Strategy & Support for Your COVID-19 Vaccination Supplemental Funding Application

AIRA Webinar
February 5, 2021
Housekeeping

All phone lines are muted

This meeting is being recorded and will be posted on the AIRA repository
Questions

• How do I ask a question?
  • There will be time allotted for Q&A following each of the updates, to unmute your line press *6
  • Via WebEx:

  Select the chat icon next to the host and type question into the chat box.

  Select the hand icon next to your name and you will be called on.
Questions During the Presentations

• Via WebEx
  • Type your question into the chat box on the WebEx toolbar and send to HOST
Today’s Speakers

Moderator: Alison Chi, MPH, Director of Education & Outreach, AIRA

Overview of CDC COVID-19 Cycle 3 Funding
Nathan E. Crawford, Technical Assistance Team Lead, POB, ISD, NCIRD, CDC

Resources to Support IIS Assessment and Development
Erin Roche, MPH, MS, Senior Informatics Analyst, PHII

Workplan Activity Strategy & Support
Mary Beth Kurilo, MPH, MSW, Senior Director of Health Informatics, AIRA
Overview of CDC COVID-19 Cycle 3 Funding

Nathan Crawford
Technical Assistance Team Lead
POB, ISD, NCIRD, CDC
Resources to Support IIS Assessment and Development

Erin Roche, MPH, MS
Senior Informatics Analyst
PHII
Resources to Support IIS Assessment and Development

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Topics

- Introduction to the **IIS Functional Model and IIS Baseline Requirements Traceability Matrix (RTM)**
- How these resources were developed
- Using these resources to identify areas of opportunity to improve your immunization information system
Background

- PHII, CDC, AIRA collaboration to develop a **baseline set of requirements for IIS**
- **What should an IIS do and how should it operate** in support of the IIS Functional Standards?

**Requirement:**
Statement describing what is needed from an information system in order to achieve a particular objective or support a particular activity
Defining technology needs to improve outcomes

Achieve the IIS Functional Standards
- DQ Blueprint Measures
- IIS Dashboard Measures
- AIRA Measurement & Improvement Measures
Methodology - Process of identifying requirements

- **Requirements Collection**
  - IIS Functional Standards, IPOM, and AIRA Guidance
  - Potential requirements
  - Program requirements

- **Requirements Refinement and Prioritization**
  - Organize, deduplicate, refine, and identify priority requirements
  - Refined requirements

- **Requirements Validation and Feedback**
  - Program staff
  - Vendors/ software developers (delayed due to COVID)
  - Baseline requirements
# IIS Functional Model

## IIS Core Functions and Capabilities

These functions and capabilities represent core functionality of IIS. Refer to the IIS Baseline RTM for descriptions and functional requirements associated with each.

<table>
<thead>
<tr>
<th>Administer System</th>
<th>Manage Organizations &amp; Facilities</th>
<th>Manage Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hierarchy configuration</td>
<td>Organization/facility search</td>
<td>User search</td>
</tr>
<tr>
<td>System configuration</td>
<td>Add, edit, inactivate organization/facility</td>
<td>Add, edit, inactivate user</td>
</tr>
<tr>
<td>System alerts</td>
<td>Organization/facility outreach</td>
<td>Authentication &amp; authorization</td>
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<td></td>
<td>VFC/vaccine program enrollment</td>
<td>Password management</td>
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<table>
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<tr>
<th>Support Interoperability</th>
<th>Ensure Data Quality</th>
<th>Evaluate &amp; Forecast</th>
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<tbody>
<tr>
<td>Onboarding</td>
<td>Patient matching &amp; deduplication</td>
<td>Clinical decision support</td>
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<tr>
<td>Interfaces</td>
<td>Vaccination event matching &amp; deduplication</td>
<td>Reminder/recall</td>
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<td>Data exchange</td>
<td>Coverage reports</td>
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<table>
<thead>
<tr>
<th>Manage Patient &amp; Immunization Records</th>
<th>Manage Vaccine Inventory</th>
<th>Provide Data Access</th>
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</thead>
<tbody>
<tr>
<td>Patient search</td>
<td>Vaccine inventory search</td>
<td>Standard reports</td>
</tr>
<tr>
<td>Add, edit patient immunization</td>
<td>Add, edit vaccine inventory</td>
<td>Print/export reports</td>
</tr>
<tr>
<td>Print/export record</td>
<td>Vaccine ordering</td>
<td>Consumer access</td>
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<tr>
<td>Mass vaccination</td>
<td>Review/approve order</td>
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<td>Vaccine decreeement</td>
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## IIS Attributes

