



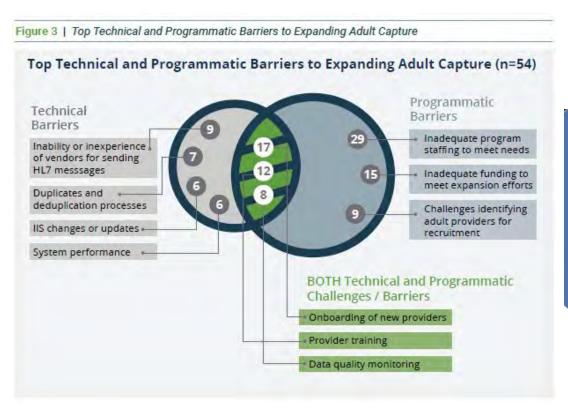


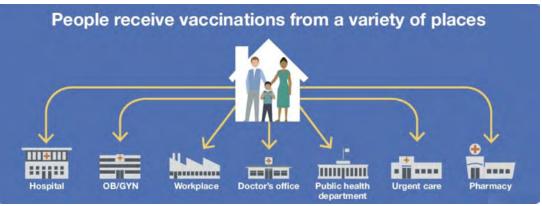
Adult Vaccination Capture

IIS Participation by Age, 2019

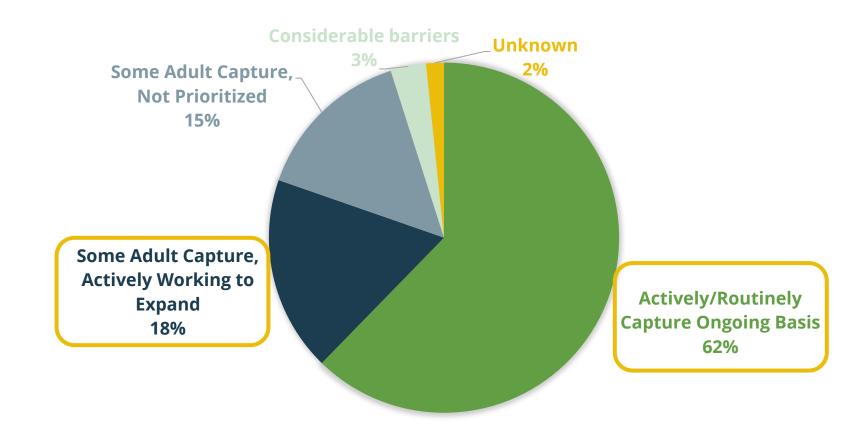


Challenges for Adult Capture





Adult Capture Status (pre-COVID)





AIRA's Adult Project

Project Goals

- Conduct a Landscape Analysis
 - •Summarizing current approaches, systems and capabilities for capturing adult vaccination records in routine and mass vaccination settings
- Develop a 3-5 year Strategic Roadmap
 - •Outlining implementation strategies & recommendations for improving and advancing the awareness, capture and use of IIS for adults

Project Activities & Methods

Complimentary Sources

Mass Vaccination Capabilities
Summary

Literature Review

Published Gray Literature

SME Interviews

Mass Vaccination Broad Adult Capture



Virtual SME Meeting

Key stakeholder input

Environmental Scan

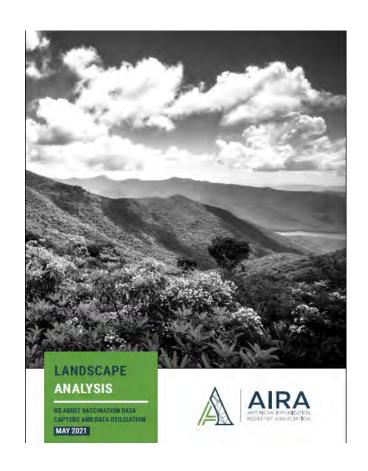
Examine current practice Review known challenges

Surveys

- Mass Vax Quick Survey
- Adult Capture
- EHR mini survey
- Provider mini survey

Landscape Analysis Key Takeaways

- Prioritize, fund, staff adult vaccination capture activities
- Motivate providers to report
- •Reduce or eliminate barriers to reporting
- Address data confidence/data quality concerns



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More from the Landscape...



APPENDIX C STAKEHOLDER ACTION SUMMARY

This appendix offers a compiled list of the "immunization stakeholder actions to improve adult data capture and utilization" that appear at the end of each subsection in the Findings and Analysis chapter.



