

LOS ANGELES COUNTY DEPARTMENT OF MENTAL HEALTH



LOS ANGELES COUNTY  
**DEPARTMENT OF  
MENTAL HEALTH**  
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LACDMH HEALTHCARE INFORMATION DATA EXCHANGE  
LOCUS API  
COMPANION GUIDE

VERSION 2025.01

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# REVISION HISTORY

| Date       | Version | Description   | Author                  |
|------------|---------|---|-------------------------|
| 12-10-2024 | 2024.01 | Initial Draft   | LACDMH Integration Team |
| 01-31-2025 | 2024.01 | Updated based on feedback   | LACDMH Integration Team |
| 07-12-2025 | 2025.01 | <p>Various sections have been updated to add more clarity. Here is the list:</p> <ul style="list-style-type: none"><li>• <a href="#">Section 1</a> is updated.</li><li>• <a href="#">Section 2</a> title is changed to 'Definitions' and only definitions of various terms are kept in this section.</li><li>• Section 2.2 API Overview is updated and it is now in <a href="#">section 4.1</a></li><li>• Section 2.3 LOCUS Workflow is updated and it is now in <a href="#">section 3.1</a></li><li>• <a href="#">Section 3</a> has been re-structured and updated. Previous version's section 4 'User Interface Requirements' content is updated and moved to <a href="#">section 3.4</a>.</li><li>• <a href="#">Section 4</a> is titled as 'Technical Details' and it includes all items from previous version's section 5 and content is updated and re-structured.</li><li>• LOCUS Questionnaire structure is identified and included in <a href="#">section 3.3</a>.</li><li>• A postman collection link is provided in <a href="#">section 4.1</a>.</li><li>• All sample payloads are included in Use-Cases <a href="#">section 4.3.1.2</a> and <a href="#">section 4.3.2.2</a>.</li></ul> | LACDMH Integration Team |

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## 1. Introduction

The Level of Care Utilization System (LOCUS) is a standardized tool developed by the American Association for Community Psychiatry (AACP) to support clinical decision-making, service planning, and utilization management for individuals requiring behavioral health services.

The Los Angeles County Department of Mental Health (LACDMH) has implemented HL7 Fast Healthcare Interoperability Resources (FHIR) standards to facilitate the secure and standardized exchange of LOCUS assessment data between Trading Partners' electronic health record (EHR) systems and LACDMH. This exchange is enabled through a RESTful Application Programming Interface (API) and is a core component of the HIDEX (Healthcare Information Data Exchange) platform, which serves as LACDMH's enterprise integration layer for standards-based data sharing and compliance.

The LOCUS API allows Trading Partners to retrieve assessment questionnaires, submit client-specific responses, and receive structured outputs including LOCUS scores and recommended levels of care. Assessments are evaluated using Deerfield Solutions' licensed algorithm in accordance with the LOCUS Version 20 specifications, which guide psychiatric and addiction service planning for both adults and children/adolescents.

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## 2. Definitions

| Term  | Definition  |
|---|---|
| HL7 (Health Level Seven)                          | A globally recognized set of standards for the electronic exchange of clinical and administrative healthcare data. HL7 enables interoperability between healthcare information systems by providing a consistent data format for communication. |
| FHIR (Fast Healthcare Interoperability Resources) | The latest HL7 standard, designed to simplify data exchange across healthcare systems. FHIR defines modular 'resources' (e.g., Patient, Observation) and leverages modern web technologies such as RESTful APIs and JSON or XML formats.        |
| REST (Representational State Transfer)            | An architectural style used for building scalable web services. RESTful APIs interact using standard HTTP methods like GET, POST, PUT, and DELETE, and are commonly used in healthcare integration due to their simplicity and flexibility.     |

| Term                              | Definition   |
|-----------------------------------|--|
| JSON (JavaScript Object Notation) | A lightweight, text-based data format used for transmitting structured information between systems. JSON is widely adopted in APIs due to its human-readable format and compatibility with modern programming languages.   |
| FHIR Resource                     | A standardized data structure representing a single clinical or administrative concept (e.g., Patient, Practitioner, Questionnaire). FHIR resources are designed for interoperability, allowing consistent representation and exchange of health data between systems using JSON or XML. |

