence as provided by this Schedule I (Service Level Commitments) of this SLA and shall end when the COUNTY's Project Director provides CONTRACTOR with a written determination that the Unscheduled Downtime has been corrected to COUNTY's Project Director's satisfaction.

III. CREDITS AND OTHER REMEDIES

This Section C (Credits and Other Remedies) of this Schedule I sets forth the credits and other remedies that shall apply in the event that CONTRACTOR fails meet the service level commitments of this Schedule I or otherwise in the SLA or Agreement.

A. CREDITS

Credits shall accrue as specified in this Section C(1) of this Schedule I of the SLA.

Credits shall not accrue for Scheduled Downtime or for any Deficiency resulting from any of the conditions listed in Subparagraph I.A.(8) of this SLA.

COUNTY will not unreasonably delay performance of Corrective Maintenance recommended by CONTRACTOR for any System Components for which CONTRACTOR is providing Application Management Services or Remote Hosting Services as provided in this SLA.

For the System and for each Phase System Component for which this Service Level Agreement applies, during the term of the Agreement, COUNTY shall be entitled to credits in the amounts specified in Table 2 "Downtime Credits" below. Credits shall apply i) in the event that any System Component fails to meet the Availability Warranty, measured and reported as specified in Subparagraph B.(3) of this Schedule I of this SLA above, ii) in the event that a period of Unscheduled Downtime has commenced because of failure of System to meet the Response Time Warranty as specified in Subparagraph B.(2) of this Schedule I of this SLA above, or iii) as provided in Sections I.A.(3) and/or I.A.(4) of this SLA.

Table 2: Downtime Credits

Percentage of Time System Is Available	Credit
Less than 99.9% but greater than or equal to 99.0%	7% of Monthly AMS and Remote Hosting fees
Less than 99.0% but greater than or equal to 98.0%	14% of Monthly AMS and Remote Hosting fees
Less than 98.0% but greater than or equal to 95.0%	20% of Monthly AMS and Remote Hosting fees
Less than 95.0% but greater than or equal 90.0%	50% of Monthly AMS and Remote Hosting fees
Less than 90%	100% of Monthly AMS and Remote Hosting fees

B. OTHER REMEDIES

(1) CONTRACTOR's Infrastructure Improvement

Without limiting the foregoing, CONTRACTOR, acting reasonably, shall determine (subject to Paragraph 46 (Dispute Resolution Procedures) of the Agreement), whether changes to the Production Domain, such as additional hardware, increased LAN/WAN connectivity capacity, infrastructure configuration changes and/or infrastructure tuning changes, will resolve the Deficiency. Consistent with such determination, CONTRACTOR shall provide such changes to the Production Domain at no additional cost to COUNTY.

(2) Termination

In the event that System Availability falls below 98.0% for any three (3) consecutive months, regardless of credit accruals, then COUNTY may exercise its rights under the Agreement to terminate for CONTRACTOR's default or otherwise under the Agreement.

C. REMEDIES EXCLUSIVE

Unless and until COUNTY terminates this Agreement for default in accordance with the terms of this agreement, COUNTY's rights under this Schedule I, together with the other right expressly provided for in this agreement, shall constitute COUNTY's sole and exclusive remedy to enforce CONTRACTOR's obligations under this Exhibit D (Service Level Agreement).

SCHEDULE II

APPLICATION MANAGEMENTS SERVICES

I. APPLICATION MANAGEMENT

Application management is the set of services and updates required to ensure the Managed Software is available for end-users. Maintenance includes changes to the Managed Software that do not require the addition of new functionality (i.e. adding meds integration) or new solutions. Each party agrees to perform its respective Application Management responsibilities as set forth in Table 1 below.

COUNTY and CONTRACTOR will use service requests ("SRs") in the CONTRACTOR service tracking tool to track Managed Software issues and requests. The end user must access the Client help desk to enter issue requests which will then be entered in the CONTRACTOR service tracking tool by the Client's first level help desk. Examples of issue requests:

- Modification to existing orders, tasks, preferences, users, etc.
- Addition of code sets and alias
- Building Powerforms, DTA's, Orders
- Adding Event Sets.

No.	Table 1: Applications Management Responsibility Matrix	CONTRACTOR	COUNTY
1.1	User accounts		
1.1.1	Designate Security Representative and provide definition of required roles, positions and application specific security profiles. Notify CONTRACTOR of any changes to user security (termination, role changed, etc.)		X
1.1.2	Provide and maintain user database for application-specific security such as task access, positions, and role setup.	X	
1.1.3	Maintain individual users accounts.		X
1.1.4	Password resets.		X
1.2	Maintenance Activities		

No.	Table 1: Applications Management Responsibility Matrix	CONTRACTOR	COUNTY
1.2.1	Maintenance of remote report distribution settings using CONTRACTOR maintenance tools	X	
1.2.2	Develop workflow documentation by conducting knowledge transfer sessions with Client	X	
1.2.3	Conduct end user training		X
1.2.4	Build and maintain reference database elements using CONTRACTOR build tools.	X	
1.2.5	Identify and provide printer and printer locations.		X
1.2.6	Maintain change management of local installations (fat client) of the Managed Software on COUNTY PC's		X
1.2.7	Perform event code/event set changes as required	X	
1.2.8	Maintain application-specific security based on COUNTY supplied guidelines.	X	
1.2.9	Maintain WTS locations		X
1.3	Second Level Application Support		
1.3.1	Answer questions regarding Managed Software usage	X	
1.3.2	Provide troubleshooting expertise and problem resolution	X	
1.3.3	Recommend short-term and long-term alternative resolutions to problems	X	
1.3.4	Follow CONTRACTOR's policies for handling patient data	X	
1.3.5	Provide COUNTY with monthly service reports	X	
1.3.6	Provide accurate problem description and example. Provide point of contact that can verify request is complete		X
1.3.7	Provide internal COUNTY help desk that serves as the initial point of contact for end users		X
1.3.8	Perform Daylight Savings Time management activities	X	

No.	Table 1: Applications Management Responsibility Matrix	CONTRACTOR	COUNTY
1.3.9	Troubleshoot and resolve foreign system and medical device interface errors on the CONTRACTOR-side of Managed Software interfaces	X	
1.3.10	Troubleshoot and resolve foreign system and medical device interface errors on COUNTY-side of interface		X
1.4	Operations Management		
1.4.1	Monitor purge job activity to ensure purges are completing successfully	X	
1.4.2	Set up and review purges and operations jobs	X	
1.4.3	Add/remove operations jobs	X	
1.4.4	Provide purge retention criteria		X
1.4.5	Set purge retention criteria for purge jobs and schedule jobs to run	X	

II. CUSTOM REPORT MANAGEMENT

Custom report management is the maintenance of COUNTY custom reports and Discern Rules. This includes an inventory of all reports and Discern Rules that are used in COUNTY's Millennium production System. CONTRACTOR will make modifications to existing production reports or rules to address changes requested by COUNTY, as well as those required for release upgrades and content updates. Each party agrees to perform its respective Custom Report Management responsibilities as set forth in Table 2 below.

No.	Table 2: Custom Report Management	CONTRACTOR	COUNTY
2.1	Custom Report Request		
2.1.1	Request modification to CCL report or Discern Rule. Provide requirement and mock up of change		X
2.1.2	Troubleshoot issues with CCL reports in production	X	
2.1.3	Manage requests using tracking tool and	X	

No.	Table 2: Custom Report Management	CONTRACTOR	COUNTY
	report to Client on status		
2.1.4	Modify and test CCL reports and Discern rules	X	
2.1.5	Validate and signoff on CCL Report and assure the integrity of the resulting data.		X

III. CONTENT MANAGEMENT

CONTRACTOR will provide updates of content packages. Content packages include standard content such as Multum, ICD-9, CPT-4 as well as code content included in Cumulative Service Packages (CSP's) and Exception Service Packages as needed. Each party agrees to perform its respective Content Management responsibilities as set forth in Table 3 below.

No.	Table 3: Content Management	CONTRACTOR	COUNTY
3.1	Package Management		
3.1.1	Maintain standard content updates subject to Section I.B., Scope of Use Limits	X	
3.1.2	Install content and Service Packages and perform technical special instructions (if not Remote Hosted by CONTRACTOR)		X
3.1.3	Perform front-end special instructions for service package loads	X	
3.1.4	Provide regression test scripts	X	
3.1.5	Monitor Licensed Software notifications (i.e., flashes, advisories, CKN, etc.) and take necessary action	X	
3.1.6	Perform service package certification guidelines as needed	X	
3.1.7	Test service packages and fixes and assure the integrity of the resulting data	X	
3.1.8	Validate service packages /application enhancements and fixes and assure the integrity of the resulting data. COUNTY is responsible for final signoff		X
3.1.9	Perform and manage the process for local installations (fat client) of the Managed		X

No.	Table 3: Content Management	CONTRACTOR	COUNTY
	Software on Client PCs		

IV. APPLICATION MONITORING

CONTRACTOR will provide a 24x7x365 service to monitor and correct errors with interfaces, chart servers, operations jobs, remote report distribution ("RRD"), and printing. Profiles will also be created to inventory and baseline transaction volumes. Each party agrees to perform its respective responsibilities as set forth in Table 4 below.

No.	Table 4: Application Monitoring	CONTRACTOR	COUNTY
4.1	Management		
4.1.1	Notify COUNTY help desk of issues found that affect service	X	
4.1.2	Review posting and error logs	X	
4.2	Interfaces Monitoring		
4.2.1	Monitor CONTRACTOR inbound/outbound interface queue counts and ensure active interfaces are operational	X	
4.2.2	Monitor and cycle CONTRACTOR in-bound interfaces as required to establish connections and start transactions	X	
4.2.3	Operation and maintenance of CONTRACTOR-side of foreign system and medical device interface	X	
4.2.4	Operation and maintenance of non-CONTRACTOR side of foreign system and medical device interface		X
4.3	Chart Server Monitoring		
4.3.1	Monitor chart queue status	X	
4.3.2	Verify chart status	X	
4.3.3	Re-submit unsuccessful charts	X	

No.	Table 4: Application Monitoring	CONTRACTOR	COUNTY
4.3.4	Review chart server errors, configurations, and chart formats and propose recommended changes	X	
4.3.5	Trend chart volumes and identify potential problem areas	X	
4.4	Operations Job Monitoring		
4.4.1	Monitor operations jobs for successful completion	X	
4.4.2	Restart production jobs as required	X	
4.4.3	Inventory, document, and review operations jobs for efficient use of system resources	X	
4.4.4	Document operations jobs performance and completion timings	X	
4.5	Remote Report Distribution Monitoring		
4.5.1	Monitor charting application services (charting and RRD) for successful completion	X	
4.5.2	Retransmit any failed RRD requests	X	
4.5.3	Manage RRD hardware (fax station, connectivity, modem status and power)		X
4.5.4	Document and map remote report distribution queues	X	
4.6	Print Monitoring		
4.6.1	Monitor print queue for successful completion	X	
4.6.2	Resubmit and/or reroute any failed print jobs	X	
4.6.3	Manage printer hardware devices		X

V. CHANGE MANAGEMENT

COUNTY and CONTRACTOR will follow a formal process for changes made to the Managed Solutions. CONTRACTOR will provide a copy of the change man-

agement procedure to COUNTY. This process (i) ensures that changes occur in a controlled environment so that all parties understand the potential impact of an impending change and (ii) identifies potentially affected systems and processes prior to implementation of the change(s). COUNTY will authorize all changes that affect production domains as specified in the standard change management procedure. COUNTY agrees to cooperate with CONTRACTOR in connection with providing reasonable and appropriate maintenance windows and participating in the testing as reasonably required. Each party agrees to perform its respective change management responsibilities as set forth in Table 5 below.

No.	Table 5: Change Management	CONTRACTOR	COUNTY
5.1	Change Management		
5.1.1	Provide and maintain an automated change management system for the centralized reporting and tracking of changes made by CONTRACTOR personnel	X	
5.1.2	Perform project management	X	X
5.1.3	Provide reporting to Client executive management	X	
5.1.4	Lead change management meetings	X	
5.1.5	Attend change management meetings	X	X
5.1.6	Agree to production change schedule	X	X
5.1.7	Communicate planned outages to end users		X
5.1.8	Designate at least two individuals responsible for signing PECA forms		X
5.1.9	Provide and communicate risk management analysis	X	
5.1.10	Communicate system changes on non-Managed Software to the AMS team as necessary		X
5.1.11	Test all changes to the Managed Software prior to moving them to production	X	
5.1.12	Validate all changes to the Managed Software prior to moving them to production		X
5.1.13	Test application enhancements, fixes, and upgrades and assure the integrity of the resulting data	X	
5.1.14	Provide six month notice to CONTRACTOR of material changes to		X

No.	Table 5: Change Management	CONTRACTOR	COUNTY
	Client growth of use of the Managed Software (e.g., order volumes, users)		
5.1.1	Provide recommendations for governance structure to support change management activities and meetings	X	
5.1.2	Identify representatives to fill and execute on the agreed upon governance structure		X
5.2	Service Management		
5.2.1	Provide weekly statistics and management reports to Client on Service Level attainment	X	

VI. PROBLEM MANAGEMENT

Problem Management is the identification, assessment of impact, reporting, tracking, escalation, notification, and resolution of problems that occur in the Managed Software. COUNTY is responsible for maintaining a staffed help desk that will provide the first line of support of users and data coordination calls. This line of support will distinguish issues with the Managed Software versus connectivity or infrastructure issues. In addition, COUNTY agrees to designate "super users" at the COUNTY site to address application-specific issues. Each party agrees to perform its respective problem management responsibilities as set forth in Table 6 below.