Adult vaccination program activities (state VFA programs):

- Reduce variability in VFA program implementations across jurisdictions.
- Increase 317 funding and/or 317 funds earmarked specifically for vaccine purchase.
- Improve VFA program marketing and messaging to encourage provider participation and increase VFA vaccine uptake by adult recipients.
- Require all publicly funded dose administrations to be reported to the IIS regardless of patient age, provider type, or vaccination setting.



Policies and mandates:

- Encourage jurisdictions to implement mandatory reporting laws and policies to facilitate reporting of adult immunization records to the IIS.
- Encourage jurisdictions to address opt-in consent laws or policies that may prohibit or restrict the collection, sharing, and utilization of adult immunization records.
- Expand interstate data sharing/exchange and encourage jurisdictions to address laws that may prohibit or restrict these types of activities.
- Provide tools and support to guide state efforts for pursuing and implementing new laws or policies.
- Examine best practices for enforcing mandatory reporting laws and policies.
- Expand consumer access to IIS data via consumer access portals and/or vaccine passport services. Consumer demand for access to complete, personal immunization records helps drive expectations for active provider reporting.
- Implement a mechanism for tracking the various laws and policies for IIS reporting requirements, consent laws, and data sharing.

Sample content

Identifying Adult Providers







In conjunction with the AIRA IIS community survey, SME interviews, and the AIRA virtual meeting, IIS programs noted the following resources and entities that have been helpful in the identification process:

- Providers participating in publicly funded vaccine programs (VFC/VFA)
- Larger provider networks/health systems—identify and connect with all associated clinics
- Adult immunization coalitions
- Intra-agency contacts (e.g., epidemiology programs, preparedness programs)
- Federal list of approved FQHCs and RHCs
- Meaningful use (MU) attestation data from Medicare and Medicaid
- Boards of medicine, boards of medical examiners, boards of pharmacy
- University schools of medicine, schools of pharmacy, and nursing programs
- Provider professional organizations/associations/groups
- Long-term care associations
- Employee health associations/contractors
- National Provider Identifier (NPI) Registry³⁹
- Pharmaceutical companies (private vaccine purchases)
- Insurance providers/payers/health plans (All Payer Claims Database)

•Average participation among adults was more than 25% higher in jurisdictions with implied consent than in those with opt-in consent policies.

•38 IIS with at least one type of reporting mandate

Example content, Onboarding



As a result of meaningful use (MU), the percentage of participating Medicare professionals who vaccinate and report to an IIS increased from 51% in 2011 to 72% in 2014.

•Similar programs may be needed to support small and midsize providers, including those caring for adults



COVID-19 Opportunities

- Recruit, onboard, RETAIN new providers
- Leverage new systems for interfaces
 - •(e.g. IZ Gateway, pharmacy hub model)
- Improve reporting policies
- •Expand adult programming utilizing new funding
- •Demonstrates priority for sustaining adult efforts

#AIRA2021

"Utilize COVID-19 dollars where available to assist in IIS infrastructure and especially for small practice providers to connect to IIS and improve data acquisition and fidelity."

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Strate gic Roadmap

Roadmap Preview



•Goal 1: Implement policy changes for improving the capture and utilization of adult vaccination data



•Goal 2: Expand electronic interfaces and bidirectional data exchange between EHRs and IIS to support adult vaccination data capture in IIS



•Goal 3: Improve the use and management of adult vaccination data in IIS

Next Steps

- Finalize Roadmap
- •Compile COVID lessons for adult capture
- •Further explore and assess how adult capture is measured

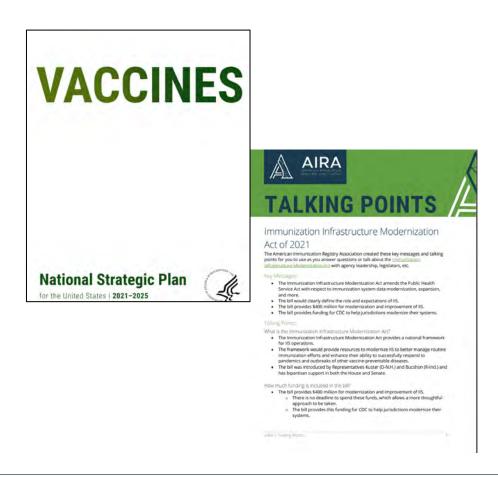




National Initiatives

Notable National Initiatives

- President Biden's FY22Budget
 - •\$100 Million Increase proposed for Section 317
- •Immunization Infrastructure Modernization Act, <u>H.R. 550</u>
- Healthy People 2030
- Vaccines National StrategicPlan