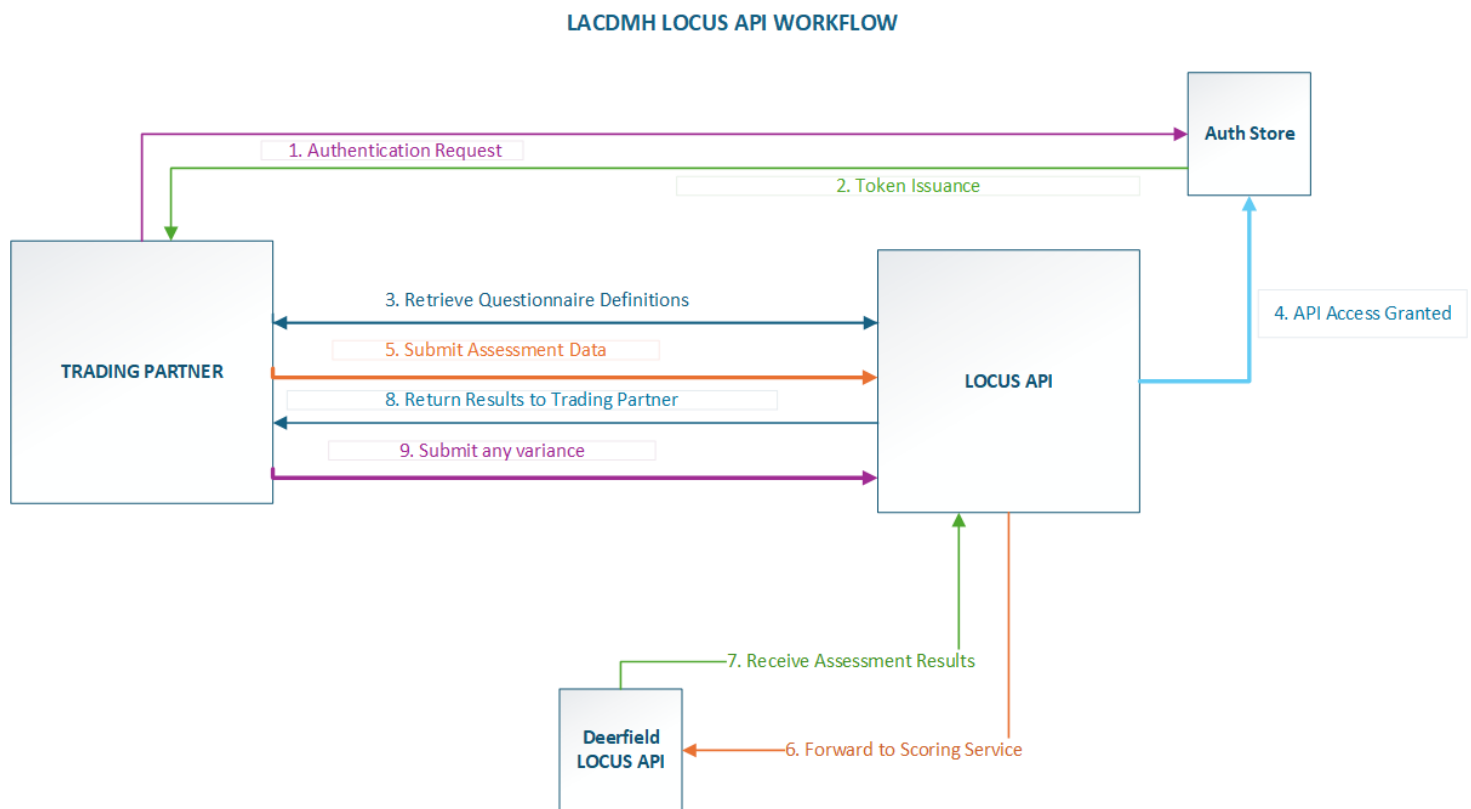
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### 3. Business Rules

This section describes workflow, copyright information, various business rules and structure for LOCUS assessment.

#### 3.1 HIDEX LOCUS Workflow

The following diagram shows the current workflow for LOCUS API.



The workflow above is explained below:

- 1. Authentication Request:**  
The Trading Partner initiates an authentication request to the Authentication Store.
- 2. Token Issuance:**  
The Authentication Store verifies the credentials and issues an access token.
- 3. Retrieve Questionnaire Definitions:**  
The Trading Partner sends a GET /Questionnaire request along with the token to retrieve

the full LOCUS assessment structure, including all Dimensions and responses. The API returns the questionnaire definitions.

4. **API Access Granted:**

The HIDEX LOCUS API validates the token and grants the Trading Partner access to the FHIR endpoints.

5. **Submit Assessment Data:**

After the user completes the assessment, the Trading Partner system submits the responses via a POST /QuestionnaireResponse request along with the token.

6. **Forward to Scoring Service:**

The LOCUS API forwards the submitted data to the Deerfield LOCUS scoring service for evaluation.

7. **Receive Assessment Results:**

The Deerfield service processes the data and returns the LOCUS score and recommended Level of Care.

8. **Please Note:** The HIDEX LOCUS API stores the assessment record along with its status (in-progress or completed). Updates are only permitted while the assessment status is marked as in-progress. Once marked completed, the record becomes read-only.**Return Results to Trading Partner:**

The LOCUS API sends the scored results back to the Trading Partner.

9. **Submit Any Variance:**

After the user verifies the recommended care level with the actual disposition, submit any variance for the assessment, (if there is any) along with the variance reason through the PUT / QuestionnaireResponse call along with the token.