No.	Table 6: Problem Management	CONTRACTOR	COUNTY
6.1	Problem Management		
6.1.1	Provide single point of contact for proper escalation of problems	X	X
6.1.2	Log all incidents and problems in accordance with documented processes in this CONTRACTOR System Schedule		X
6.1.3	Maintain ownership of all problems related to AMS through closure or until agreement that the problem is not within AMS scope of responsibility	X	
6.1.4	Perform root cause analysis on problems that affect service level standards	X	

No.	Table 6: Problem Management	CONTRACTOR	COUNTY
6.1.5	Notify COUNTY help desk of issues found that affect service	X	
6.1.6	Staff operations 24 x 7	X	
6.1.7	Provide on-call application staff 24 x 7	X	
6.1.8	Ensure proper notification and escalation of issues in accordance with standard operating procedures	X	
6.1.9	Maintain COUNTY help desk to provide first line of support to end users		X
6.1.10	Differentiate between application and connectivity issues, manage non-Managed Software issues with appropriate teams		X
6.1.11	Provide escalation process within COUNTY organization		X
6.1.12	Assign IT Coordinator as primary contact according to CONTRACTOR standard escalation processes		X

ORIGINAL

EXHIBIT E

HEALTHE INTENT MASTER SERVICES AGREEMENT

Cerner™

CERNER HEALTHE INTENT SERVICES AGREEMENT

This Cerner Healthe Intent Services Agreement (the "Agreement") is made on _____ ("Effective Date"), between

Los Angeles County Sheriff's Department ("Client")	and	Cerner Corporation ("Cerner")
a Municipal Government Agency with its principal place of business at:		a Delaware corporation with its principal place of business at:
12440 E Imperial Hwy 400 E Norwalk, CA 90650 Telephone:		2800 Rockcreek Parkway Kansas City, MO 64117, U.S.A. Telephone: (816) 221-1024

This Agreement consists of the following documents:

- Basic Terms and Conditions
- Cerner Sales Order

COUNTY OF LOS ANGELES

By: Lee Baca

LEROY D. BACA
(type or print)

Title: SHERIFF

CERNER CORPORATION

By: Marc G. Naughton

Marc G. Naughton

Title: Executive Vice President

SIGNATURE PAGE

EXHIBIT E

HEALTHE INTENT SERVICES AGREEMENT

BASIC TERMS AND CONDITIONS

1. SERVICES

1.1 **General**. Cerner is using a shared computing utility to deliver new services, technology and content to Client (the "Services"). Client desires to use selected Cerner *Healthe Intent*™ Services (each a "Service"), subject to the terms and conditions of this Agreement.

1.2 **Healthe Intent Services.** Client may select a Service at any time via the online Cerner Store, or by contacting a Cerner sales associate. Each Service is described in the associated Service Description referenced in each Cerner Sales Order ("Sales Order"). Each Sales Order will be a separate agreement, and if purchased via the online Cerner Store, Client will click the "I Accept" button to accept the Service and any applicable additional terms and conditions. Certain online Services contain separate terms and conditions related to their use, and such terms and conditions will govern each End User's use of the applicable Service. If such End User terms and conditions apply, they will be identified on the applicable Sales Order.

1.3 **Data Security & Privacy.** Cerner has implemented reasonable security measures, systems and procedures to (i) protect the confidentiality, integrity and accessibility of Client's Confidential Information (as defined below), (ii) prevent the unauthorized use of or unauthorized access to Client's Confidential Information, and (iii) protect against anticipated threats or hazards to the security or integrity of Client's Confidential Information. Client is responsible for its security and privacy compliance, including implementing appropriate security capabilities and establishing appropriate policies and procedures to minimize or prevent unlawful access by Client and/or its End Users (as defined below) who may have access to the Services. For Services requiring use and disclosure of protected health information as defined in HIPAA, Cerner agrees to comply with the Business Associate obligations set forth in the business associate agreement entered into by Cerner and Client, or if there is no current Business Associate Agreement in place between the parties, Cerner will comply with Cerner's Business Associate Agreement obligations which are in effect as of the Effective Date of this Agreement (and which can be viewed at https://store.cerner.com/contracts/baa-2011-01-11.pdf).

2. CLIENT OBLIGATIONS

2.1 **Use of Services.** Other than for Services provided for the benefit of consumers (such as personal health records), Client is responsible for (i) credentialing all users who have access to the Services ("End Users") and determining the correct privileges for each End User, and (ii) ensuring that it and all End Users use the Services in accordance with the documentation and the Agreement and for no other purpose whatsoever. Client will use all commercially reasonable efforts to prevent unauthorized use of the Services, and to terminate any unauthorized use. Client will promptly notify Cerner of any unauthorized use, or access to, the Services of which it becomes aware.

2.2 **Restrictions on Use.** Client will not, and will use commercially reasonable efforts to make sure End Users do not: (i) alter information transmitted through the Services to End Users, or (ii) sell, resell, lease or the functional equivalent, the Services to a third party. Cerner has and shall retain sole and exclusive right, title and interest, including copyright and all other rights, in and for the Services. Cerner hereby reserves all rights not expressly granted hereunder.

2.3 **Connections.** Other than for Services provided for the benefit of consumers, Client is responsible for managing and maintaining communications connections and devices for End Users at all locations.

3. FEES AND TAXES

3.1 **Payment Terms.** Client agrees to pay any applicable fees as set forth in a Sales Order.

3.2 **Taxes.** Client will pay all taxes imposed in conjunction with this Agreement, including, but not limited to sales, use, excise, value added, goods and services, and similar taxes based on or measured by charges payable under this Agreement and imposed under authority of federal, state, provincial, local, or any other taxing jurisdictions, but excluding foreign, federal, state, provincial and local taxes on Cerner's net income or corporate existence. If tax exempt, Client will provide to Cerner a copy of its sales tax exemption certificate.

4. TECHNICAL SUPPORT SERVICES

Cerner will provide support services for issues reported via eService in accordance with the Technical Support Services description set forth in Exhibit A of the applicable Sales Order.

5. CONFIDENTIAL INFORMATION

Confidential Information means all technical, business, financial and other information that is disclosed by either party to the other, all individually-identifiable patient information, and all non-publicly available information related to Cerner Services. Confidential Information will not include any information (i) that is publicly available through no breach of this Agreement, (ii) that is independently developed or was previously known by Client or Cerner, or (iii) that is rightfully acquired by Client or Cerner from a third party who is not in breach of an agreement to keep such information confidential. Except as expressly permitted by this Agreement and each Service, Cerner and Client will not disclose, use, copy, distribute, sell, license, publish, reproduce or otherwise make available Confidential Information of the other party. Cerner and Client will each (i) secure and protect the other party's Confidential Information by using the same or greater level of care that it uses to protect its own confidential and proprietary information of like kind, but in no event less than a reasonable degree of care, and (ii) require that each of their respective employees, agents, attorneys and independent contractors who have access to such Confidential Information are bound to at least as restrictive confidentiality terms as this Article 5. Notwithstanding the foregoing, either party may disclose the other party's Confidential Information to the extent required by applicable law or regulation or by order of a court or other governmental entity, in which case, if permitted, such party will notify the other party as soon as practicable prior to such party making such required disclosure.

6. ACCESS TO DATA

Client grants to Cerner a license to use the data identified by the applicable Service for the purposes set forth in the applicable Service Description.

7. WARRANTY

Cerner warrants that it will perform the Services in accordance with applicable laws and regulations and in a professional, workmanlike manner in accordance with the applicable Service Description.

8. DISCLAIMER OF WARRANTIES

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

9. CERNER INDEMNIFICATION

Cerner agrees to indemnify Client and its officers, directors, employees and agents against any and all claims, liabilities, obligations, judgments, causes of actions, costs and expenses (including reasonable attorneys' fees) made in settlement or awarded as a result of any third party action brought against Client to the extent directly and proximately caused by the negligence or willful misconduct of Cerner while engaged in the performance of the Services under this Agreement. In the event that any claim is made against Client for which Cerner has indemnified Client, Client shall, as soon as practicable, notify Cerner of the nature of the claim and Client's basis for believing that Cerner has indemnified Client from the claim. Cerner may, in its sole discretion, defend Client against such claim and shall advise Client within five days of receiving notice of Cerner's decision as to whether Cerner will defend the claim. In that event, Cerner shall have sole control of the defense of the claim. Until such time as Cerner has advised Client that it will defend the claim, Client shall be authorized and obligated to defend the claim. If Cerner does not defend the claim, Client shall advise and consult with Cerner before agreeing to settle the claim. If a judgment is taken or any other adverse event occurs as a result of Client's failure to defend the Claim, Cerner shall be excused from its obligation to indemnify Client.

10. CLIENT INDEMNIFICATION

Client agrees to indemnify Cerner and its officers, directors, employees and agents against any and all claims, liabilities, obligations, judgments, causes of actions, costs and expenses (including reasonable attorneys' fees) made in settlement or awarded as a result of any third party action brought against Cerner to the extent directly and proximately caused by Client's use of the Services except to the extent directly and proximately caused by the negligence or willful misconduct of Cerner while engaged in the performance of the Services under this Agreement. In the event that any claim is made against Cerner for which Client has indemnified Cerner, Cerner shall, as soon as practicable, notify Client of the nature of the claim and Cerner's basis for believing that Client has indemnified Cerner from the claim. Client may, in its sole discretion, defend Cerner against such claim and shall advise Cerner within five days of receiving notice of Client's decision as to whether Client will defend the claim. In that event, Client shall have sole control of the defense of the claim. Until such time as Client has advised Cerner that it will defend the claim, Cerner shall be authorized and obligated to defend the claim. If Client does not defend the claim, Cerner shall advise

and consult with Client before agreeing to settle the claim. If a judgment is taken or any other adverse event occurs as a result of Cerner's failure to defend the Claim, Client shall be excused from its obligation to indemnify Cerner.

11. LIMITATION OF LIABILITY

NEITHER PARTY WILL BE LIABLE UNDER THIS AGREEMENT FOR LOST REVENUES OR INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, EXEMPLARY, OR PUNITIVE DAMAGES, EVEN IF THE PARTY KNEW OR SHOULD HAVE KNOWN THAT SUCH DAMAGES WERE POSSIBLE AND EVEN IF DIRECT DAMAGES DO NOT SATISFY A REMEDY. Cerner's aggregate liability under each Sales Order for all claims whatsoever arising under such Sales Order will be limited to the greater of (i) the amount of Service fees paid by Client to Cerner during the twelve (12) month period prior to the claim under the applicable Sales Order, or (ii) one hundred thousand dollars ($100,000). These limitations of liability do not apply to breaches of the Business Associate Agreement or indemnification obligations under this Agreement.

12. GOVERNING LAW

This Agreement shall be governed by the laws of the state of Client's place of incorporation, excluding that state's conflicts of laws rules.

13. TERM

This Agreement shall remain effective until all Services are terminated in accordance with this Agreement or the applicable Sales Order(s). The term of each Service is set forth in the applicable Sales Order.

14. TERMINATION

Either party shall have the right to terminate this Agreement if the other party materially breaches any provision of this Agreement so long as such party sends a notice of termination to the other party specifying each such breach. This Agreement shall be terminated thirty (30) days following delivery of such notice unless such breach is cured within the thirty day period. Upon termination for any reason, each party shall immediately destroy all copies of the other party's Confidential Information.

15. INFORMATION MANAGEMENT TOOLS

While the Services have been developed and reviewed by Cerner based upon published data and the experiences of qualified professionals whenever possible; medical information changes rapidly and, therefore, some of the medical information utilized in the Services may be out of date. Client acknowledges and agrees that the Services provided by Cerner are information management tools only, many of which contemplate and require the involvement of professional medical personnel. Information provided through the Service is not intended to be a substitute for the advice and professional judgment or other professional medical personnel. Client acknowledges and agrees that physicians and other professional medical personnel should never delay in providing treatment, or make a treatment decision, based solely upon information provided through the Services. Client further acknowledges and agrees that Cerner has not represented its Services as having the ability to diagnose disease, prescribe treatment, or perform any other tasks that constitute the practice of medicine or of other professional or academic disciplines.

EXHIBIT E

CERNER SALES ORDER

Prepared For: Los Angeles County Sheriff's Department ("Client")
12440 E Imperial Hwy 400 E
Norwalk, CA 90650

Client Contact:
Phone:

Cerner Contact: Len Giuffre
Phone: (816) 206-4099

This Cerner Sales Order ("Sales Order") is made on _____ ("Effective Date") between Client and Cerner Corporation ("Cerner"), a Delaware corporation having a principal place of business at 2800 Rockcreek Parkway, Kansas City, Missouri, 64117. This Sales Order is subject to and incorporates by reference the *Healthe Intent Services Agreement* ("Agreement") between Client and Cerner.

This Sales Order includes details regarding the following:

- Prerequisites
- Solution Descriptions
- Fees To Be Paid
- Payment Terms
- Term and Termination
- Additional Provisions
- Definition(s)
- Exhibit A –Professional Services Scope
- Exhibit B – *Cerner Healthe Intent™* Services Scope

PREREQUISITES

The following are required in order for Client to be eligible to receive the Sepsis Alert:

- Chart Search (CE-10200-PKG)
- Chart Search Crawler must be running against a live domain

SERVICE DESCRIPTIONS

The *Cerner Healthe Intent™* services ("Services") set forth in this Sales Order may be defined by a service description. Where applicable, such descriptions are referenced by service to a service description code within the Fees To Be Paid section of this Sales Order and can be viewed at http://www.cerner.com/clientresources/solutiondescriptionlookup. Service descriptions are incorporated into this Sales Order by reference.

FEES TO BE PAID / PAYMENT TERMS

The fees and payment terms for the services set forth in this Sales Order are set forth under the Jail Health Information System Agreement (the "Jail Health Information System Agreement"). For the avoidance of doubt, however, and other than for the fees and payment terms for the Services, the Healthe Intent Agreement and this Sales Order shall supersede all terms and conditions of the Jail Health Information System Agreement with respect to the Services herein.

TERM AND TERMINATION

The Services set forth in this Sales Order shall commence upon completion of the technical services set forth in Exhibit A of this Sales Order, and shall continue thereafter in full force and effect for a period of twelve (12) months ("Initial Term"), unless terminated earlier in accordance with the Agreement. At the end of this term, the Services will automatically renew for additional twelve (12) month periods (each a "Renewal Term") pursuant to the terms of the Agreement and this Sales Order (unless Cerner provides Client with written notice no less than ninety (90) days prior to the expiration of the Initial Term of revised terms and conditions and/or fees, which shall be set forth in a new Sales Order (the Initial Term and any Renewal Terms, collectively,

shall be called the "Term"). The Services shall immediately terminate if Client terminates the Chart Search Sales Order or discontinues use of the Chart Search crawler for any reason.

ADDITIONAL PROVISIONS

1. Use of Data. Cerner may use the Data for purposes permitted by HIPAA in connection with Sepsis Agent including performance of Sepsis Agent, analysis of Sepsis Agent, and improvements to Sepsis Agent. For purposes of this section, Data shall mean all data that is collected, stored, or generated through the use of the Services.

2. Sepsis Agent Configuration Services. Cerner will provide technical services to integrate the Client Millennium domain with the St. John Sepsis agent ("Sepsis Agent"). This requires unique system integration knowledge of how the Millennium application and database interact with the Healthe Intent platform. A full description of the technical project scope is set forth in Exhibit A of this Sales Order.