These attributes represent the technical characteristics of an IIS necessary to support immunization programs and stakeholders. Refer to the IIS Baseline RTM for descriptions and non-functional requirements associated with each.

<table>
<thead>
<tr>
<th>Performance</th>
<th>Usability</th>
<th>Reliability</th>
<th>Security</th>
<th>Maintainability</th>
<th>Portability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency</td>
<td>Operability</td>
<td>Availability</td>
<td>Confidentiality</td>
<td>Analyzability</td>
<td>Adaptability</td>
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<tr>
<td></td>
<td>User error protection</td>
<td>Fault tolerance</td>
<td>Non-repudiation</td>
<td>Installability</td>
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<tr>
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<td>Accessibility</td>
<td>Recoverability</td>
<td>Accountability</td>
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Immunization Information System (IIS) Baseline Requirements Traceability Matrix (RTM)

DRAFT, version 0.6, last updated 02/02/2021

This requirements traceability matrix (RTM) contains draft baseline functional and non-functional requirements for an immunization information system (IIS). The requirements clarify minimum expectations for what IIS technology must do and how it must operate to support IIS Functional Standards and programmatic and immunization stakeholder needs. The functional requirements describe intended behaviors of an IIS system to support business processes and tasks, by function and capability. The non-functional requirements convey technical requirements related to how a system must operate, by attribute and sub-characteristic. An embedded IIS Functional Model presents a visual depiction of the core functions, capabilities and attributes of IIS and serves as a companion to the requirements.

This RTM is intended to be used by immunization programs as a starting point for the procurement of an IIS platform, module or enhancement. The RTM should be used throughout the system development life cycle (SDLC) to ensure requirements are met in a final product or system. Immunization programs and IIS may also use the IIS Functional Model and the requirements within this RTM to help assess and identify gaps in current IIS functions, capabilities and technical quality and provide a roadmap for future development within or across jurisdictions.

Contents
- Guidance: using the RTM
  Step-by-step guidance and helpful hints/notes for using the RTM as part of a procurement process.
- Version history
  History of versions and summary of changes.
- Functional Model
  Draft IIS Functional Model (FM), a visual depiction of IIS functions and capabilities and attributes.
- FM descriptions
  Descriptions of the IIS Functional Model functions and capabilities and attributes; also provides an indication of total requirements by function/category.
- RTM format
  Description of how the RTM is structured for presentation of the requirements.

Requirements by Function/Grouping:
- Admin system
  Requirements related to the function: Administer System
- Manage orgs
  Requirements related to the function: Manage Organizations and Facilities
- Manage users
  Requirements related to the function: Manage Users
  - Interop
    Requirements related to the function: Support Interoperability
- Data quality
  Requirements related to the function: Ensure Data Quality
- Eval forecast
  Requirements related to the function: Evaluate & Forecast
- Manage pt iz record
  Requirements related to the function: Manage Patient & Immunization Records
- Manage vaccine Inventory
  Requirements related to the function: Manage Vaccine Inventory
- Data access
  Requirements related to the function: Provide Data Access
- Non-functional
  Technical requirements across key attributes

Glossary
- List of terms used in requirements and their definitions

Crosswalk to FS
- Compare the Functional Model to the IIS Functional Standards.
Leveraging the IIS Functional Model and RTM in the IT Lifecycle

- Assess areas of opportunity to optimize and enhance your IIS
- Communicate requirements to IIS implementers
- Support testing of enhancements
Assessing areas of opportunity

Does your IIS fully support the core functions/capabilities and attributes depicted in the IIS Functional Model?