Please note that before creating an assessment, the client and encounter must already be established in HIDEX or Client web services.

### [3.2 LOCUS Copyright Information](#)

The LOCUS service intensity assessment and planning instrument is owned and copyrighted by the American Association for Community Psychiatry (AACP). The only sanctioned method for accessing and scoring the LOCUS tool for clinical service intensity assessment, service planning and/or utilization management for individuals and families in need of behavioral health services is through the electronic scoring algorithm that must be licensed to the end user organization by Deerfield Solutions, LLC.

LACDMH contracted with Deerfield Solutions, LLC. to use the LOCUS tool. Provider software developers and/or vendors are advised to obtain a license to digitally duplicate the LOCUS tool by sending the request to Deerfield Solutions by emailing at the following address:

[licensing@deerfieldsolutions.com](mailto:licensing@deerfieldsolutions.com)

There is no cost to obtain a license for integration with LACDMH's HIDEX but it does require a license agreement. When contacting Deerfield please be sure to note the request is for the LACDMH HIDEX project as these requests will be prioritized.

### 3.3 LOCUS Assessment Structure

Here is a quick view of LOCUS Assessment structure:

| Dimensions           | Sub Dimensions/ Sub Scales | Assessment Questions   | Submission Rule |
|----------------------|----------------------------|--|-----------------|
| 1. Risk of Harm      | 1.1 Minimal Risk of Harm   | <ul style="list-style-type: none"> <li>1.1.1a</li> <li>1.1.2b</li> </ul>   | None            |
|                      | 1.2 Low Risk of Harm       | <ul style="list-style-type: none"> <li>1.2.1a</li> <li>1.2.2b</li> <li>1.2.3c</li> </ul>   | None            |
|                      | 1.3 Moderate Risk of Harm  | <ul style="list-style-type: none"> <li>1.3.1a</li> <li>1.3.2b</li> <li>1.3.3c</li> <li>1.3.4d</li> <li>1.3.5e</li> </ul>                 | None            |
|                      | 1.4 Serious Risk of Harm   | <ul style="list-style-type: none"> <li>1.4.1a</li> <li>1.4.2b</li> <li>1.4.3c</li> <li>1.4.4d</li> </ul>                                 | None            |
|                      | 1.5 Extreme Risk of Harm   | <ul style="list-style-type: none"> <li>1.5.1a</li> <li>1.5.2b</li> <li>1.5.3c</li> </ul>   | None            |
| 2. Functional Status | 2.1 Minimal Impairment     | <ul style="list-style-type: none"> <li>2.1.1a</li> </ul>   | None            |
|                      | 2.2 Mild Impairment        | <ul style="list-style-type: none"> <li>2.2.1a</li> <li>2.2.2b</li> <li>2.2.3c</li> <li>2.2.4d</li> </ul>                                 | None            |
|                      | 2.3 Moderate Impairment    | <ul style="list-style-type: none"> <li>2.3.1a</li> <li>2.3.2b</li> <li>2.3.3c</li> <li>2.3.4d</li> <li>2.3.5e</li> <li>2.3.6f</li> </ul> | None            |
|                      | 2.4 Serious Impairment     | <ul style="list-style-type: none"> <li>2.4.1a</li> <li>2.4.2b</li> <li>2.4.3c</li> <li>2.4.4d</li> <li>2.4.5e</li> </ul>                 | None            |
|                      | 2.5 Severe Impairment      | <ul style="list-style-type: none"> <li>2.5.1a</li> <li>2.5.2b</li> <li>2.5.3c</li> <li>2.5.4d</li> </ul>                                 | None            |