3. Disclaimer of Warranties. EXCEPT AS OTHERWISE SET FORTH IN THE AGREEMENT, CERNER EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES, BOTH EXPRESS AND IMPLIED. CERNER DOES NOT MAKE ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY AND COMPLETENESS OF THE DATA DELIVERED THROUGH THE SERVICES, THE MERCHANTABILITY AND FITNESS FOR CLIENT'S PARTICULAR PURPOSE, NON-INFRINGEMENT OF PROPRIETARY RIGHTS NOR THE COMPATIBILITY OF THE SERVICES WITH CLIENT'S HARDWARE AND SYSTEMS. THE CHART SEARCH SERVICES ACCESS A DELAYED INDEX ON AN AS-IS AND AS-AVAILABLE BASIS TO A CACHED SUBSET OF THE PATIENT'S MEDICAL RECORD AND DOES NOT SEARCH THE PATIENT'S ENTIRE MEDICAL RECORD AND IS NOT AN EXACT REPRODUCTION OF THE SEARCHED MEDICAL RECORD. NOT ALL INFORMATION FROM THE PATIENT'S MEDICAL RECORD IS INDEXED, AS DESCRIBED IN MORE DETAIL ON THE SERVICE PAGES HELP MENU. ALL INFORMATION CONTAINED IN AN INDEX IS SUBJECT TO TIME DELAYS.

4. Technical Integration Services. Cerner will provide technical services to integrate the Client Millennium domain with the Chart Search cloud-based service. This requires unique system integration knowledge of how the Millennium application and database interact with the Chart Search architecture. A full description of the technical project scope is set forth in Exhibit A of this Sales Order.

5. Technical Support Services. Cerner will provide support services for issues as set forth in Exhibit B of this Sales Order.

DEFINITION(S)

Execution means the Effective Date of this Sales Order.

AUTHORIZATION

By executing this Sales Order, Client agrees to purchase and take delivery of the products, services, maintenance, and installation set forth herein.

COUNTY OF LOS ANGELES

By: _____

LEROY D. BACA
(type or print)

Title: SHERIFF

CERNER CORPORATION

By: _____

Marc G. Naughton

Title: Executive Vice President and Chief Financial Officer

EXHIBIT A
PROFESSIONAL SERVICES SCOPE
SEPSIS

1. SEPSIS AGENT CONFIGURATION SERVICES

1.1 Setup Activities.

A. Crawler framework must be implemented prior to project kick-off.

- Client and Cerner will mutually agree to the project timeframe;
- Cerner will crawl data domains into the Healthe Intent platform from the Millennium production environment to gather Client specific concepts needed for the algorithm.

B. During the Sepsis agent design phase, Cerner and Client will:

- Review recommended design including rule parameters and intended audience;
- Ensure design decisions are finalized and documented;
- Cerner will deliver discrete Data findings from the gap analysis to Client;
- Client will provide missing discrete Data found in the gap analysis to Cerner; and
- Client will adhere to Cerner's recommendations. Cerner will allow Client to localize the Sepsis agent in the following areas: reference ranges and suppression criteria.

1.2 Clinical Validation. Prior to the full deployment of the Sepsis agent to Client's identified Users, the following activities will occur:

- The Sepsis crawler will be installed and will pull relevant Data for algorithm evaluation;
- Client approved data elements will be mapped within the Healthe Intent platform via a mapping service;
- Packages will be loaded;
- Build will be configured in non-PROD and PROD environments;
- Client will clinically validate the Sepsis agent during a pilot phase;
- Cerner will support a single event to move the Sepsis agent to full use.

1.3 Client Approval. Prior to moving Sepsis agent to full use, Client will approve the Sepsis agent design as follows:

- Cerner will provide System configuration and education with Client sign-off at completion;
- Client will define and communicate to its Users, Client's policies and procedures for the Sepsis agent;
- Cerner will perform localization of the Sepsis agent; and
- Cerner will notify Client of any applicable updates to the Sepsis algorithm.

EXHIBIT A
PROFESSIONAL SERVICES SCOPE
CHART SEARCH

1. CHART SEARCH TECHNICAL INTEGRATION SERVICE

1.1 **Chart Search Service Description.** Chart Search is a cloud-based service for clinicians to perform structured search of unstructured text anywhere in a person's chart by understanding clinical vocabularies. The Chart Search Technical Integration Service is designed to integrate a Millennium domain with the cloud-based service and allow the search capabilities to be leveraged.

1.2 **Definition of Project Scope.** Certain tasks are dependent on the availability of Client personnel for verification, testing, and knowledge transfer. Cerner will identify Client tasks at the beginning of the engagement to facilitate scheduling and coordination.

The following work activities will be performed:

A. Crawler Installation and Configuration. The Crawler collects data from the Client database and interfaces with the Indexing service in the cloud in order to establish semantic context for the data in the cloud. The Crawler runs on a server in the Client environment. The following activities will be performed:

i. Identify a server on which to install the Crawler – Client Responsibility unless the system is Remote Hosted by CernerWorks

ii. Install the Crawler

iii. Configure the Crawler

iv. Run and monitor progress of the Crawler until the initial indexing is complete

v. Ongoing monitoring and maintenance for the Crawler in change detection mode is Client's Responsibility unless the system is Remote

vi. Hosted by CernerWorks

B. Network Connectivity. Network connectivity will be required between the Client environment and the cloud. Cerner will provide Client with communication requirements including any DNS, ACL, or security certificate requirements. Client will be responsible for making network changes unless the system is remotely hosted by CernerWorks.

C. Millennium Application Server Configuration. Cerner will identify and work with Client to configure Millennium Enterprise Java Servers required for Chart Search.

D. Millennium Application Package Requirements. Cerner will identify and work with Client to install and configure the Millennium package required necessary to leverage Chart Search.

E. Knowledge Transfer. Cerner will provide information about support channels and reference material related to Chart Search in order to transfer knowledge to Client about system management. This will include topics such as understanding the general technical integration and managing the crawler.

1.3 **Client Skill and Participation Level Requirements.** The following client roles are required:

- End User Application Trainer/Super User
  - Skill Level: Basic
  - Level of Participation: Review
- Project Manager
  - Skill Level: Analyst
  - Level of Participation: Review, Approve
- System Engineer
  - Skill Level: Expert

- Level of Participation: Perform Work

- Network Engineer
  - Skill Level: Expert
  - Level of Participation: Contributor, Perform Work

1.4 **Assumptions.** Chart Search leverages Millennium Discern mPage architecture. Specific base requirements will be documented at project initiation and are assumed to be in place or will be managed by Client.

1.5 **Estimated Duration.** This is a fixed fee service that is generally delivered remotely and lasts approximately four (4) weeks depending on Client availability and pre-requisites.

EXHIBIT B
HEALTHE INTENT SERVICES SCOPE

1. TECHNICAL SUPPORT SERVICES

Cerner provides the following levels of Technical Support Services for the Sepsis Agent:

1.1 **Self Help**. All tools that will be used to configure the Sepsis Agent will support the user's workflow with basic help. This help will allow the user to find answers to commonly asked questions as well as clarity on how to use the tool.

The algorithm used by the Sepsis Agent will be available in human readable form to allow understanding of what is being evaluated. Additionally, the clinical concepts that are used will be listed for clarity.

Client will have the ability to view the Cerner Millennium codes currently mapped to each clinical concept in the Sepsis algorithm. This will provide Client with the ability to request changes or additions as Client updates its codes.

For clarity, the scope of the technical support services covers only Sepsis Agent up to the point where the Sepsis Agent alert is sent to Client's Millennium users. Any issues related to the integration within Cerner Millennium, including but not limited to Discern Notify, should be handled under Cerner Millennium Support.

In addition, online collaboration is available via uCern (www.ucern.com).

1.2 **Help Desk**. Client is responsible for staffing a help desk that will provide the first line of support for its End Users and data coordination calls. This line of support must be able to distinguish between application issues and connectivity or infrastructure problems. End Users may also log any issue or question via Cerner's eService. Instructions and account information will be provided on Cerner's website (www.cerner.com/support/). Issues will be worked during regular business hours, M-F 9AM-5PM CST; (excluding US holidays).

1.3 **Improvements**. As necessary, Service improvements will deliver new or revised functionality over time. Some improvements may require integration activities in Client domains connected to the Sepsis Agent. Reasonable instruction will be provided so Client may perform these activities on its own or Client may engage Cerner for professional services on a time and material basis. Details of the improvements will be made available via Self Help.

1.4 **Service Level Expectations**. The Sepsis Agent does not offer any guaranteed service level. Cerner will provide a notification service that Client may subscribe to for updates if the Service is down or experiencing any issues. Additionally, Cerner will provide notification to the Client for any planned downtime. If Client experiences unexpected downtime, please contact the Help Desk. Service level commitments relating to other Cerner services and solutions are not applicable to the Services set forth in this Sales Order.

2. CLIENT OBLIGATIONS

As part of the technical services design sessions described in this Exhibit B, Cerner will map all relevant clinical concepts from Client's Millennium database to the fields used by the Sepsis Agent algorithm. Upon the completion of the technical services, Client will be responsible for any changes made to such clinical concepts in Client's Millennium database and agrees to notify Cerner of any relevant changes to the clinical concepts mapped to the Sepsis Agent. Cerner will work with Client to incorporate new clinical concepts as applicable and map to Client's Millennium database. Client will validate and accept any new design change to the Sepsis Agent prior to use by Client.

ORIGINAL

EXHIBIT F

CONTRACTOR'S EEO CERTIFICATION

CONTRACTOR'S Name

Address

Internal Revenue Service Employer Identification Number

GENERAL

In accordance with Section 4.32.010 of the Code of the County of Los Angeles, CONTRACTOR, supplier, or vendor certifies and agrees that all persons employed by such firm, its affiliates, subsidiaries, or hold companies are and will be treated equally by the firm without regard to or because of race, color, religion, ancestry, national origin, age, condition of physical or mental disability, marital status, political affiliation or sex and in compliance with all antidiscrimination laws of the United States of America and the State of California.

CONTRACTOR'S CERTIFICATION

	(circle one)	
1. The CONTRACTOR has a written policy statement prohibiting discrimination in all phases of employment.	Yes	No
2. The CONTRACTOR periodically conducts a self-analysis or utilization analysis of its work force.	Yes	No
3. The CONTRACTOR has a system for determining if its employment practices are discriminatory against protected groups.	Yes	No
4. Where problem areas are identified in employment practices, the CONTRACTOR has a system for taking reasonable corrective action to include establishment of goals or timetables.	Yes	No

Marc G. Naughton, Exec. V Pres. Chief Financial Officer
Name and Title of Signer

Marc G Naughton 10-15-12
Signature Date

EXHIBIT I

REQUIRED SUBCONTRACT PROVISIONS

THIS SUBCONTRACT AGREEMENT (hereafter "Agreement") is made and entered into this _____ day of _____, 20__, by and between _____ _____, located at _____(hereafter "CONTRACTOR"), and _____ _____, located at _____ (hereafter "SUBCONTRACTOR").

WHEREAS, CONTRACTOR has entered into Los Angeles County Contract No. _____ (hereafter "Prime Contract") with the County of Los Angeles, State of California (hereafter "COUNTY") for the purpose of _____;and

WHEREAS, in order to fulfill all of its obligations to COUNTY under the Prime Contract, CONTRACTOR desires to engage SUBCONTRACTOR to perform work in the area(s) of _____; and

WHEREAS, SUBCONTRACTOR desires to perform such work in accordance with the terms and conditions of this Agreement.

NOW, THEREFORE, CONTRACTOR and SUBCONTRACTOR agree as follows:

1. APPLICABLE DOCUMENTS:

1.1 Interpretation:

Exhibits 1, 2 and 3 are attached to and form a part of this Agreement. In the event of any conflict or inconsistency in the definition or interpretation of any word, responsibility, schedule, or the contents of any task, subtask, deliverable, goods, service, or other work, or otherwise, between the Prime Contract and the body of this Agreement and the Exhibits thereto, or between Exhibits, such conflict or inconsistency shall be resolved by giving precedence first to the Prime Contract and then to the Exhibits according to the following priority:

1. The body of this Agreement
2. Exhibit 1 - Statement of Work
3. Exhibit 2 - Additional Terms and Conditions
4. Exhibit 3 - Subcontractor's EEO Certification
5. Exhibit 4 - Confidentiality of CORI

1.2 Entire Agreement:

The body of this Agreement, and the Exhibits thereto, shall constitute the complete and exclusive statement of understanding between the parties which

supersedes all previous agreements, written or oral, and all communications between the parties relating to the subject matter of this Agreement.

1.3 Definitions:

Unless otherwise defined in this Agreement, all capitalized terms shall have the meanings as set forth in the Prime Contract.

2. PRIME CONTRACT:

Notwithstanding any other provision of this Agreement, this Agreement is a subcontract under the Prime Contract and each and all of the provisions of the Prime Contract and any Amendments thereto shall extend to and be binding upon the parties to this Agreement.

3. WORK:

Pursuant to the provisions of this Agreement, SUBCONTRACTOR shall fully provide, complete and deliver on time all the tasks, subtasks, deliverables, goods, services, and other work set forth in Exhibit 1 (Statement of Work). Time is of the essence of SUBCONTRACTOR's performance hereunder.

4. PERSONNEL:

4.1 All SUBCONTRACTOR personnel performing work under this Agreement shall be subject to the prior and continuing approval of CONTRACTOR and COUNTY. If at any time during the term of this Agreement, any SUBCONTRACTOR personnel is not approved by CONTRACTOR or COUNTY, then SUBCONTRACTOR shall, immediately upon receipt of written or oral notice from CONTRACTOR or COUNTY, replace such personnel with substitute qualified personnel or take such other action as requested by CONTRACTOR or COUNTY.

4.2 If at any time during the term of this Agreement, any SUBCONTRACTOR personnel ceases performance for any reason, including, but not limited to, resignation or termination, then SUBCONTRACTOR shall, within five (5) working days, replace such personnel with substitute qualified personnel.

4.3 SUBCONTRACTOR shall be solely liable and responsible for providing to, or on behalf of, all persons performing work pursuant to this Agreement, all employee compensation and benefits. CONTRACTOR and COUNTY shall have no liability or responsibility for the payment of any salaries, wages, unemployment benefits, disability benefits, Federal, State, and local taxes, or other compensation benefits, or taxes, for any personnel provided by or on behalf of SUBCONTRACTOR.

4.4 SUBCONTRACTOR understands and agrees that all persons performing work under this Agreement are, for purposes of workers' compensation liability, the

sole employees of SUBCONTRACTOR and not employees of CONTRACTOR or COUNTY. SUBCONTRACTOR shall be solely liable and responsible for any and all workers' compensation benefits to any person as a result of injuries arising from or connected with any work performed by or on behalf of SUBCONTRACTOR pursuant to this Agreement.

4.5 SUBCONTRACTOR shall maintain the confidentiality of all records and information, including, but not limited to, COUNTY Materials, billings, COUNTY records, inmate records and information, and inmate patient records and information, in accordance with all applicable Federal, State and local laws, regulations, ordinances, guidelines and directives relating to confidentiality, security and non-disclosure. SUBCONTRACTOR shall inform all of its officers, employees and agents providing services hereunder of the confidentiality provisions of this Agreement. Further, SUBCONTRACTOR shall require each of its officers, employees and agents, to be bound in writing by confidentiality, security and non-disclosure provisions at least as protective of the COUNTY as the confidentiality, security and non-disclosure provisions of this Agreement. The indemnification obligations set forth in Subparagraph 12.1 shall include, but shall not be limited to, any and all loss, damage, liability, and expense arising from any breach by SUBCONTRACTOR and/or any of its officers employees or agents of the confidentiality, security and non-disclosure provisions of this Agreement.