- If not, where are there areas of opportunity to enhance your system?
- What essential requirements from the RTM are not met in your current system?
Prioritizing system enhancements

Consider **criteria for prioritizing areas of opportunity**, i.e., potential to improve:

- IIS Dashboard Measures/AIRA M&I results
- Program efficiency
- IIS data quality
- User experience
- Longer-term system sustainability
- Other

**Coming Soon!**
IIS Functional Model Assessment Worksheet
IIS Functional Model and IIS Baseline RTM

- Critical tools to support you in identifying opportunities to leverage funding to enhance your system
- Clarify what IIS technology must do, how it must operate to support the IIS Functional Standards and programmatic/stakeholder needs, and determine any gaps
- Provide a common language for programs to articulate shared needs
Acknowledgements: PHII, CDC, AIRA Project Team

**PHII**
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- Birgit Bolton, Project Manager
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- Marcey Propp, SME
- Noam Arzt, SME
- Amy Metroka, SME

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- Janet Fath, Operations Team Lead
- Lynn Gibbs-Scharf, Branch Chief
- LaTrece Harris, Evaluation Team Lead
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- RTI International, CDC partner

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Workplan Activity Strategy & Support

Mary Beth Kurilo, MPH, MSW
AIRA Senior Director of Health Informatics
Objectives

1. Explore where the COVID-19 response can benefit from broader collaboration across IIS

2. Identify ways to utilize M&I report results to strategically develop workplan activities

3. Review and discuss AIRA’s resources to assist jurisdictions with workplan development
Big Picture
In Support of a Network of IIS

• IIS were **early adopters of standards**, leading to broad interoperability success

• COVID-19 has highlighted some **ground left to cover** to best support needs nation-wide
  • Full standards alignment
  • Best practice onboarding
  • Interjurisdictional exchange
  • Policies that support broad data access
To Better Support Our Members, AIRA is Exploring Some New Community Offerings Under the Joint Development and Implementation Umbrella

1. **Onboarding**
   - Shared onboarding services to support engagement, HL7 and transport testing, and quality improvement

2. **Key Data**
   - Guidance on increasing capture of key data fields (e.g., race, ethnicity)

3. **EHR Integration**
   - Specifications on returning high-volume data to EHRs, guidance for EHRs on consuming/integrating data

4. **Uniform Message**
   - Exploration of a single standardized, uniform message for broad acceptance across IIS

We hope you’ll assign staff to collaborate with AIRA for a JDI 2.0 reboot in support of this coordinated IIS work
And There’s More!

• We’ll share an abundance of ideas today that we hope will support you in your planning, and move our community closer to a well-coordinated network of IIS systems
• And if you need more assistance, we’re happy to help!
Measurement & Improvement (M&I) Initiative
Measurement & Improvement (M&I)

**Goal of M&I:** Provide IIS with actionable information to more fully align with IIS Functional Standards and improve interoperability

- M&I Initiative tests IIS alignment with standards and provides information and assistance to help IIS improve
- Test results are available in the Aggregate Analysis Reporting Tool (AART)
AART Dashboard

• The AART Dashboard provides an at-a-glance overview of results
• All IIS and vendor staff have access to AART
• Jurisdictions are encouraged to view results in AART to inform decisions regarding activities to prioritize
Recommended COVID-19 Vaccination Supplemental Funding Activities
Strategy & Support

• AIRA has developed a resource outlining suggested activities and potential budget considerations
• Activities focus on long-term system sustainability
• AIRA can assist jurisdictions by:
  • Serving in a coordinating role to support efforts
  • Reviewing reports
  • Providing technical assistance
Document Structure

High-Level Categories:

A. Support Interoperability
B. Evaluate and Forecast
C. Ensure Data Quality
D. Provide Data Access
E. Manage Organizations and Facilities
F. Manage Patients and Immunization Records
G. Manage Vaccine Inventory

Each category is broken into:

- Overview
- Suggested Activities
- Potential Budget Considerations
A. Support Interoperability

• Interoperability is critical to the viability of IIS

Activity Example:
Identify IIS interoperability stage using the IIS Measurement and Improvement Validation - Priority Order document and Aggregate Analysis Reporting Tool (AART) results document. Develop a plan to advance IIS toward standards alignment.