| Dimensions                                | Sub Dimensions/ Sub Scales           | Assessment Questions   | Submission Rule |
|---|--------------------------------------|--|-----------------|
|   |                                      | <ul style="list-style-type: none"> <li>• 2.5.5e</li> </ul>   |                 |
| 3. Co-Morbidity                           | 3.1 No Co-morbidity                  | <ul style="list-style-type: none"> <li>• 3.1.1a</li> <li>• 3.1.2b</li> </ul>   | None            |
|   | 3.2 Minor Co-morbidity               | <ul style="list-style-type: none"> <li>• 3.2.1a</li> <li>• 3.2.2b</li> <li>• 3.2.3c</li> </ul>   | None            |
|   | 3.3 Significant Co-morbidity         | <ul style="list-style-type: none"> <li>• 3.3.1a</li> <li>• 3.3.2b</li> <li>• 3.3.3c</li> <li>• 3.3.4d</li> <li>• 3.3.5e</li> <li>• 3.3.6f</li> </ul>                   | None            |
|   | 3.4 Major Co-morbidity               | <ul style="list-style-type: none"> <li>• 3.4.1a</li> <li>• 3.4.2b</li> <li>• 3.4.3c</li> <li>• 3.4.4d</li> <li>• 3.4.5e</li> </ul>                                     | None            |
|   | 3.5 Severe Co-morbidity              | <ul style="list-style-type: none"> <li>• 3.5.1a</li> <li>• 3.5.2b</li> <li>• 3.5.3c</li> <li>• 3.5.4d</li> <li>• 3.5.5e</li> </ul>                                     | None            |
| 4. Recovery Environment - Level of Stress | 4.1 Low Stress Environment           | <ul style="list-style-type: none"> <li>• 4.1.1a</li> <li>• 4.1.2b</li> <li>• 4.1.3c</li> <li>• 4.1.4d</li> <li>• 4.1.5e</li> <li>• 4.1.6f</li> </ul>                   | None            |
|   | 4.2 Mildly Stressful Environment     | <ul style="list-style-type: none"> <li>• 4.2.1a</li> <li>• 4.2.2b</li> <li>• 4.2.3c</li> <li>• 4.2.4d</li> <li>• 4.2.5e</li> <li>• 4.2.6f</li> </ul>                   | None            |
|   | 4.3 Moderately Stressful Environment | <ul style="list-style-type: none"> <li>• 4.3.1a</li> <li>• 4.3.2b</li> <li>• 4.3.3c</li> <li>• 4.3.4d</li> <li>• 4.3.5e</li> <li>• 4.3.6f</li> <li>• 4.3.7g</li> </ul> | None            |
|   | 4.4 Highly Stressful Environment     | <ul style="list-style-type: none"> <li>• 4.4.1a</li> <li>• 4.4.2b</li> <li>• 4.4.3c</li> <li>• 4.4.4d</li> <li>• 4.4.5e</li> <li>• 4.4.6f</li> <li>• 4.4.7g</li> </ul> | None            |

| Dimensions                                 | Sub Dimensions/ Sub Scales           | Assessment Questions   | Submission Rule   |
|--|--------------------------------------|--|---|
|  | 4.5 Extremely Stressful Environment  | <ul style="list-style-type: none"> <li>• 4.5.1a</li> <li>• 4.5.2b</li> <li>• 4.5.3c</li> <li>• 4.5.4d</li> <li>• 4.5.5e</li> <li>• 4.5.6f</li> </ul> | None  |
| 5. Recovery Environment - Level of Support | 5.1 Highly Supportive Environment    | <ul style="list-style-type: none"> <li>• 5.1.1a</li> <li>• 5.1.2b</li> </ul>   | If 5.1.2b is selected, then no response should be submitted from 5.2 thru 5.5 |
|  | 5.2 Supportive Environment           | <ul style="list-style-type: none"> <li>• 5.2.1a</li> <li>• 5.2.2b</li> <li>• 5.2.3c</li> </ul>   | None  |
|  | 5.3 Limited Support in Environment   | <ul style="list-style-type: none"> <li>• 5.3.1a</li> <li>• 5.3.2b</li> <li>• 5.3.3c</li> <li>• 5.3.4d</li> <li>• 5.3.5e</li> </ul>                   | None  |
|  | 5.4 Minimal Support in Environment   | <ul style="list-style-type: none"> <li>• 5.4.1a</li> <li>• 5.4.2b</li> <li>• 5.4.3c</li> <li>• 5.4.4d</li> </ul>                                     | None  |
|  | 5.5 No Support in Environment        | <ul style="list-style-type: none"> <li>• 5.5.1a</li> </ul>   | None  |
| 6. Treatment and Recovery History          | 6.1 Fully Responsive                 | <ul style="list-style-type: none"> <li>• 6.1.1a</li> <li>• 6.1.2b</li> <li>• 6.1.3c</li> </ul>   | None  |
|  | 6.2 Significant Response             | <ul style="list-style-type: none"> <li>• 6.2.1a</li> <li>• 6.2.2b</li> </ul>   | None  |
|  | 6.3 Moderate or Equivocal Response   | <ul style="list-style-type: none"> <li>• 6.3.1a</li> <li>• 6.3.2b</li> <li>• 6.3.3c</li> <li>• 6.3.4d</li> </ul>                                     | None  |
|  | 6.4 Poor Response                    | <ul style="list-style-type: none"> <li>• 6.4.1a</li> <li>• 6.4.2b</li> </ul>   | None  |
|  | 6.5 Negligible Response              | <ul style="list-style-type: none"> <li>• 6.5.1a</li> <li>• 6.5.2b</li> </ul>   | None  |
| 7. Engagement and Recovery Status          | 7.1 Optimal Engagement and Recovery  | <ul style="list-style-type: none"> <li>• 7.1.1a</li> <li>• 7.1.2b</li> <li>• 7.1.3c</li> <li>• 7.1.4d</li> </ul>                                     | None  |
|  | 7.2 Positive Engagement and Recovery | <ul style="list-style-type: none"> <li>• 7.2.1a</li> <li>• 7.2.2b</li> <li>• 7.2.3c</li> <li>• 7.2.4d</li> </ul>                                     | None  |