4.5.1 With respect to any COUNTY Materials, billings, COUNTY records, inmate records and information, and inmate patient records and information that is obtained by SUBCONTRACTOR, SUBCONTRACTOR shall: (1) not use any such information for any purpose whatsoever other than carrying out the express terms of this Agreement; (2) promptly transmit to COUNTY all requests for disclosure of any such information; (3) not disclose, except as otherwise specifically permitted by this Agreement, any such information to any person or organization other than COUNTY without COUNTY's prior written authorization that the information is releasable; and (4) at the expiration or termination of this Agreement, return all such information to COUNTY or maintain such information according to the written procedures sent to SUBCONTRACTOR by COUNTY for this purpose.

4.5.2 SUBCONTRACTOR hereby acknowledges the right of privacy of all persons as to whom there exists any inmate records and information, and inmate patient records and information. CONTRACTOR shall protect, secure and keep confidential all inmate records and information, and inmate patient records and information in compliance with all federal, State and local laws, rules, regulations, ordinances, guidelines and directives, relating to confidentiality and information security (including any breach of the security of the System, such as any unauthorized acquisition of inmate records and information, and inmate patient records and information that compromises the security, confidentiality or integrity of personal information), including California Civil Code Section 1798.82. Further, SUBCONTRACTOR shall take all reasonable actions necessary or advisable to protect all inmate records and information, and inmate patient

records and information in its possession, custody or control from loss or damage by any cause, including fire, theft or other catastrophe. In addition, if requested by COUNTY's Project Director, SUBCONTRACTOR shall provide notification to all persons whose unencrypted personal information was, or is reasonably believed to have been, acquired by any unauthorized person, and the content, method and timing of such notification shall be subject to the prior approval of COUNTY's Project Director.

4.5.3 By State law (California Welfare and Institutions Code Sections 827 and 828 an California Penal Code Sections 1203.5, 1203.9 and 11140 through 11144), adult records and Sheriff's Department case information which is in SUBCONTRACTOR's care and possession is confidential and no information related to anyone except those authorized employees of the Sheriff's Department and law enforcement agencies.

A. SUBCONTRACTOR shall give each of its employees who will have access to inmate records during the course of performing work under this Agreement copies of all cited code sections, and a Confidentiality of CORI form in the form attached hereto as Exhibit 4 (Confidentiality of CORI), regarding confidentiality of the information in adult and juvenile records. SUBCONTRACTOR shall retain an original executed Confidentiality of CORI form for each such employee and shall forward copies of each such Confidentiality of CORI form to CONTRACTOR within five (5) Working Days of the start of such employee having access to COUNTY records under this Agreement.

B. SUBCONTRACTOR shall inform all of its officers, employees, agents and subcontractors of the above provisions and that any knowing and intentional violation of such State law is a misdemeanor.

5. COMPENSATION:

All compensation to SUBCONTRACTOR under this Agreement shall be paid by CONTRACTOR and shall be as set forth in Exhibit 2 (Additional Terms and Conditions). CONTRACTOR shall be solely liable and responsible for any and all payments and other compensation to SUBCONTRACTOR and its officers, employees, and agents. COUNTY shall have no liability or responsibility whatsoever for any payment or other compensation for SUBCONTRACTOR or its officers, employees, and agents. Without limitation of the foregoing, SUBCONTRACTOR disclaims any right to seek any payment from COUNTY for any and all compensation or recovery of any of its costs, or to assert any lien against COUNTY, its assets or rights in the System or any element thereof, on account thereof.

6. TERM:

The term of this Agreement shall commence on _____ and shall continue through _____ unless sooner terminated, in whole or in part, as provided in this Agreement.

7. TERMINATION:

CONTRACTOR shall have the right to terminate this Agreement, in whole or in part, at any time by giving written notice to SUBCONTRACTOR when such action is deemed by CONTRACTOR to be in its best interest. This Agreement shall also terminate, in whole or in part, upon receipt by CONTRACTOR of written notice from COUNTY that COUNTY no longer approves the continuation of the whole or any part of this Agreement.

8. THIRD PARTY BENEFICIARY:

CONTRACTOR and SUBCONTRACTOR understand and agree that this Agreement is entered into for the benefit of COUNTY and that COUNTY is hereby expressly made a third party beneficiary of this Agreement.

9. AMENDMENTS:

The provisions of the body of this Agreement and the Exhibits thereto shall not be changed in any way by CONTRACTOR or SUBCONTRACTOR without the prior written consent of COUNTY, and any unapproved change shall be null and void. No changes to the body of this Agreement or the Exhibits thereto shall be valid and effective unless made in the form of a written Amendment which is approved in writing by COUNTY and which is formally executed by authorized officials of CONTRACTOR and SUBCONTRACTOR.

10. PROHIBITION AGAINST ASSIGNMENT AND DELEGATION:

This Agreement, or any interest therein, including, but not limited to, any claim for monies due or to become due with respect thereto, shall not be assigned or delegated, or both, by CONTRACTOR or SUBCONTRACTOR, and any assignment or delegation shall be null and void, except that in the event of termination of the Prime Contract, CONTRACTOR has the right to assign this Agreement to COUNTY.

11. PROHIBITION AGAINST SUBCONTRACTING:

No performance of this Agreement, or any part thereof, shall be subcontracted by SUBCONTRACTOR, and any subcontract shall be null and void.

12. INDEMNIFICATION, INSURANCE AND PERFORMANCE BOND:

12.1 Indemnification: CONTRACTOR and SUBCONTRACTOR agree to indemnify, defend, and hold harmless each other, their officers, employees, and agents from and against any and all liability and expense, including defense costs and legal

fees, arising from or connected with claims and lawsuits for damages or worker's compensation benefits relating to CONTRACTOR's or SUBCONTRACTOR's operations or their services, which result from bodily injury, death, personal injury, or property damage (including damage to property owned by or in the care, custody, or control of either party).

12.2 Insurance:

Without limiting either party's indemnification of the other and during the term of this Agreement, CONTRACTOR and SUBCONTRACTOR shall each provide and maintain at its own expense the following programs of insurance. Such programs and evidence of insurance shall be satisfactory to the COUNTY and shall be primary to and not contributing with any other insurance maintained by the COUNTY. Certificates or other evidence of coverage shall be delivered to County's Project Director prior to commencing services under this Agreement, shall specifically identify this Agreement, and shall contain the express condition that COUNTY is to be given written notice by registered mail at least thirty (30) days in advance of any modification or termination of insurance.

12.2.1 Liability:

Such insurance shall shall include:

1. General liability insurance written on a commercial general liability form or on a comprehensive general liability form covering the hazards of premises/ operations, contractual, independent contractors, products/completed operations, broad form property damage, and personal injury with a combined single limit of not less than Two Million Dollars ($2,000,000) per occurrence.

    a. If written with an annual aggregate limit, the policy limit should be no less than Three Million Dollars ($3,000,000).

    b. If written on a claims made form, CONTRACTOR and SUBCONTRACTOR shall continue to name COUNTY as an additional insured or provide an extended two (2) year reporting period commencing upon termination or cancellation of this Agreement.

    COUNTY shall have additional insured status on the general liability policy.

2. Comprehensive auto liability endorsed for all owned, non-owned, and hired vehicles with a combined single limit of not less than One Million Dollars ($1,000,000) per occurrence.

3. Professional liability insurance covering liability arising from any error, omission, negligent or wrongful act of the SUBCONTRACTOR, its officers

or employees with limits of not less than Two Million Dollars ($2,000,000) per occurrence and Three Million Dollars ($3,000,000) aggregate. Such insurance shall be maintained for not less than two (2) years upon termination or cancellation of the Agreement, or the policy shall provide an extended two (2) year reporting period commencing upon termination or cancellation of the Agreement.

12.2.2 Workers' Compensation:

Insurance in an amount and form to meet all applicable requirements of the Labor Code of the State of California, including Employers Liability with a One Million Dollar ($1,000,000) limit, covering all persons who provide services for CONTRACTOR and SUBCONTRACTOR.

12.3 Performance Bond:

Prior to the effective date of this Agreement, SUBCONTRACTOR shall furnish to COUNTY a performance bond in the sum of not less than ten percent (10%) of the total compensation due to SUBCONTRACTOR under this Agreement payable to the County of Los Angeles and CONTRACTOR and executed by a corporate surety licensed to transact business as a surety in the State of California. Such bond shall be conditioned upon faithful performance by SUBCONTRACTOR of the terms and conditions of the Agreement, and shall be renewed to provide for continuing liability in the above amount notwithstanding any payment or recovery thereon. At its sole option, COUNTY may accept Certificates of Deposit, Cash Deposits, or United States Government Securities in lieu of commercial bonds to meet this provision. Such alternative performance bonds shall be made payable to County of Los Angeles and CONTRACTOR and shall be deposited with the COUNTY as instructed by COUNTY's Project Director in writing.

12.4 Failure to Procure or Maintain Insurance and Performance Bond:

Failure on the part of SUBCONTRACTOR to procure or maintain the required insurance or performance bond shall constitute a material breach of this Agreement upon which this Agreement may be terminated pursuant to Paragraph 7 (Termination).

13. RECORDS AND AUDITS:

13.1 SUBCONTRACTOR shall maintain accurate and complete financial records of its activities and operations relating to this Agreement in accordance with generally accepted accounting principles. SUBCONTRACTOR shall also maintain accurate and complete employment and other records relating to its performance of this Agreement. SUBCONTRACTOR agrees that COUNTY, or its duly authorized representatives, shall have access to and the right to examine, audit, excerpt, copy, or transcribe any pertinent transaction, activity, or records relating to this Agreement. All such material, including, but not limited to, all financial

records, time cards and other employment records, and proprietary data and information, shall be kept and maintained by SUBCONTRACTOR and shall be made available to CONTRACTOR and COUNTY during the term of this Agreement and for a period of five (5) years thereafter unless written permission of both CONTRACTOR and COUNTY is given to dispose of any such material prior to such time. All such material shall be maintained by SUBCONTRACTOR at a location in Los Angeles County, provided that if any such material is located outside Los Angeles County, then, at COUNTY's option, SUBCONTRACTOR shall pay COUNTY for travel, per diem, and other costs incurred by COUNTY to examine, audit, excerpt, copy or transcribe such material at such other location.

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

13.3 Failure on the part of SUBCONTRACTOR to comply with the provisions of this Paragraph 13 shall constitute a material breach of this Agreement upon which CONTRACTOR may immediately terminate or suspend this Agreement.

14. PROPRIETARY CONSIDERATIONS AND CONFIDENTIALITY:

THE FOLLOWING PARAGRAPH 14 SHALL APPLY ONLY TO INTELLECTUAL PROPERTY, PROCESSES, APPLICATIONS, DEVELOPMENTS, MATERIALS, DATA, AND INFORMATION, IF ANY, DEVELOPED UNDER THIS AGREEMENT.

14.1 CONTRACTOR and SUBCONTRACTOR agree that all intellectual property, processes, applications, developments, materials, data, and information developed under this Agreement shall become the sole property of COUNTY, and SUBCONTRACTOR hereby assigns and transfers to COUNTY all SUBCONTRACTOR's right, title, and interest in and to all such intellectual property, processes, applications, developments, materials, data, and information, provided that SUBCONTRACTOR may retain possession of all working papers prepared by SUBCONTRACTOR. During and subsequent to the term of this Agreement, COUNTY shall have the right to inspect any and all such working papers, make copies thereof, and use the working papers and the information contained therein.

14.2 Whenever requested by COUNTY, SUBCONTRACTOR shall: (1) promptly execute and deliver to COUNTY all papers, instruments, and other documents requested by COUNTY to reflect SUBCONTRACTOR's assignment and transfer to COUNTY of all SUBCONTRACTOR's right, title, and interest in and to the

items described in this Paragraph 14, and (2) promptly perform all other acts necessary to carry out the terms of this Agreement.

14.3 Except as expressly permitted by this Agreement, CONTRACTOR and SUBCONTRACTOR shall not disclose to any third party, and shall protect the security of and keep confidential all intellectual property, processes, applications, developments, materials, data, and information received or produced under this Agreement.

15. PATENT, COPYRIGHT AND TRADE SECRET INDEMNIFICATION:

SUBCONTRACTOR shall indemnify, defend, and hold harmless CONTRACTOR and COUNTY from and against any and all claims, liability, damages, costs, and expenses, including, but not limited to, defense costs and attorneys fees, for or by reason of any actual or alleged infringement of any patent, copyright, or any actual or alleged trade secret disclosure or misappropriation arising from or related to the operation and utilization of SUBCONTRACTOR's work under this Agreement.

16. WARRANTIES:

16.1 SUBCONTRACTOR represents, warrants, covenants, and agrees that SUBCONTRACTOR shall promptly correct any and all defects, errors, or omissions in the tasks, subtasks, deliverables, goods, services, and other work provided pursuant to this Agreement in order to conform and comply with all specifications, requirements, standards, and representations set forth in this Agreement. The correction of any such defects, errors or omissions shall be at no cost to CONTRACTOR or COUNTY.

16.2 SUBCONTRACTOR further represents, warrants, covenants, and agrees that:

1. SUBCONTRACTOR shall strictly comply with the specifications, requirements, standards, and representations set forth in this Agreement.

2. All tasks, subtasks, deliverables, goods, services, and other work shall be provided and/or performed in a timely and professional manner by qualified personnel.

3. Any software or data analysis used by SUBCONTRACTOR shall be available to CONTRACTOR and COUNTY during the term of this Agreement and for a period of four (4) years thereafter, provided that this warranty shall only apply to software or data analysis owned by or under the control of SUBCONTRACTOR and related to this Agreement;

4. All tasks, subtasks, deliverables, goods, services and other work shall be completed in accordance with this Agreement, the Prime Contract, industry standards, and hardware manufacturers' specifications.

5. All hardware and software provided under this Agreement shall perform according to the requirements as set forth in Exhibit 1 (Statement of Work).

6. All documentation developed under this Agreement shall be uniform in appearance.

7. SUBCONTRACTOR shall not cause any unplanned interruption of the operations of, or accessibility to any System Component through any device, method or means including, without limitation, the use of any Virus, "lockup," "time bomb," or "key lock," "worm," device or program, or disabling code, which has the potential or capability of compromising the security of any of COUNTY's confidential or proprietary information or of causing any unplanned interruption of the operations of, or accessibility of any System Component to COUNTY or any User or which could alter, destroy, or inhibit the use of any System Component, or the data contained therein (collectively referred to for purposes of this Subparagraph as "Disabling Device(s)"), which could block access to or prevent the use of any System Component by COUNTY or Users. SUBCONTRACTOR represents, warrants and agrees that it has not purposely placed, nor is it aware of, any Disabling Device on any System Component provided to COUNTY under the Prime Contract, nor shall SUBCONTRACTOR knowingly permit any subsequently delivered System Component to contain any Disabling Device.