Potential Budget Consideration:
Staff and/or consultants to investigate and document gaps in standards using individual AART reports and other resources (e.g., CDC Dashboard and the IIS Blueprint).
IIS Measurement and Improvement Validation - Priority Order

1. **Transport Basic**
   - Does your IIS offer a standard CDC WSDL as one possible transport method to exchange data?

2. **Submission Basic**
   - Are messages that are sent in standard HL7 format accepted by your IIS?

3. **Submission Basic + Acks**
   - Are messages that are sent in standard HL7 format accepted, and are conformant acknowledgment messages sent by your IIS?

4. **Query Basic**
   - Are queries for records and forecasts responded to in a standard way by your IIS?

5. **CDS Basic**
   - Are your IIS forecasts aligned with ACIP?
     - *Individual IIS Validation Results are available in AART. Aggregate Validation Reports will be published soon.*

6. **CDS Complete**
   - Are your IIS evaluations and forecasts aligned with ACIP?
     - *Individual IIS Validation Results are available in AART. Aggregate Validation Reports will be published soon.*

7. **Submission Complete**
   - Are messages and acknowledgments exchanged in standard format, including refusals, adverse events, etc.?

8. **Query Complete**
   - Are queries responded to by your IIS in a standard and timely way, including recognizing significant errors?

9. **Transport Complete**
   - Does your IIS offer a standard CDC WSDL with all required faults as one transport method?

V6, 2/3/2021
B. Evaluate and Forecast

• CDSi provides clear and accurate clinical guidance and supports the use of IIS data to improve immunization rates

**Activity Example:**
Review AART CDS Assessment Report for IIS and implement changes to make sure the forecaster functions optimally.

**Potential Budget Consideration:**
Contracts to develop new or improved IIS CDS and/or reminder/recall functionality.
C. Ensure Data Quality

• High quality data allows IIS to support clinical and public health activities

**Activity Example:**
Participate in the AIRA Data at Rest Pilot to evaluate data completeness in IIS.

**Potential Budget Consideration:**
Staff and/or consultants to develop new or improved IIS data quality functionality.
D. Provide Public Data Access

• Giving people a way to access their immunization records encourages patient awareness and accuracy of immunization data

Activity Example:
Develop and publish COVID-19 Dashboards using live IIS data.

Potential Budget Consideration:
Software for visualizing IIS data.
E. Manage Organizations and Facilities

• Full provider participation is key to complete data capture and broad use of IIS data at the clinical point of care and for population health.

Activity Example:
Develop a targeted plan to recruit providers and increase data reporting. Consider stakeholders, such as adult immunizers, pharmacies, Indian Health Services/Tribal health, military, Veterans Affairs, etc.

Potential Budget Consideration:
Review and develop reports on enrollment and participation among current organizations and facilities.
F. Manage Patients and Immunization Records

• Management of patient and vaccine records ensures the IIS has complete immunization history for specific patients without duplications.

**Activity Example:**
Evaluate and improve system mass vaccination functionality.

**Potential Budget Consideration:**
Contracts to enhance/modify IIS for mass vaccination capabilities.
G. Manage Vaccine Inventory

• Vaccine inventory tools in an IIS help maintain accurate information about provider vaccine inventories and increase transparency for state and federal programs into the amount of vaccine available at provider sites

**Activity Example:**
Evaluate and improve vaccine ordering and/or prebook functionality.

**Potential Budget Consideration:**
Staff and/or consultants to:
- Develop new or improved IIS vaccine management functionality.
- Manage, analyze, and share data (data management, visualizations, etc.).
Questions & Discussion

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Please send additional questions to info@immregistries.org