| Dimensions | Sub Dimensions/ Sub Scales          | Assessment Questions   | Submission Rule |
|------------|-------------------------------------|--|-----------------|
|            | 7.3 Limited Engagement and Recovery | <ul style="list-style-type: none"> <li>• 7.3.1a</li> <li>• 7.3.2b</li> <li>• 7.3.3c</li> <li>• 7.3.4d</li> <li>• 7.3.5e</li> </ul> | None            |
|            | 7.4 Minimal Engagement and Recovery | <ul style="list-style-type: none"> <li>• 7.4.1a</li> <li>• 7.4.2b</li> <li>• 7.4.3c</li> <li>• 7.4.4d</li> <li>• 7.4.5e</li> </ul> | None            |
|            | 7.5 Unengaged and Stuck             | <ul style="list-style-type: none"> <li>• 7.5.1a</li> <li>• 7.5.2b</li> <li>• 7.5.3c</li> <li>• 7.5.4d</li> </ul>                   | None            |

### 3.4 Other User Interface Requirements

Trading Partners' user interfaces must adhere to the following requirements to ensure alignment with the LOCUS instrument and evaluation process:

- Preservation of Order and Structure:**  
 Dimensions and individual responses must be displayed in the same order as presented in the official LOCUS instrument. These statements referred to interchangeably as "responses" or "criteria" are grouped by Dimension, each representing a distinct clinical category. Descriptions of these elements can be retrieved via the GET /Questionnaire call to the LOCUS API.  
 Reference output:  
[LOCUS Questionnaire JSON](#)
- Selection of Specific Responses:**  
 Providers must ensure that users select the actual clinical response(s) that apply to the client's condition at the time of assessment. It is not acceptable to simply assign a 1–5 score for a Dimension without specifying the corresponding response(s).
- Minimum Completion Requirements:**  
 At least one response must be selected in each Dimension—and in each subscale, where applicable.
- Data Retention:**  
 When saving assessments to your internal database, all selected responses must be stored. This supports transparency and auditability by allowing reviewers to understand the rationale behind each dimension's score.

*Example: Instead of “Client scored a 4 on Risk of Harm,” the stored data should include the specific criteria selected that justified that score.*

- **Editing In-Progress Assessments Only:**  
Editing an assessment using the PUT /QuestionnaireResponse method is only permitted when the record status is *in-progress*. No updates are allowed once the status is marked *completed*.
- **Instrument Text Integrity:**  
All LOCUS instrument content—including introductory paragraphs, scoring definitions, and response text—must be preserved exactly as written. No edits, omissions, or rewording are allowed. See Section 3.1 for details.
- **Access to Introductory Content:**  
Introductory paragraphs for each Dimension do not need to appear on the main entry screen but must be readily accessible (e.g., via an “info” button or collapsible panel).
- **Support for Conditional Logic (“Overrides”):**  
Some responses include conditional logic that restricts selection of other responses within the same Dimension (e.g., selecting Response A disables Responses B–E). These logic rules must be enforced in the UI. See [Section 3.4](#) (LOCUS Assessment Structure) for a full list of applicable overrides.
- **Access to Level of Care Definitions:**  
The system must make definitions for LOCUS Levels of Care easily accessible (e.g., via an info button or help link). Level of Care definitions can be retrieved by invoking the following API call: GET [base]/Questionnaire?title=LOCUS\_Adult where [base]= <https://hidex.dmh.lacounty.gov/healthcare>
- **Certification Report Requirements:**  
A report must be generated during testing to support the certification process. At a minimum, this report must include:
  - Date (and preferably time) of assessment completion
  - LOCUS Recommended Level of Care
  - Score (1–5) for each of the seven Dimensions
  - Specific response items selected for each Dimension’s highest scoring level

All of this information is returned in the response from the POST /QuestionnaireResponse call. See [Section 4.3.2.2](#) for a POST call output sample payload.

For additional UI or LOCUS instrument specific questions contact [Deerfield support](#) after acquiring the license.

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## 4. Technical Details

LACDMH uses a RESTful service that exchanges LOCUS data in JSON format between Trading Partners' EHR systems and LACDMH. The API is based on HL7 FHIR standards and leverages defined FHIR resources for structured data exchange. For definitions of key technical terms, refer to Section 2.

### 4.1 API Overview

The API follows the REST architectural style, meaning it uses standard HTTP methods to submit and retrieve data. JSON format is used to structure and transmit the data, providing an efficient way for systems to communicate information. Here is some key information:

- Base URL: <https://hidex.dmh.lacounty.gov/healthcare>  
In this document, also referred as [base]
- FHIR Version: v4.0.1
- Authorization and Authentication: Only authorized organizations are allowed to use the API. App Registration grants access. A security token obtained via OAuth 2.0 using the registered app's credentials is used for API calls.
- Content Type: application/fhir+json

Newly contracted providers are required to complete the onboarding process in order to obtain the necessary access credentials. This process includes legal and technical registration steps and is further detailed in the sections here:

<https://dmh.lacounty.gov/pc/cp/or>

Existing contracted providers may request access as part of their routine access renewal process or by submitting a HEAT ticket to expedite access to the test and QA (non-production) environments. Upon successful demonstration of data exchange and conformance to submission requirements, access to the production environment will be granted.