8. SUBCONTRACTOR shall use its best efforts to prevent Viruses from being incorporated or introduced into the System. SUBCONTRACTOR shall prevent Viruses from being incorporated or introduced into any System Component prior to delivery thereof to COUNTY, and shall utilize its best efforts to prevent any Viruses being incorporated or introduced in the process of SUBCONTRACTOR's loading of any System Component, or being introduced in the process of SUBCONTRACTOR's performance of any work under this Agreement.

9. Any and all software and hardware provided under this Agreement will accurately determine chronological dates and accurately perform all calculations, data manipulations, sorting and transmission of date data regardless of whether the date data represents or references different centuries.

17. COMPLIANCE WITH APPLICABLE LAW:

17.1 SUBCONTRACTOR's activities hereunder shall comply with all applicable Federal, State, and local laws, rules, regulations, ordinances, guidelines, codes and directives, and all provisions required thereby to be included in this Agreement are incorporated herein by this reference thereto. SUBCONTRACTOR shall have up to fifteen (15) days to correct any

noncompliance with COUNTY rules, regulations, ordinances, guidelines, codes and directives following written notice from COUNTY or CONTRACTOR including written copies of such applicable rules, regulations, ordinances, guidelines, codes and/or directives.

17.2 SUBCONTRACTOR shall indemnify, defend, and hold harmless COUNTY, its districts administered by COUNTY, and its elected and appointed officers, employees, and agents from and against any and all claims, demands, damages, liabilities, losses, costs, and expenses, including, but not limited to, defense costs and legal, accounting and other expert, consulting or professional fees, arising from or related to any violation on the part of SUBCONTRACTOR, its employees, or agents of any such laws, rules, regulations, ordinances, guidelines, codes or directives.

18. FAIR LABOR STANDARDS:

SUBCONTRACTOR shall comply with all applicable provisions of the Federal Fair Labor Standards Act, and shall indemnify, defend, and hold harmless CONTRACTOR and COUNTY, their officers, employees and agents from any and all liability, including, but not limited to, wages, overtime pay, liquidated damages, penalties, court costs, and attorneys' fees arising under any wage and hour law, including, but not limited to, the Federal Fair Labor Standards Act, for work performed by SUBCONTRACTOR's employees for which CONTRACTOR or COUNTY may be found jointly or solely liable.

19. RESTRICTIONS ON LOBBYING:

19.1 Federal Funds Projects:

If any Federal funds are to be used to pay for any of SUBCONTRACTOR's work under this Agreement, SUBCONTRACTOR shall fully comply with all certification and disclosure requirements prescribed by Section 319 of Public Law 101-121 (31 United States Code Section 1352) and any implementing regulations, and shall ensure that each of its subcontractors receiving funds provided under this Agreement also fully complies with all such certification and disclosure requirements.

19.2 All Projects:

SUBCONTRACTOR and each COUNTY lobbyist or COUNTY lobbying firm as defined in Los Angeles County Code Section 2.160.010, retained by SUBCONTRACTOR, shall fully comply with the County Lobbyist Ordinance, Los Angeles County Code Chapter 2.160. Failure on the part of SUBCONTRACTOR or any COUNTY lobbyist or COUNTY lobbying firm retained by SUBCONTRACTOR to fully comply with the County Lobbyist Ordinance shall constitute a material breach of this Agreement upon which COUNTY may immediately terminate or suspend this Agreement.

20. NONDISCRIMINATION AND AFFIRMATIVE ACTION:

20.1 SUBCONTRACTOR certifies and agrees that all persons employed by it, its affiliates, subsidiaries or holding companies are and will be treated equally without regard to or because of race, color, religion, ancestry, national origin, sex, age, or physical or mental handicap, in compliance with all applicable Federal and State anti-discrimination laws and regulations.

20.2 SUBCONTRACTOR shall certify to, and comply with, the provisions of Exhibit 4 (SUBCONTRACTOR's EEO Certification).

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

20.4 SUBCONTRACTOR certifies and agrees that it will deal with its subcontractors, bidders or vendors without regard to or because of race, color, religion, ancestry, national origin, sex, age, or physical or mental handicap.

20.5 SUBCONTRACTOR certifies and agrees that it, its affiliates, subsidiaries or holding companies, will comply with all applicable Federal and State laws and regulations, including, but not limited to:

1. Title VII, Civil Rights Act of 1964;

2. Section 504, Rehabilitation Act of 1973;

3. Age Discrimination Act of 1975;

4. Title IX, Education Amendments of 1973, as applicable; and

5. Title 43, Part 17, Code of Federal Regulations, Subparts A & B;

and that no person shall, on the grounds of race, color, religion, ancestry, national origin, sex, age, or physical or mental handicap, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under, this Agreement or under any project, program, or activity supported by this Agreement.

20.6 SUBCONTRACTOR shall allow COUNTY representatives access to its employment records during regular business hours to verify compliance with the provisions of this Paragraph 20 when so requested by COUNTY.

20.7 If COUNTY finds that any of the provisions of this Paragraph 20 have been violated, such violation shall constitute a material breach of this Agreement upon which COUNTY may terminate or suspend this Agreement. While COUNTY reserves the right to determine independently that the anti-discrimination provisions of this Agreement have been violated, in addition, a determination by the California Fair Employment Practices Commission or the Federal Equal Employment Opportunity Commission that SUBCONTRACTOR has violated State or Federal anti-discrimination laws or regulations shall constitute a finding by COUNTY that SUBCONTRACTOR has violated the anti-discrimination provisions of this Agreement.

20.8 The parties agree that in the event SUBCONTRACTOR violates the anti-discrimination provisions of this Agreement, COUNTY shall, at its option, be entitled to the sum of Five Hundred Dollars ($500) pursuant to California Civil Code Section 1671 as liquidated damages in lieu of terminating or suspending this Agreement.

21. EMPLOYMENT ELIGIBILITY VERIFICATION:

SUBCONTRACTOR warrants that it fully complies with all Federal and State statutes and regulations regarding the employment of aliens and others and that all its employees performing work under this Agreement meet the citizenship or alien status requirements set forth by Federal and State statutes and regulations. SUBCONTRACTOR shall obtain, from all employees performing work hereunder, all verification and other documentation of employment eligibility status required by Federal and State statutes and regulations as they currently exist and as they may be hereafter amended. SUBCONTRACTOR shall retain all such documentation for the period prescribed by law. SUBCONTRACTOR shall indemnify, defend and hold harmless CONTRACTOR and COUNTY, their officers and employees, from and against any employer sanctions and any other liability which may be assessed against SUBCONTRACTOR, CONTRACTOR or COUNTY in connection with any alleged violation of any Federal or State statutes or regulations pertaining to the eligibility for employment of any persons performing work hereunder.

22. SUBCONTRACTOR PERFORMANCE DURING CIVIL UNREST OR DISASTER:

SUBCONTRACTOR recognizes that the health facilities maintained by COUNTY provide services essential to the residents of the communities they serve, and that these services are of particular importance at the time of a riot, insurrection, civil unrest, natural disaster or similar event. Notwithstanding any other provision of this Agreement, full performance by SUBCONTRACTOR during any riot, insurrection, civil unrest, natural disaster, or similar event is not excused if such performance remains physically possible without related danger to SUBCONTRACTORS' employees and suppliers. During any such event in which the health or safety of any SUBCONTRACTOR's staff members would be

endangered by performing their services on-site, such staff members may perform any or all of their services remotely.

23. LICENSES, ETC.

SUBCONTRACTOR shall obtain and maintain in effect during the term of this Agreement all licenses, permits, registrations, accreditations, and certificates required by all Federal, State, and local laws, ordinances, rules, regulations, guidelines, and directives, which are applicable to SUBCONTRACTOR's services under this Agreement. A copy of each such license, permit, registration, accreditation, and certificate required by all applicable Federal, State, and local laws, ordinances, rules, regulations, guidelines, and directives shall be provided, in duplicate, to CONTRACTOR.

24. COMPLIANCE WITH THE COUNTY'S JURY SERVICE PROGRAM

This Agreement is subject to the provisions of the COUNTY's ordinance entitled Contractor Employee Jury Service as codified in Sections 2.203.010 through 2.203.090 of the Los Angeles County Code.

25. SUBCONTRACTOR'S RESPONSIBILITY AND DEBARMENT

This Agreement is subject to the provisions of the COUNTY's ordinance entitled Determinations of Contractor Non-Responsibility and Contractor Debarment as codified in Chapter 2.202 of the Los Angeles County Code.

26. NOTICE TO EMPLOYEES REGARDING THE FEDERAL EARNED INCOME CREDIT

SUBCONTRACTOR shall notify its employees residing or working in the State of California, and shall require each subcontractor performing work under this Agreement to notify its employees residing or working in the State of California, that they may be eligible for the Federal Earned Income Credit under the federal income tax laws. Such notice shall be provided in accordance with the requirements set forth in Internal Revenue Service Notice No. 1015.

27. SAFELY SURRENDERED BABY LAW

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

28. CAPTIONS AND PARAGRAPH HEADINGS:

Captions and paragraph headings used in this Agreement are for convenience only and are not a part of this Agreement and shall not be used in construing this Agreement.

29. WAIVER:

No waiver of any breach of any provision of this Agreement shall constitute a waiver of any other breach or of such provision. Failure of any party to enforce at any time, or from time to time, any provision of this Agreement shall not be construed as a waiver thereof. The rights and remedies set forth in this Paragraph 24 shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Agreement.

30. GOVERNING LAW, JURISDICTION AND VENUE:

This Agreement shall be governed by, and construed in accordance with, the laws of the State of California applicable to agreements made and to be performed within that State. Without limiting the foregoing, CONTRACTOR and SUBCONTRACTOR intend that this Agreement shall be subject to the provisions of the Uniform Commercial Code as enacted in California, and the parties hereto shall retain all of their rights and remedies thereunder. CONTRACTOR and SUBCONTRACTOR agree and consent to the exclusive jurisdiction of the courts of the State of California for all purposes regarding this Agreement and further agree and consent that venue of any action brought hereunder shall be exclusively in the County of Los Angeles, California.

31. SEVERABILITY:

If any provision of this Agreement is adjudged void or invalid for any reason whatsoever, but would be valid if part of the wording thereof were deleted or changed, then such provision shall apply with such modifications as may be necessary to make it valid and effective. In the event that one or more of the provisions of this Agreement is found to be invalid, illegal or unenforceable in any respect, such provision shall be deemed deleted herefrom and the validity, legality, and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

32. AUTHORIZATION WARRANTY:

SUBCONTRACTOR represents and warrants that the person executing this Agreement for SUBCONTRACTOR is an authorized agent who has actual authority to bind SUBCONTRACTOR to each and every term, condition, and obligation of this Agreement and that all requirements of SUBCONTRACTOR have been fulfilled to provide such actual authority.

33. NOTICES:

All notices or demands required or permitted to be given or made under this Agreement, unless otherwise specified, shall be in writing and shall be addressed to the parties at the following addresses and delivered: (1) by hand with signed receipt, (2) by first-class registered or certified mail, postage prepaid, or (3) by facsimile transmission followed within twenty-four (24) hours by a confirmation copy mailed by first-class registered or certified mail, postage prepaid. Notices shall be deemed given at the time of signed receipt in the case of hand delivery, three (3) days after deposit in the United States mail as set forth above, or on the date of facsimile transmission if followed by timely confirmation mailing. Addresses may be changed by either party giving ten (10) days prior written notice thereof to the other party.

1. If to CONTRACTOR:

With a copy to COUNTY, addressed as follows:

County's Project Director
Captain, Medical Services Bureau
Los Angeles County Sheriff's Department
450 Bauchet Street, TTCF E877B
Los Angeles, California 9001

2. If to SUBCONTRACTOR:

With a copy to COUNTY, addressed as follows:

County's Project Director
Captain, Medical Services Bureau
Los Angeles County Sheriff's Department
450 Bauchet Street, TTCF E877B
Los Angeles, California 9001

IN WITNESS WHEREOF, CONTRACTOR and SUBCONTRACTOR have caused this Agreement to be signed by their duly authorized officers on the day and year first set forth hereinabove.

[CONTRACTOR]

By: _____
Name:
Title:

[SUBCONTRACTOR]

By: _____
Name:
Title:

EXHIBIT 1

STATEMENT OF WORK

(To be prepared by CONTRACTOR and SUBCONTRACTOR)

EXHIBIT 2

ADDITIONAL TERMS AND CONDITIONS

(To be prepared by CONTRACTOR and SUBCONTRACTOR)

EXHIBIT 3

SUBCONTRACTOR'S EEO CERTIFICATION

_____
Subcontractor's Name

_____
Address

_____
Internal Revenue Service Employer Identification Number

GENERAL

In accordance with Paragraph 4.32.010 of the Code of the County of Los Angeles, the above-referenced Subcontractor certifies and agrees that all persons employed by such firm, its affiliates, subsidiaries, or holding companies are and will be treated equally by the firm without regard to or because of race, religion, ancestry, national origin, or sex and in compliance with all anti-discrimination laws of the United States of America and the State of California.

SUBCONTRACTOR'S CERTIFICATION

	(circle one)	
1. The subcontractor has a written policy statement prohibiting discrimination in all phases of employment.	YES	NO
2. The Subcontractor periodically conducts a self analysis or utilization analysis of its work force.	YES	NO
3. The Subcontractor has a system for determining if its employment practices are discriminatory against protected groups.	YES	NO
4. Where problem areas are identified in employment practices, the Subcontractor has a system for taking reasonable corrective action, to include establishment of goals or timetables.	YES	NO

_____
Name and title of signer

_____
Signature Date

EXHIBIT 4

CONFIDENTIALITY OF CORI

Criminal Offender Record Information (CORI) is that information which is recorded as the result of an arrest, detention or other initiation of criminal proceedings including any consequent proceedings related thereto. As an employee of_____ during the legitimate course of your duties, you may have access to CORI. The Sheriff's Department has a policy of protecting the confidentiality of CORI.

You are required to protect the information contained in case files against disclosure to all individuals who do not have a right-to-know or a need-to-know this information.

The use of any information obtained from case files or other related sources of CORI to make contacts with inmates or their relatives, or to make CORI available to anyone who has no real and proper reason to have access to this information as determined solely by the Sheriff's Department is considered a breach of confidentiality, inappropriate and unauthorized.

Any _____ employee engaging in such activities is in violation of the Sheriff's Department's confidentiality policy and will be subject to appropriate disciplinary action and/or criminal action pursuant to Section 11142 of the Penal Code.