#### **OpenAPI Specification**

A full OpenAPI 3.0 specification is available for this API. Trading Partners integrating with HIDEX or developing clients can download the latest OpenAPI definition from the following link:

[OpenAPI Definition Link](#)

This definition includes all supported endpoints, parameters, and request/response formats, and may be used to generate client SDKs or API testing collections (e.g., Postman, Swagger UI). Postman collection is available from: the following link:

[LACDMH LOCUS API Postman Collection Link](#)

The API supports the following FHIR resources:

| FHIR Resource         | Purpose                                  |
|-----------------------|--|
| Questionnaire         | To define LOCUS assessment questionnaire |
| QuestionnaireResponse | To intake and retrieve LOCUS assessments |
| Bundle                | To show search set for assessments       |

## 4.2 Search Parameters

The LOCUS API supports retrieving records using FHIR's standardized search operations (GET [resource]?parameter=value). Below is a summary of commonly used search parameters for each resource:

### **Questionnaire:** title

- title; use title=LOCUS\_Adult
- Following search query retrieves all the definitions of the LOCUS adult assessment:  
[base]/Questionnaire?title=LOCUS\_Adult

### **QuestionnaireResponse:** \_tag, id, patient

- \_tag: use LOCUS
- id: {{LOCUS Assessment record ID}}
- patient: use {{Client ID}}  
Following search query syntax is used in the LACDMH LOCUS API to get a submitted LOCUS assessment for a particular client.

[base]/QuestionnaireResponse?\_tag=LOCUS&patient={{Client ID}}&\_id={{LOCUS Assessment record ID}}

Refer to the FHIR Search API (<https://www.hl7.org/fhir/R4/search.html>) or (<https://hl7.org/fhir/R4/questionnaireresponse.html#search>) for a comprehensive list of R4 search parameters and operations.


### 4.3 Key FHIR Resources

The following REST methods have been implemented using the respective FHIR resource profiles through the LACDMH LOCUS API. Each URL specifies the API syntax, function names, required and optional parameters supported and their data types, return variables and their types/structures as per HL7 FHIR standard:

| Supported API REST Method | FHIR Resource         | Resource Definition URL   |
|---------------------------|-----------------------|---|
| GET                       | Questionnaire         | <a href="https://hl7.org/fhir/R4/questionnaire.html">https://hl7.org/fhir/R4/questionnaire.html</a>                 |
| GET, POST, PUT            | QuestionnaireResponse | <a href="https://hl7.org/fhir/R4/questionnaireresponse.html">https://hl7.org/fhir/R4/questionnaireresponse.html</a> |

Please note that some response structures include a codeableconcept structure. From the FHIR R4 standard, A CodeableConcept represents a value that is usually supplied by providing a reference to one or more terminologies or ontologies but may also be defined by the provision of text. This is a common pattern in healthcare data.

#### Structure

| Name  | Flags      | Card. | Type    | Description & Constraints  |
|---|------------|-------|---------|--|
|  CodeableConcept | Σ <b>N</b> |       | Element | Concept - reference to a terminology or just text<br>Elements defined in Ancestors: <a href="#">id</a> , <a href="#">extension</a> |
|  coding          | Σ          | 0..*  | Coding  | Code defined by a terminology system   |
|  text            | Σ          | 0..1  | string  | Plain text representation of the concept   |

For details please consult the FHIR documentation, Datatypes - FHIR v4.0.1 (<https://www.hl7.org/fhir/R4/datatypes.html#CodeableConcept>)

Note that for cardinality:

- 1..1 means required and no repeats.
- 0..1 means optional and no repeats.
- 1..n means required and may repeat
- 0..n means optional and may repeat.

## Bundle (Search Results)

The FHIR Bundle resource is a container used to group multiple resources into a single package, commonly used to return search results from a FHIR server. When a query is made (e.g., retrieving multiple LOCUS assessments), the response is returned as a Bundle of QuestionnaireResponse entries. Each entry in the bundle represents an individual resource matching the search criteria, along with metadata such as pagination or links. For details please consult the FHIR documentation, Bundle - FHIR v4.0.1 (<https://hl7.org/fhir/R4/bundle.html#bundle>)

Each key FHIR resource is described in detail below:

### 4.3.1 QUESTIONNAIRE

#### 4.3.1.1 Definition

Questionnaire resource is used to identify all assessment questions for LOCUS Adult assessment.

#### 4.3.1.2 Use-Cases

| Description  | LACDMH FHIR Service Method & Search Query   |
|--|---|
| The provider wants to view the Assessment questions for LOCUS. | <p>GET [base]/Questionnaire[title]</p> <p>Use the following query string to get questionnaire definition and associated linkIds:<br/><a href="https://hidex.dmh.lacounty.gov/healthcare/Questionnaire?title=LOCUS%20Adult">https://hidex.dmh.lacounty.gov/healthcare/Questionnaire?title=LOCUS Adult</a></p> <p>Please use the following link to download a sample payload for the GET QuestionnaireResponse:<br/><a href="https://file.lacounty.gov/SDSInter/dmh/1176834_GetQuestionnaireLOCUS_Output.json">https://file.lacounty.gov/SDSInter/dmh/1176834_GetQuestionnaireLOCUS Output.json</a></p> |



#### 4.3.1.3 Data Mapping

| FHIR DataElement            | Cardinality | FHIRData Type   | Comment   |
|-----------------------------|-------------|-----------------|---|
| resourceType                | 0..1        | resource        |   |
| id                          | 0..1        | identifier      |   |
| meta.lastUpdated            | 1..1        | String          |   |
| type                        | 0..1        | code            | default: searchset  |
| link.relation               | 1..1        | BackboneElement |   |
| link.url                    | 1..1        | BackboneElement |   |
| entry.fullUrl               | 1..1        |                 |   |
| entry.resource.resourceType | 1..1        | resource        | Questionnaire   |
| entry.resource.id           | 1..1        | identifier      |   |
| entry.resource.meta         | 1..1        | string          |   |
| entry.resource.url          | 1..1        | string          | <a href="http://fhir.dmh.lacounty.gov/Questionnaire/LOCUS">http://fhir.dmh.lacounty.gov/Questionnaire/LOCUS</a> |
| entry.resource.title        | 1..1        | string          | LOCUS_Adult   |
| entry.resource.status       | 1..1        | string          | Draft   |
| entry.resource.item.linkId  | 0..1        | string          | 1.1.1a thru 7.5.4d  |
| entry.resource.item.code    | 0..1        | string          | Various GUIDs   |
| entry.resource.item.text    | 0..1        | string          | Assessment question definition  |
| entry.resource.item.type    | 0..1        | Boolean         | true / false  |

## 4.3.2 QUESTIONNAIRERESPONSE

### 4.3.2.1 Definition

QuestionnaireResponse resource is used to intake the submission of all assessment questionnaire answers for LOCUS Adult and return back the assessment score and recommendation for care.

Please note: A post call will create a new record. A put call will update an existing record. If the trading partner submits a post call twice with the same data, two assessment records will be created. There are two acceptable values: completed and in-progress. completed = final. in-progress=draft. The values in status should be all lower case.

#### 4.3.2.2 Use-Cases

| Description   | LACDMH FHIR Service Method & Search Query   |
|---|---|
| The provider wants to submit the LOCUS assessment for a particular client and get the score and recommendation.               | <p>Download the JSON file from following link for a sample payload of the POST call input:<br/> <a href="https://file.lacounty.gov/SDSInter/dmh/1187825_PostQuestionnaireResponseLOCUS_Input.json">https://file.lacounty.gov/SDSInter/dmh/1187825_PostQuestionnaireResponseLOCUS_Input.json</a></p> <p>Download the JSON file from following link for a sample payload of the POST call output:<br/> <a href="https://file.lacounty.gov/SDSInter/dmh/1187760_PostQuestionnaireResponseLOCUS_Output.json">https://file.lacounty.gov/SDSInter/dmh/1187760_PostQuestionnaireResponseLOCUS_Output.json</a></p>  |
| The provider wants to update the submitted draft LOCUS assessment for a particular client and submit any care level variance. | <p>Download the JSON file from following link for a sample payload of the PUT call input:<br/> <a href="https://file.lacounty.gov/SDSInter/dmh/1187844_PutQuestionnaireResponseLOCUS_Input.json">https://file.lacounty.gov/SDSInter/dmh/1187844_PutQuestionnaireResponseLOCUS_Input.json</a></p> <p>Download the JSON file from following link for a sample payload of the PUT call output:<br/> <a href="https://file.lacounty.gov/SDSInter/dmh/1187895_PutQuestionnaireResponseLOCUS_Output.json">https://file.lacounty.gov/SDSInter/dmh/1187895_PutQuestionnaireResponseLOCUS_Output.json</a></p>  |
| The provider wants to retrieve a submitted assessment for a particular client.  | <p>GET [base]/ QuestionnaireResponse? [_tag]&amp;[patient]&amp;[_id]<br/> Example:<br/> <a href="https://hidex.dmh.lacounty.gov/healthcare/QuestionnaireResponse? tag=LOCUS&amp;patient=&lt;ClientID&gt;&amp; id={{QuestionnaireResponseIDForSubmittedLOCUS}}">https://hidex.dmh.lacounty.gov/healthcare/QuestionnaireResponse? tag=LOCUS&amp;patient=&lt;ClientID&gt;&amp; id={{QuestionnaireResponseIDForSubmittedLOCUS}}</a></p> <p>Download the JSON file from following link for a sample payload of the GET call output:<br/> <a href="https://file.lacounty.gov/SDSInter/dmh/1187894_GetQuestionnaireResponseLOCUS_Output.json">https://file.lacounty.gov/SDSInter/dmh/1187894_GetQuestionnaireResponseLOCUS_Output.json</a></p> |