I have read and understand the Sheriff's Department's policy concerning the confidentiality of CORI.

_____

Signature

_____

Name (Print)

_____

Title

_____

Date

EXHIBIT J

CONTRACTOR'S OBLIGATIONS AS A "BUSINESS ASSOCIATE" UNDER HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT OF 1996 (HIPAA) AND THE HEALTH INFORMATION TECHNOLOGY FOR ECONOMIC AND CLINICAL HEALTH ACT (HITECH) (BUSINESS ASSOCIATE AGREEMENT)

Under County Agreement No. _____ (together with all exhibits and attachments thereto, all as amended from time to time, "Agreement"), Contractor ("Business Associate") provides goods, services and other work ("Services") to County ("Covered Entity") and Business Associate receives, has access to or creates Protected Health Information in order to provide those Services.

Covered Entity is subject to the Administrative Simplification requirements of the Health Insurance Portability and Accountability Act of 1996, Public Law 104-191 ("HIPAA"), and regulations promulgated thereunder, including the Standards for Privacy of Individually Identifiable Health Information ("Privacy Regulations") and the Health Insurance Reform: Security Standards ("the Security Regulations") at 45 Code of Federal Regulations (C.F.R.) Parts 160 and 164 (together the "Privacy and Security Regulations".) The Privacy and Security Regulations require Covered Entity to enter into a contract with Business Associate ("Business Associate Agreement") in order to mandate certain protections for the privacy and security of Protected Health Information, and those Regulations prohibit the disclosure to or use of Protected Health Information by Business Associate if such a contract is not in place.

Further, pursuant to the Health Information Technology for Economic and Clinical Health Act, Public Law 111-005 ("HITECH Act"), effective February 17, 2010, certain provisions of the HIPAA Privacy and Security Regulations apply to Business Associates in the same manner as they apply to Covered Entity and such provisions must be incorporated into the Business Associate Agreement.

This Business Associate Agreement and the following provisions are intended to protect the privacy and provide for the security of Protected Health Information disclosed to or used by Business Associate in compliance with HIPAA's Privacy and Security Regulations and the HITECH Act, as they now exist or may hereafter be amended.

Therefore, the parties agree as follows:

DEFINITIONS

1.1 "Breach" has the same meaning as the term "breach" in 45 Code of Federal Regulations (C.F.R.) § 164.402.

1.2 "Disclose" and "Disclosure" mean, with respect to Protected Health Information, the release, transfer, provision of access to, or divulging in any other manner of

Protected Health Information outside Business Associate's internal operations or to other than its employees.

1.3 "Electronic Health Record" has the same meaning as the term "electronic health record" in the HITECH Act, 42 U.S.C. Section 17921. Electronic Health Record means an electronic record of health-related information on an individual that is created, gathered, managed, and consulted by authorized health care clinicians and staff.

1.4 "Electronic Media" has the same meaning as the term "electronic media" in 45 C.F.R. § 160.103. Electronic Media means (1) Electronic storage media including memory devices in computers (hard drives) and any removable/transportable digital memory medium, such as magnetic tape or disk, optical disk, or digital memory card; or (2) Transmission media used to exchange information already in electronic storage media. Transmission media include, for example, the internet (wide-open), extranet (using internet technology to link a business with information accessible only to collaborating parties), leased lines, dial-up lines, private networks, and the physical movement of removable/transportable electronic storage media. Certain transmissions, including of paper via facsimile, and of voice via telephone, are not consider to be transmissions via electronic media, because the information being exchanged did not exist in electronic form before the transmission.

1.5 "Electronic Protected Health Information" has the same meaning as the term "electronic protected health information" in 45 C.F.R. § 160.103. Electronic Protected Health Information means Protected Health Information that is (i) transmitted by electronic media; (ii) maintained in electronic media.

1.6 "Individual" means the person who is the subject of Protected Health Information and shall include a person who qualifies as a personal representative in accordance with 45 C.F.R. § 164.502(g).

1.7 "Minimum Necessary" refers to the minimum necessary standard in 45 C.F.R. § 164.502(b) as in effect or as amended.

1.8 "Privacy Rule" means the Standards for Privacy of Individually Identifiable Health Information at 45 C.F.R. Parts 160 and 164, also referred to as the Privacy Regulations.

1.9 "Protected Health Information" has the same meaning as the term "protected health information" in 45 C.F.R. § 160.103, limited to the information created or received by Business Associate from or on behalf of Covered Entity. Protected Health Information includes information that (i) relates to the past, present or future physical or mental health or condition of an Individual; the provision of health care to an Individual, or the past, present or future payment for the provision of health care to an Individual; (ii) identifies the Individual (or for which

there is a reasonable basis for believing that the information can be used to identify the Individual); and (iii) is received by Business Associate from or on behalf of Covered Entity, or is created by Business Associate, or is made accessible to Business Associate by Covered Entity. "Protected Health Information" includes Electronic Protected Health Information.

1.10 "Required By Law" means a mandate contained in law that compels an entity to make a Use or Disclosure of Protected Health Information and that is enforceable in a court of law. Required by law includes, but is not limited to, court orders and court-ordered warrants; subpoenas or summons issued by a court, grand jury, a governmental or tribal inspector general, or any administrative body authorized to require the production of information; a civil or an authorized investigative demand; Medicare conditions of participation with respect to health care providers participating in the program; and statutes or regulations that require the production of information, including statutes or regulations that require such information if payment is sought under a government program providing benefits.

1.11 "Security Incident" means the attempted or successful unauthorized access, Use, Disclosure, modification, or destruction of information in, or interference with system operations of, an Information System which contains Electronic Protected Health Information. However, Security Incident does not include attempts to access an Information System when those attempts are not reasonably considered by Business Associate to constitute an actual threat to the Information System.

1.12 "Security Rule" means the Security Standards for the Protection of Electronic Health Information also referred to as the Security Regulations at 45 C.F.R. Parts 160 and 164.

1.13 "Services" as defined in the preamble of this Business Associate Agreement.

1.14 "Unsecured Protected Health Information" has the same meaning as the term "unsecured protected health information" in 45 C.F.R. § 164.402.

1.15 "Use" or "Uses" mean, with respect to Protected Health Information, the sharing, employment, application, utilization, examination or analysis of such Information within Business Associate's internal operations.

1.16 Terms used, but not otherwise defined in the Business Associate Agreement shall have the same meaning as those terms in the HIPAA Regulations and HITECH Act.

OBLIGATIONS OF BUSINESS ASSOCIATE

2.1 Permitted Uses and Disclosures of Protected Health Information. Business Associate:

(a) shall Use and Disclose Protected Health Information only as necessary to perform the Services, and as provided in this Business Associate Agreement;

(b) shall Disclose Protected Health Information to Covered Entity upon request;

(c) may, as necessary for the proper management and administration of its business or to carry out its legal responsibilities:

i. Use Protected Health Information; and

ii. Disclose Protected Health Information if the Disclosure is Required by Law or to agents and/or subcontractors with respect to which the procedures outlined in Section 5.2 of this Business Associate Agreement have been complied.

Business Associate shall not Use or Disclose Protected Health Information for any other purpose or in any manner that would constitute a violation of the Privacy Regulations or the HITECH Act if so Used or Disclosed by Covered Entity.

2.2 Prohibited Uses and Disclosures of Protected Health Information. Business Associate:

(a) shall not Use or Disclose Protected Health Information for fundraising or marketing purposes.

(b) except as otherwise Required by Law, shall not disclose Protected Health Information to a health plan for payment or health care operations purposes if the Individual has requested this special restriction and has paid out of pocket in full for the health care item or service to which the Protected Health Information solely relates.

(c) shall not directly or indirectly receive payment in exchange for Protected Health Information, except with the prior written consent of Covered Entity and as permitted by the HITECH Act. This prohibition shall not affect payment by Covered Entity to Business Associate. Covered Entity shall not provide such written consent except upon express approval of the departmental privacy officer and only to the extent permitted by law, including HIPAA and the HITECH Act.

2.3 Adequate Safeguards for Protected Health Information. Business Associate:

(a) shall implement and maintain appropriate safeguards to prevent the Use or Disclosure of Protected Health Information in any manner other than as permitted by this Business Associate Agreement. Business Associate agrees to limit the Use and Disclosure of Protected Health Information to the Minimum Necessary in accordance with the Privacy Regulation's minimum necessary standard as in effect or as amended.

(b) as to Electronic Protected Health Information, shall implement and maintain administrative, physical, and technical safeguards that reasonably and appropriately protect the confidentiality, integrity, and availability of Electronic Protected Health Information; effective February 17, 2010, said safeguards shall be in accordance with 45 C.F.R. Sections 164.308, 164.310, and 164.312, and shall comply with the Security Rule's policies and procedure and documentation requirements.

2.4 Reporting Non-Permitted Use or Disclosure and Security Incidents and Breaches of Unsecured Protected Health Information. Business Associate:

(a) shall report to Covered Entity each Use or Disclosure of Protected Health Information that is made by Business Associate, its employees, representatives, Agents, subcontractors, or other parties under Business Associate's control with access to Protected Health Information but which is not specifically permitted by this Business Associate Agreement or otherwise required by law.

(b) shall report to Covered Entity each Security Incident of which Business Associate becomes aware.

(c) shall notify Covered Entity following discovery of each Breach by Business Associate, its employees, representatives, agents or subcontractors of Unsecured Protected Health Information that is known to Business Associate or, by exercising reasonable diligence, would have been known to Business Associate. Business Associate shall be deemed to have knowledge of a Breach of Unsecured Protected Health Information if the Breach is known, or by exercising reasonable diligence would have been known, to any person, other than the person committing the Breach, who is an employee, officer, or other agent of the Business Associate as determined in accordance with the federal common law of agency.

2.4.1 Immediate Telephonic Report. Except as provided in Section 2.4.3, notification shall be made immediately upon discovery of the non-permitted Use or Disclosure of Protected Health Information, Security Incident or Breach of Unsecured Protected Health Information by telephone call to (562) 940-3335.

2.4.2 Written Report. Except as provided in Section 2.4.3, the initial telephonic notification shall be followed by written notification made without unreasonable delay and in no event later than three (3) business days from the date of discovery of the non-permitted Use or Disclosure of Protected Health Information, Security Incident, or Breach of Unsecured Protected Health Information by the Business Associate to the Chief Privacy Officer at:

Chief Privacy Officer

Kenneth Hahn Hall of Administration

500 West Temple Street

Suite 525

Los Angeles, California 90012

HIPAA@auditor.lacounty.gov

(213) 974-2166

(a) The notification required by Section 2.4 shall include, to the extent possible, the identification of each Individual whose Unsecured Protected Health Information has been, or is reasonably believed by the Business Associate to have been, accessed, acquired, or Disclosed; and

(b) with respect to Breaches of Unsecured Protected Health Information only, the notification required by Section 2.4 shall be written in plain language and shall include, to the extent possible, all information required to provide notification to the Individual under 45 C.F.R. 164.404(c) and in a manner that permits Covered Entity to comply with its obligations under Subpart D, Notification in the Case of Breach of Unsecured PHI of the Privacy and Security Regulations, including:

i. A brief description of what happened, including the date of the Breach and the date of the discovery of the Breach, if known;

ii. A description of the types of Unsecured Protected Health Information that were involved in the Breach (such as whether full name, social security number, date of birth, home address, account number, diagnosis, disability code, or other types of information were involved);

iii. Any other details necessary to conduct an assessment of whether there is a risk of harm to the Individual;

iv. Any steps Business Associate believes that the Individual could take to protect him or herself from potential harm resulting from the Breach;

v. A brief description of what Business Associate is doing to investigate the Breach, to mitigate harm to the Individual, and to protect against any further Breaches; and

vi. The name and contact information for the person most knowledge regarding the facts and circumstances of the Breach.

(c) If Business Associate is not able to provide the information specified in Section 2.4.2 (a) or (b) at the time of the notification required by Section 2.4.2, Business Associate shall provide such information promptly thereafter as such information becomes available.

2.4.3 Request for Delay by Law Enforcement. Business Associate may delay the notification required by Section 2.4 if a law enforcement official states to Business Associate that notification would impede a criminal investigation or cause damage to national security. If the law enforcement official's statement is in writing and specifies the time for which a delay is required, Business Associate shall delay notification, notice, or posting for the time period specified by the official; if the statement is made orally, Business Associate shall document the statement, including the identity of the official making the statement, and delay the notification, notice, or posting temporarily and no longer than 30 days from the date of the oral statement, unless a written statement as described in this section is submitted during that time.

2.5 Mitigation of Harmful Effect. Business Associate agrees to mitigate, to the extent practicable, any harmful effect that is known to Business Associate of a Use or Disclosure of Protected Health Information by Business Associate in violation of the requirements of this Business Associate Agreement.

2.6 Breach Notification Reimbursement. Business Associate shall reimburse Covered Entity any and all reasonable costs incurred by Covered Entity as a result of Business Associate's Breach of Unsecured Protected Health Information, including costs of providing notification to the Individual under 45 C.F.R. 164.404(c) and in compliance with Covered Entity's obligations under Subpart D, Notification in the Case of Breach of Unsecured PHI of the Privacy and Security Regulations, internet posting, or media publication.

2.7 Availability of Internal Practices, Books and Records to Government Agencies. Business Associate agrees to make its internal practices, books and records relating to the Use and Disclosure of Protected Health Information available to the Secretary of the federal Department of Health and Human Services for purposes of determining Covered Entity's compliance with the Privacy and Security Regulations. Business Associate shall immediately notify Covered Entity of any request made by the Secretary and provide Covered Entity with copies of any documents produced in response to such request.

2.8 Access to Protected Health Information. Business Associate shall, to the extent Covered Entity determines that any Protected Health Information constitutes a "designated record set" as defined by 45 C.F.R. § 164.501, make the Protected Health Information specified by Covered Entity available to the Individual(s) identified by Covered Entity as being entitled to access and copy that Protected Health information. Business Associate shall provide such access for inspection of that Protected Health Information within twenty (20) days after receipt of request from Covered Entity or such longer period of time (not to exceed ten (10) additional days) as the Sheriff may authorize in writing. Business Associate shall provide copies of that Protected Health Information within twenty (20) days after receipt of request from Covered Entity or such longer period of time (not to exceed ten (10) additional days) as the Sheriff may authorize in writing. If Business Associate maintains an Electronic Health Record, Business Associate shall provide such information in electronic format to enable Covered Entity to fulfill its obligations under the HITECH Act.

2.9 Amendment of Protected Health Information. Business Associate shall, to the extent Covered Entity determines that any Protected Health Information constitutes a "designated record set' as defined by 45 C.F.R. § 164.501, make any amendments to Protected Health Information that are requested by Covered Entity. Business Associate shall make such amendment within twenty (20) days after receipt of request from Covered Entity in order for Covered Entity to meet the requirements under 45 C.F.R. § 164.526 or such longer period of time (not to exceed twenty-five (25) additional days) as the Sheriff may authorize in writing.