#### 4.3.2.3 Data Mapping

Following table shows the data elements used in QuestionnaireResponse resource:

| FHIRDataElements                    | Value   | Cardinality | Comment   |
|-------------------------------------|---|-------------|---|
| resourceType                        | QuestionnaireResponse   | 1..1        |   |
| Id                                  | Unique GUID   | 0..1        | Unique ID specifying a particular assessment record. Used in PUT and GET calls. |
| meta.versionId                      |   | 0..1        |   |
| meta.lastUpdated                    |   | 0..1        |   |
| meta.tag.code                       | LOCUS   | 1..1        | default   |
| meta.tag.display                    | LOCUS   | 1..1        | default   |
| basedOn.reference                   | LOCUS   | 1..1        | default   |
| questionnaire                       | <a href="http://fhir.dmh.lacounty.gov/Questionnaire/LOCUS">http://fhir.dmh.lacounty.gov/Questionnaire/LOCUS</a> | 1..1        | default   |
| Status                              | completed or in-progress  | 1..1        |   |
| subject.id                          | ClientID  | 1..1        |   |
| subject.reference                   | construct: Patient/<ClientID>   | 1..1        |   |
| encounter.id                        | EncounterID   | 1..1        |   |
| encounter.reference                 | construct: Encounter/<EncounterID>  | 1..1        |   |
| source.reference                    | construct: Practitioner/<NPI>   | 1..1        |   |
| Authored                            | dateTime when answers were gathered   | 1..1        | Format: YYYY-MM-DDTHH:MM  |
| author.reference                    | construct: Organization/<TP's ProgramID>  | 1..1        |   |
| ITEM (questionnaire with responses) |   |             |   |
| item.linkId                         |   | 1..1        | Values 1 thru 7 for each dimension  |

| FHIRDataElements                   | Value                         | Cardinality | Comment   |
|------------------------------------|-------------------------------|-------------|---|
| item.text                          |                               | 1..1        | Various values. See section 3.1                           |
| item.item.linkId                   |                               | 1..1        | Values 1.1 thru 7.5                                       |
| item.item.text                     |                               | 1..1        | Various values. See section 3.1                           |
| item.item.item.linkId              |                               | 0..1        | Values 1.1.x thru 7.1.x where x=a thru g. See section 3.1 |
| item.item.item.answer.valueBoolean |                               | 0..1        | true' or 'false'  |
| Item.linkID                        | ActualDisposition             | 1..1        | Default. For PUT call only                                |
| Item.text                          | ActualDisposition             | 1..1        | Default. For PUT call only                                |
| Item.item.linkId                   | Dispositiondescription        | 1..1        | Default. For PUT call only                                |
| Item.item.answer.valueString       | <actual care level submitted> | 1..1        | Default. For PUT call only                                |
| Item.item.linkId                   | Variance                      | 1..1        | Default. For PUT call only                                |
| Item.item.answer.valueString       | <variance reason submitted>   | 1..1        | Default. For PUT call only                                |
| item.linkId                        | compositeScore                | 1..1        | default   |
| item.text                          | Composite Score               | 1..1        | default   |
| item.answer.valueInteger           |                               | 1..1        | Assessment score  |
| item.linkId                        | recommendedCareLevel          | 1..1        | default   |
| item.text                          | Recommended Care Level        | 1..1        | default   |
| item.item.linkId                   | id                            | 1..1        | default   |
| item.answer.valueInteger           | Unique GUID                   | 1..1        |   |
| item.item.linkId                   | description                   | 1..1        | default   |

| FHIRDataElements        | Value | Cardinality | Comment                            |
|-------------------------|-------|-------------|------------------------------------|
| item.answer.valueString |       | 1..1        | This is the recommended care level |

#### 4.4 Exception Handling

Errors will be returned as OperationOutcome resources as per the FHIR standard. Typical HTTP status codes used by the API are:

- 200 OK: Successful request.
- 400 Bad Request: Invalid request, typically due to incorrect query parameters.
- 404 Not Found: No matching resources found.
- 500 Internal Server Error: Unexpected error occurred on the server.
- 401 Unauthorized: This assessment is marked as final and cannot be edited.

Example error response:

```
{
  "resourceType": "OperationOutcome",
  "issue": [
    {
      "severity": "error",
      "code": "invalid",
      "details": {
        "text": "Invalid query parameter 'unknown'"
      }
    }
  ]
}
```

**-END OF THE DOCUMENT-**