2.10 Accounting of Disclosures. Upon Covered Entity's request, Business Associate shall provide to Covered Entity an accounting of each Disclosure of Protected Health Information made by Business Associate or its employees, agents, representatives or subcontractors, in order to permit Covered Entity to respond to a request by an Individual for an accounting of disclosures of Protected Health Information in accordance with 45 C.F.R. § 164.528 and/or the HITECH Act which requires an Accounting of Disclosures of Protected Health Information maintained in an Electronic Health Record for treatment, payment, and health care operations.

Any accounting provided by Business Associate under this Section 2.10 shall include: (a) the date of Disclosure; (b) the name, and address if known, of the entity or person who received the Protected Health Information; (c) a brief description of the Protected Health Information disclosed; and (d) a brief statement of the purpose of the Disclosure. For each Disclosure that could require an accounting under this Section 2.10, Business Associate shall document the information specified in (a) through (d), above, and shall securely maintain the information for six (6) years from the date of the Disclosure. Business Associate shall provide to Covered entity, within ten (10) business days after receipt of request from Covered Entity, information collected in accordance with this Section 2.10 to permit Covered Entity to respond to a request by an

Individual for an accounting of disclosures of Protected health Information in accordance with 45 C.F.R. § 164.528. If Business Associate maintains an Electronic Health Record, Business Associate shall provide such information in electronic format to enable Covered Entity to fulfill its obligations under the HITECH Act.

2.11 Indemnification. Business Associate shall indemnify, defend, and hold harmless Covered Entity, including its elected and appointed officers, employees, and agents, from and against any and all liability, including but not limited to demands, claims, actions, fees, costs, penalties and fines (including regulatory penalties and/or fines), and expenses (including attorney and expert witness fees), to the extent arising from or connect with Business Associate's acts and/or omissions arising from and/or relating to this Business Associate Agreement; Business Associate's obligations under this provision extend to compliance and/or enforcement actions of Secretary of the federal Department of Health and Human Services and/or Office for Civil Rights.

OBLIGATION OF COVERED ENTITY

3.1 Obligation of Covered Entity. Covered Entity shall notify Business Associate of any current or future restrictions or limitations on the use of Protected Health Information that would affect Business Associate's performance of the Services, and Business Associate shall thereafter restrict or limit its own uses and disclosures accordingly.

TERM AND TERMINATION

4.1 Term. The term of this Business Associate Agreement shall be the same as the term of this Agreement. Business Associate's obligations under Section 4.3 and, with respect to any Protected Health Information under Section 4.3(b), Sections 2.1 (as modified by Section 4.2), 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, and 5.2 shall survive the termination or expiration of this Agreement to the extent that return or destruction of the Protected Health Information is not feasible.

4.2 Termination for Cause. In addition to and notwithstanding the termination provisions set forth in this Agreement, upon either party's knowledge of a material breach by the other party, the party with knowledge of the other party's breach shall:

(a) Provide an opportunity for the breaching party to cure the breach or end the violation and terminate this Agreement if the breaching party does not cure the breach or end the violation within the time specified by the non-breaching party;

(b) Immediately terminate this Agreement if a party has breached a material term of this Agreement and cure is not possible; or

(d) If neither termination nor cure is feasible, report the violation to the Secretary of the federal Department of Health and Human Services.

4.3 Disposition of Protected Health Information Upon Termination or Expiration.

(a) Except as provided in paragraph (b) of this section, upon termination for any reason or expiration of this Agreement, Business Associate shall return or destroy all Protected Health Information received from Covered Entity, or created or received by Business Associate on behalf of Covered Entity. This provision shall apply to Protected Health Information that is in the possession of subcontractors or agents of Business Associate. Business Associate shall retain no copies of the Protected Health Information.

(b) In the event that Business Associate determines that returning or destroying the Protected Health Information is infeasible, Business Associate shall provide to Covered Entity notification of the conditions that make infeasible. If return or destruction is infeasible, Business Associate shall extend the protections of this Business Associate Agreement to such Protected Health Information and limit further Uses and Disclosures of such Protected Health Information on to those purposes that make the return or destruction infeasible, for so long as Business Associate maintains such Protected Health Information.

MISCELLANEOUS

5.1 No Third Party Beneficiaries. Nothing in the Business Associate Agreement shall confer upon any person other than the parties and their respective successors or assigns, any rights, remedies, obligations, or liabilities whatsoever.

5.2 Use of Subcontractors and Agents. Business Associate shall require each of its agents and subcontractors that receive Protected Health Information from Business Associate, or create Protected Health Information for Business Associate, on behalf of Covered Entity, to agree to the same restrictions on Use and Disclosure of Protected Health Information of such Protected Health Information that apply to Business Associate.

5.3 Relationship to Services Agreement Provisions. In the event that a provision of this Business Associate Agreement is contrary to another provision of this Agreement, the provision of this Business Associate Agreement shall control. Otherwise, this Business Associate Agreement shall be construed under, and in accordance with, the terms of this Agreement.

5.4 Regulatory References. A reference in this Business Associate Agreement to a section in the Privacy or Security Regulations means the section as in effect or as amended.

5.5 Interpretation. Any ambiguity in this Business Associate Agreement shall be resolved in favor of a meaning that permits Covered Entity to comply with the Privacy and Security Regulations.

5.6 Amendment. The parties acknowledge that the American Recovery and Reinvestment Act of 2009 ("ARRA") requires the Secretary of Health and Human Services to promulgate regulations and interpretative guidance that are not available at the time of executing this Business Associate Agreement. In the event either party determines in good faith that any such regulation or guidance adopted or amended after the execution of the Business Associate Agreement shall cause any paragraph or provision of this Business Associate Agreement to be invalid, void or in any manner unlawful or subject either party to penalty, then the parties agree to renegotiate in good faith to amend this Business Associate Agreement in accordance with the body of the Agreement, in order to comply with the change in law, regulation or interpretative guidance. Furthermore, the parties agree to take such action as is necessary to amend this Business Associate Agreement in accordance with the body of the Agreement from time to time as is necessary for Covered Entity to comply with the requirements of the Privacy and Security Regulations and other privacy laws governing Protected Health Information.

* * *

EXHIBIT K

COUNTY'S ADMINISTRATION

AGREEMENT NO. _____

COUNTY'S PROJECT DIRECTOR:

Kevin R. Kuykendall, Captain
Los Angeles County Sheriff's Department
450 Bauchet Street, TTCF E877B
Los Angeles, California 90012
Phone: (213) 893-5460
Fax: (213) 415-7568
E-mail: krkuyken@lasd.org

COUNTY'S TECHNICAL PROJECT MANAGER:

Scott R. Goodwin,
Los Angeles County Sheriff's Department
12440 East Imperial Highway, 4th Floor East
Norwalk, California 90650
Phone: (562) 345-4149
Fax: (562) 415-6599
E-mail: SRGoodwi@lasd.org

COUNTY'S ADMINISTRATIVE PROJECT MANAGER:

Kimberly J. Saucedo, Staff Analyst-Health
Los Angeles County Sheriff's Department
450 Bauchet Street, TTCF E873
Los Angeles, California 90012
Phone: (213) 473-2947
Fax: (562) 415-1232
E-mail: kjsauced@lasd.org

EXHIBIT L

CONTRACTOR'S ADMINISTRATION

AGREEMENT NO: _____

CONTRACTOR'S PROJECT DIRECTOR:
Jodi Drury
Cerner Corporation
2800 Rockcreek Parkway
Kansas City, MO 64117
Phone: 816-885-3367
Fax: 816-571-0239
E-mail: jdrury@cerner.com

CONTRACTOR'S PROJECT MANAGER:

Eric Urquiza
Cerner Corporation
2800 Rockcreek Parkway
Kansas City, MO 64117
Phone: 816 269-2253
Fax: 816 936-7100
E-mail: eric.urquiza@cerner.com

CONTRACTOR'S INTEGRATION ARCHITECT:

Jen Gregg
Cerner Corporation
2800 Rockcreek Parkway
Kansas City, MO 64117
Phone: 816 201-7722
Fax: 816 571-7517
E-mail: jen.gregg@cerner.com

CONTRACTOR'S AUTHORIZED OFFICIAL(S):

CHANGE NOTICE OR AMENDMENT:

Marc Naughton
Executive Vice President and Chief Financial Officer
Cerner Corporation
2800 Rockcreek Parkway
Kansas City, MO 64117
Phone: (816) 201-1989
Fax: (816) 571-1989
E-mail:marc.naughton@cerner.com

ADDRESS FOR NOTICES:

Title: Attn: President

Address: Cerner Corporation
2800 Rockcreek Parkway
Kansas City, MO 64117

EXHIBIT M
ACKNOWLEDGEMENT & SEXUAL HARASSMENT/DISCRIMINATION/RETALIATION PROHIBITED FORM

A copy of this completed document must be forwarded to the Los Angeles County Sheriff's Department County's Project Managers within five (5) business days of start of work under the below-referenced contract. All staff described under Subparagraphs 3.10 and 15.4 of such Agreement must complete an Acknowledgement & Sexual Harassment/Discrimination/Retaliation Prohibited Form. Please forward a copy as follows:

Los Angeles County Sheriff's Department
Attn: Contracts Unit
4700 Ramona Boulevard, 2nd Floor
Monterey Park, California 91754

PROJECT NAME: _____

CONTRACTOR/EMPLOYER NAME: _____

LOS ANGELES COUNTY AGREEMENT NUMBER: _____

ACKNOWLEDGEMENT

I understand and agree that the above-referenced contractor is a contractor or subcontractor under the above-referenced contract with the County of Los Angeles ("County"). I also understand and agree that such contractor is my sole employer for purposes of the above-referenced contract. I further understand and agree that I must rely exclusively upon my employer for payment of salary and any and all other benefits payable to me or on my behalf by virtue of my performance of work under the above-referenced contract.

I understand and agree that I am not an employee of the County for any purpose whatsoever and that I do not have and will not acquire any rights or benefits of any kind from the County by virtue of my performance of work under the above-referenced contract. I understand and agree that I do not have and will not acquire any rights or benefits from the County pursuant to any agreement between any person or entity and the County.

SEXUAL HARASSMENT/DISCRIMINATION/RETALIATION PROHIBITED

Sexual harassment is a form of unlawful sex discrimination, which is a violation of Title VII of the Civil Rights Act of 1964, as amended, and Chapter 6 of the California Fair Employment and Housing Act. Sexual harassment is defined as unwelcome sexual advances, requests for sexual favors and/or other verbal or physical conduct of a sexual nature when:

- Submission to such conduct is made either explicitly or implicitly a term or condition of employment; or
- Submission to or rejection of such conduct by an individual is used as a basis for employment decisions affecting such individual; or

- Such conduct has the purpose or effect of unreasonably interfering with an employee's work performance or creating an intimidating, hostile or offensive working environment

The County has a policy that sexual harassment is unacceptable and will not be tolerated. In addition, the County has a policy that individuals should be educated and informed of their rights and responsibilities. Under the above-referenced contract, the above-referenced contractor is required to provide sexual harassment training to certain staff in order to familiarize such staff with policies and reporting procedures. Such training shall be provided by the contractor and shall include the following at a minimum:

1. Definition of Sexual Harassment
2. Definition of Discrimination
3. Definition of Retaliation
4. Their Rights
5. Their Responsibilities
6. Procedure for Reporting Discrimination/Harassment/Retaliation with the Contractor
7. Procedure for Filing a Complaint of Discrimination/Harassment/Retaliation with the Contractor

I have read and understand that as an employee of _____ assigned under the contract that I **must** receive the above referenced training. I _____ hereby confirm that I have received such training and information on _____, 20_____.

NAME (PRINT):	
POSITION:	
SIGNATURE:	DATE:

EXHIBIT N

CONFIDENTIALITY OF CORI

Criminal Offender Record Information (CORI) is that information which is recorded as the result of an arrest, detention or other initiation of criminal proceedings including any consequent proceedings related thereto. As an employee of_____ during the legitimate course of your duties, you may have access to CORI. The Sheriff's Department has a policy of protecting the confidentiality of CORI.

You are required to protect the information contained in case files against disclosure to all individuals who do not have a right-to-know or a need-to-know this information.

The use of any information obtained from case files or other related sources of CORI to make contacts with inmates or their relatives, or to make CORI available to anyone who has no real and proper reason to have access to this information as determined solely by the Sheriff's Department is considered a breach of confidentiality, inappropriate and unauthorized.

Any _____ employee engaging in such activities is in violation of the Sheriff's Department's confidentiality policy and will be subject to appropriate disciplinary action and/or criminal action pursuant to Section 11142 of the Penal Code.

I have read and understand the Sheriff's Department's policy concerning the confidentiality of CORI.

_____
Signature

_____
Name (Print)

_____
Title

_____
Date

EXHIBIT O.

SOURCE CODE ESCROW AGREEMENT

EXHIBIT O.

SOFTWARE ESCROW AGREEMENT

This Software Escrow Agreement ("Escrow Agreement") is entered into to be effective as of the 1st day of January 2011, by and among Cerner Corporation, a Delaware corporation, the owner of certain software ("Cerner"), and U.S. Bank National Association, a national banking association ("Escrow Agent").

RECITALS:

A. Cerner and certain licensees of the aforementioned software (each a "Licensee") have entered into and may enter into in the future a software license agreement (the "License Agreement") whereby Cerner granted or may grant to such Licensee a limited license to use Cerner's computer programs identified therein (the "Software").

B. The uninterrupted availability of the Software is critical to each Licensee in the conduct of its business.

C. As a consequence of the foregoing, Cerner has agreed to enter into this Escrow Agreement to provide for the availability of the Software's source code, as well as any corrections, changes, modifications and enhancements to such source code, in accordance with the terms and conditions hereinafter set forth.

AGREEMENT:

Based upon the recitals set forth above and in consideration of the mutual obligations contained herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

ARTICLE 1 -- DEPOSITS

1.1 Obligation to Make Deposit(s). Within 10 days of execution of this Escrow Agreement, Cerner shall deliver to Escrow Agent the source code for the Software in its current (and, at Cerner's option, certain prior) versions, including relevant documentation (the "Escrow Material"). Cerner shall update the Escrow Material within 60 days of each release of a new version of the Software in accordance with the terms of this Escrow Agreement. All references in this Escrow Agreement to the Escrow Material shall include the initial Escrow Material and any updates.

1.2 Identification of Tangible Media. Prior to the delivery of the Escrow Material to Escrow Agent, Cerner shall conspicuously label for identification each document, magnetic tape, CD, disk, or other tangible media upon which the Escrow Material are written or stored. Additionally, Cerner shall deliver to Escrow Agent with the Escrow Material a list identifying each such tangible media by the item label description, the type of media and the quantity, which shall be substantially in the format set forth in Exhibit B (the "Escrow List"). The Escrow List must be signed by Cerner and delivered to Escrow Agent with the Escrow Material.

1.3 Deposit Inspection. When Escrow Agent receives the Escrow Material and the Escrow List, Escrow Agent will conduct a deposit inspection by visually matching the labeling of the tangible media containing the Escrow Material to the item descriptions and quantity listed on the Escrow List. Escrow Agent shall have no duty or obligation to inspect or inquire into the contents or substance of the Escrow

Material, and Escrow Agent's obligation shall be strictly limited to matching the aforementioned labeling to the Escrow List.

1.4 Acceptance of Deposit. At the completion of the deposit inspection, if Escrow Agent determines that the labeling of the tangible media matches the item descriptions and quantity on the Escrow List, then Escrow Agent will date and sign the Escrow List and deliver a copy thereof to Cerner, which shall occur no later than ten (10) business days after Escrow Agent's receipt of the Escrow Material. If Escrow Agent determines that the labeling does not match the item descriptions or quantity on the Escrow List, Escrow Agent will: (a) note the discrepancies in writing on the Escrow List; (b) date and sign the Escrow List with the exceptions noted; and (c) provide a copy of the Escrow List to Cerner. Escrow Agent's acceptance of the deposit occurs upon the signing of the Escrow List by Escrow Agent. Cerner may, at its discretion, provide a copy of the signed Escrow List to a Licensee as an indication that the Escrow Material have been received and accepted by Escrow Agent. Upon Escrow Agent's acceptance of any updated Escrow Material, the Escrow Agent shall return to Cerner, within ten (10) business days after the issuance of the written notice of acceptance to Cerner, all previous versions of the Escrow Material.

1.5 Cerner's Representations. Cerner represents to Escrow Agent that:

a. Cerner lawfully possesses all of the Escrow Material deposited with Escrow Agent;

b. With respect to all of the Escrow Material, Cerner has the right and authority to grant to Escrow Agent the rights as provided in this Escrow Agreement;

c. The Escrow Material are not subject to any lien or other encumbrance;

d. The Escrow Material consists of Software identified in the License Agreements; and

e. The Escrow Material are readable and useable in their current form or, if the Escrow Material are encrypted, the decryption tools and decryption keys have also been deposited, which deposit may be separate from the Escrow Material deposit;

provided, however, that Escrow Agent shall have no duty to enforce such representations for the benefit of any third party, including without limitation a Licensee.

ARTICLE 2 -- CONFIDENTIALITY AND RECORD KEEPING

2.1 Confidentiality. Escrow Agent shall maintain the Escrow Material in a secure, locked facility which is accessible only to authorized representatives of Escrow Agent. Escrow Agent shall have the obligation to reasonably protect the confidentiality of the Escrow Material. Except as provided in this Escrow Agreement, Escrow Agent shall not disclose, transfer, make available, or use the Escrow Material. If Escrow Agent receives a subpoena or other order of a court or other judicial tribunal pertaining to the disclosure or release of the Escrow Material, Escrow Agent will promptly notify Cerner. It shall be the responsibility of Cerner to challenge any such order; provided, however, that Escrow Agent does not waive its rights to present its position with respect to any such order. Escrow Agent will not be required to disobey any court or other judicial tribunal order.

2.2 Audit Rights. During the term of this Escrow Agreement, Cerner shall have the right to inspect the written records of Escrow Agent pertaining to this Escrow Agreement. Any inspection shall be held during normal business hours and following reasonable prior notice, and shall be conducted at the Cerner's sole expense.

ARTICLE 3 -- RELEASE OF DEPOSIT

3.1 Right to Make Copies. Escrow Agent shall have the right to make copies of the Escrow Material as reasonably necessary to perform with respect to rights and duties under this Escrow Agreement. Escrow Agent will copy all copyright, nondisclosure, and other proprietary notices and titles contained on the Escrow Material onto any copies made by Escrow Agent.

3.2 Right to Transfer Upon Release. Cerner hereby grants to Escrow Agent the right to transfer a copy of the Escrow Material to a Licensee upon the occurrence of a Release Condition as defined in Section 3.3 below. Except upon such a release or as otherwise provided in this Escrow Agreement, Escrow Agent shall not otherwise transfer the Escrow Material.

3.3 Release Conditions. As used in this Escrow Agreement, "Release Conditions" shall mean the following:

a. Cessation of business by Cerner without a successor; or

b. Cerner's cessation of the Support supplied for the Software pursuant to the License Agreement without making a provision for continued support by a qualified third party on substantially the same terms, conditions and pricing; or

c. in the case of Cerner and Licensee having entered into a Licensee Agreement specifically providing other circumstances under which such Licensee may be entitled to a copy of the Escrow Material.

3.4 Filing For Release. If a Release Condition has occurred, then Cerner shall provide written notice of the occurrence of the Release Condition and a request for the release of a copy of the Escrow Material to Licensee(s).

3.5 Licensee Request. In the event a Licensee requests release of the Escrow Material, Licensee shall notify Escrow Agent and Cerner of a Release Condition in accordance with the notice provisions of this Escrow Agreement. Cerner will promptly work with Escrow Agent to approve the release in accordance with the Release Conditions or to address the request directly with the Licensee.

ARTICLE 4 -- OWNERSHIP AND USE OF ESCROW MATERIAL

4.1 Ownership/Confidentiality of Escrow Material. In all events, Cerner or its successors or assigns, shall remain the owner of the Escrow Material. Licensee's right to and interest in the Escrow Material shall be as a licensee only.

4.2 Right to Use Following Release. Upon release of the Escrow Material in accordance with Article 3, Licensee shall have the right to use the Escrow Material for the sole purpose of continuing the benefits afforded to Licensee by the License Agreement. Licensee shall be obligated to maintain the confidentiality of the released Escrow Material as provided in the License Agreement. Without limiting any other terms of this Escrow Agreement, Escrow Agent shall have no duties or obligations with respect to enforcing this Section 4.2 or any terms of a License Agreement.

ARTICLE 5 -- COMPENSATION OF ESCROW AGENT

5.1 Escrow Agent Fee. Cerner shall make payment to Escrow Agent for escrow service in accordance with Escrow Agent's fee schedule as outlined on Exhibit A attached hereto, and shall be invoiced upon execution of this Escrow Agreement.

5.2 Non-payment. In the event of non-payment of Escrow fee, Escrow Agent shall give Cerner sixty (60) days notice thereof. If the sixty (60) day notice period elapses without Escrow Agent having received payment from Cerner, Escrow Agent shall then have the option, upon delivery of written notice to Cerner, to terminate this Escrow Agreement and to return to Cerner all Escrow Material.

ARTICLE 6 -- TERM

6.1 Term and Termination. The initial term of this Escrow Agreement shall commence as of the effective date set forth on the first page hereof and continue for a period of ten years (the "Initial Term"). Thereafter, this Escrow Agreement shall automatically renew from year-to-year (each a "Renewal Term") unless either party provides not less than 180 days notice to the other of its intention to terminate the Escrow Agreement at the end of the then current term. This Escrow Agreement may be terminated prior to the expiration of the Initial Term or any Renewal Term in any of the following ways: (a) Cerner instructs Escrow Agent in writing that the Escrow Agreement is terminated; (b) the Escrow Agreement is terminated by Escrow Agent for nonpayment in accordance with Section 5.2.

6.2 Disposition of Escrow Materials on Termination. Escrow Agent shall return the Escrow Materials to Cerner upon the termination of this Escrow Agreement.

6.3 Survival of Terms Following Termination. Upon termination of this Escrow Agreement, the following provisions of this Escrow Agreement shall survive: Section 1.5 – Cerner's Representations, Section 2.1 – Confidentiality Obligations of Escrow Agent, Article 4 – Ownership and Use of the Escrow Material, any payment obligations to Escrow Agent, this Section 6.3, Section 7.2 – Indemnification of Escrow Agent, Section 7.4 – Liability of Cerner, and Article 8 – General Provisions.

ARTICLE 7 -- LIABILITY AND INDEMNIFICATION OF ESCROW AGENT

7.1 Right to Rely on Instructions. Escrow Agent may act in reliance upon any instruction, instrument, or signature from Cerner reasonably believed by Escrow Agent to be genuine. Neither party shall be responsible for failure to act as a result of causes beyond the reasonable control of such party.

7.2 Indemnification. Cerner shall defend, indemnify and hold harmless Escrow Agent from any and all liability, damages, costs, or expenses including reasonable attorneys' fees, which may be sustained or incurred by the Escrow Agent as a result of taking action under this Escrow Agreement, except in the case of the negligence or willful misconduct of Escrow Agent. The obligations of Cerner under this section shall survive any termination of this Escrow Agreement and the resignation or removal of Escrow Agent. Escrow Agent shall promptly notify Cerner in writing of any such action or allegation and Cerner shall have had sole control of the defense of any such action and all negotiations for its settlement or compromise.

7.3 Liability of Escrow Agent. Escrow Agent shall not, by reason of its execution of this Escrow Agreement, assume any responsibility or liability for any transactions between Cerner and Licensee. Escrow Agent undertakes to perform only such duties as are expressly set forth herein and no duties shall be implied. The Escrow Agent shall have no liability under and no duty to inquire as to the provisions of any agreement other than this Escrow Agreement, including without limitation any other agreement

between the Cerner and a Licensee or any other persons even though reference thereto may be made herein. The Escrow Agent shall not be liable directly to any third party, including without limitation any Licensee. The Escrow Agent shall not be liable for any action taken or omitted by it in good faith except to the extent of the Escrow Agent's negligence or willful misconduct. Escrow Agent's sole responsibility shall be for the safekeeping of the Escrow Material in accordance with the terms of this Escrow Agreement. Escrow Agent shall not be charged with knowledge or notice of any fact or circumstance not specifically set forth herein. Escrow Agent may rely upon any notice, instruction, request or other instrument, not only as to its due execution, validity and effectiveness, but also as to the truth and accuracy of any information contained therein, which Escrow Agent shall believe to be genuine and to have been signed or presented by the person or parties purporting to sign the same. In no event shall Escrow Agent be liable for incidental, indirect, special, consequential or punitive damages (including, but not limited to lost profits), even if the Escrow Agent has been advised of the likelihood of such loss or damage and regardless of the form of action. Escrow Agent shall not be obligated to take any legal action or commence any proceeding in connection with the Escrow Materials, this Escrow Agreement or any License Agreement, or to appear in, prosecute or defend any such legal action or proceeding.

The Escrow Agent is authorized, in its sole discretion, to comply with final orders issued or process entered by any court with respect to the Escrow Material, without determination by the Escrow Agent of such court's jurisdiction in the matter. If any portion of the Escrow Material is at any time attached, garnished or levied upon under any court order, or in case the payment, assignment, transfer, conveyance or delivery of any such property shall be stayed or enjoined by any court order, or in case any order, judgment or decree shall be made or entered by any court affecting such property or any part thereof, then and in any such event, the Escrow Agent is authorized, in its sole discretion, to rely upon and comply with any such order, writ, judgment or decree which it is advised by legal counsel selected by it is binding upon it without the need for appeal or other action; and if the Escrow Agent complies with any such order, writ, judgment or decree, it shall not be liable to any of the parties hereto or to any other person or entity by reason of such compliance even though such order, writ, judgment or decree may be subsequently reversed, modified, annulled, set aside or vacated.

7.4 Liability of Cerner. IN NO CASE SHALL CERNER BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES BASED UPON BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT TORT, OR ANY OTHER LEGAL THEORY.

ARTICLE 8 -- GENERAL PROVISIONS

8.1 Notices. All notices, approvals, consents, requests, and other communications hereunder shall be in writing and shall be delivered by hand, overnight delivery service, electronic mail or facsimile transmitter (with confirmed receipt) to the following physical address, electronic address or facsimile number set forth in this section, or to such other address as each party may designate for itself by like notice, and shall be deemed to have been given on the date received:

Cerner Corporation:

Cerner Corporation
2800 Rockcreek Parkway
North Kansas City, MO 64117
Attn: General Counsel
Phone: 816-221-1024

Fax: 816-474-1742

Escrow Agent:

U.S. Bank National Association
EP-MN-WS3C
60 Livingston Avenue
St. Paul, MN 55107
Attn: Georgette Kleinbaum
Phone: 651 495-3922
Fax: 651 495-8096
E-mail: georgette.kleinbaum@usbank.com

In the event that any party should change its address for notice purposes, it shall provide the other parties with written notice of such new address in accordance with the pursuant to the terms of this Section 8.1, but any such change shall not be effective until actually received.

8.2 Assignment/Binding Nature. Except as set forth below, neither party shall have the right to assign its rights and obligations under this Escrow Agreement. Cerner may, however, assign and delegate in conjunction with a reorganization or merger, or in conjunction with the sale of substantially all its assets to which this Agreement pertains. This Escrow Agreement shall be binding upon the parties' successors and assigns. Any assignment of this Agreement, by Escrow Agent or Cerner, must be made in its entirety, including all rights and obligations.

8.3 Entire Agreement. This Escrow Agreement contains the entire contract between the parties as to the subject matter hereof and supersedes any prior or contemporaneous written or oral agreements between the parties with respect to the subject matter hereof.

8.4 Modifications and Waivers. No purported amendment, modification or waiver of any provision of this Escrow Agreement shall be binding unless set forth in a written document signed by all parties (in the case of amendments and modifications) or by the party to be charged thereby (in the case of waivers). Any waiver shall be limited to the circumstance or event specifically referenced in the written waiver document and shall not be deemed a waiver of any other term or provision of this Escrow Agreement or of the same circumstance or event upon any recurrence thereof.

8.5 Controlling Law. This Escrow Agreement shall be governed by and interpreted in accordance with the laws of the State of Missouri, without application of its conflict of law provisions.

8.6 Patriot Act. The Parties acknowledge that to help the government fight the funding of terrorism and money laundering activities, Federal law requires all financial institutions to obtain, verify and record information that identifies each person who opens an account, and that for a non-individual person such as a business entity, a charity, a Trust or other legal entity, the Escrow Agent will ask for documentation to verify its formation and existence as a legal entity. The Parties further acknowledge that the Escrow Agent may also ask to see financial statements, licenses, identification and authorization documents or other relevant documentation from individuals claiming authority to represent the entity.

(SIGNATURES ON FOLLOWING PAGE)

EXHIBIT O.

The parties have executed this Escrow Agreement, in the manner appropriate to each, to be effective as of the date on the first page hereof.

OWNER:

CERNER CORPORATION

Signature

Marc E. Elkins

Asst. Secretary

Title

30 December 2010

Date

U.S. BANK NATIONAL ASSOCIATION,
as Escrow Agent

Signature

Georgette Kleinbaum

Name

Assistant Vice President

Title

12-30-10

Date