National Adult Vaccination Coverage

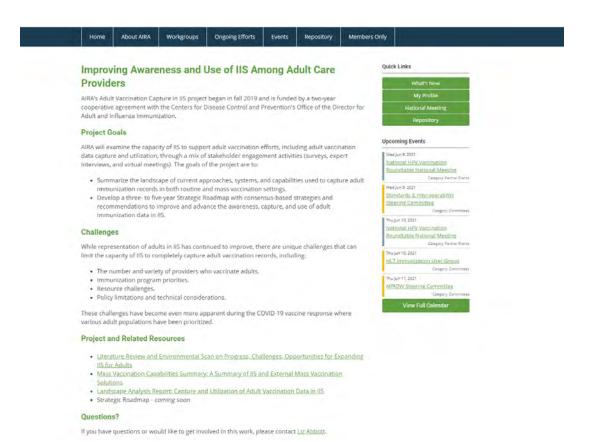


- •"Among the challenges clinicians face in assessing the need for vaccination is availability of a complete and accurate vaccination history along with access at the point of care to the most current vaccination recommendations.
- •Enhancing provider access to IIS could help improve vaccination coverage because IIS can provide consolidated immunization histories for use by a vaccination provider in determining appropriate client vaccinations."



Resources

Project Deliverables



- •Literature Review
- Mass VaccinationCapabilities Summary
- Landscape Analysis Report

Project Team

AIRA

- •Liz Abbott
- •Rebecca Coyle
- Amanda Dayton
- Maureen Neary
- Danielle Reader-Jolley
- Angela Shen

CDC Project Team

- Sam Graitcer (technical monitor)
- Charleigh Granade
- Ram Koppaka



Louisiana Experience & Efforts

Quan Le, RN LINKS Program Manager

Pre-COVID Facilitators of Adult Capture

- Mandatory Immunization Reporting for all ages
 - Revision to Sanitary Code, effective April 2020
 - Removed age-restrictive code to expand for adults
- Positive relationship with LA Board of Pharmacy
 - Following 2009 H1N1, all pharmacy doses to be entered into LINKS
 - Data exchange with big chain pharmacies (e.g. Walmart)
- Medicaid partnership to ensure adult vaccines are on LA Medicaid's Preferred Drug List
 - o Reimbursement central to successful implementation

COVID Successes & Challenges

Successes

- "Low and wide" strategy to achieve high accessibility among most underserved
 - Wide range of low volume providers
 - Resulted in high number of new vaccine providers

Challenges

- Inventory
 management/reporting
 and accountability
- Onboarding and Training
- Federal Pharmacy LTC Program Partnership
- Data quality/discrepancies

Onboarding Challenges

- Large number of new providers requiring onboarding
- Delays in developing online electronic registration
- Streamlining LINKS Enrollment with Federal requirements
 - Current LINKS providers having to re-enroll when they were already overburdened
- Training gaps
- Provider prioritization
 - Politically impatient groups of providers

Looking Forward: Planned Changes

- Retain COVID-19 vaccine providers in LINKS
 - Focusing on all non-traditional new providers
 - Maintaining data exchange with pharmacies to report all vaccines
 - Louisiana Independent Pharmacy Association partnership-matched all nursing homes with vaccinating pharmacy
- Development of database/warehouse to provide access for users like Medicaid and to help handle volume
- Working with our IIS vendor on this
 Hiring new staff to support adult capture activities such as outreach, onboarding, training
- Race & Ethnicity reporting consistency/standards

Amazing Success!

- 4x annual VFC workload in 22 weeks
 Enrolled +2,444 COVID providers to-date
- Some of the second seco
- 36.6% increase in adults with 2 or more vaccines in LINKS since October 2020
- Shout out to systems with bi-directional interface!
 Need real time data exchange if data is to inform decision making
- Offered enormous volume of vaccine directly impacting pandemic

Need a clear, national long-term strategy for system improvements, funding, etc. moving forward!



Thank You!

labbott@immregistries.org Quan.le@la.gov





Improving Interoperability through Cross-Sector Collaboration

Melissa McClung, MSPH Immunization Integration Program Director

What's New with the IIP!

- The Immunization Integration Program (IIP)
 - AIRA IIP Staff
 - Program Updates
 - Current Efforts
 - Evaluation
- Issue Collection, Assessment and Selection Process

IIP Goals & Strategies

- Goal: Improve interoperability between EHRs and IIS
- Strategies:
 - <u>Testing & Recognition Initiative</u> demonstrate and be tested on immunization capabilities
 - <u>Collaborative</u> diverse forum to develop interoperability recommendations and solutions
- Evaluation and Communication



IIP Governance

Previous Current Executive **Executive Committee Technical Advisory Panel** Committee **Technical Council** Testing and Recognition Collaborative Testing & Recognition Initiative Collaborative Activities & Products **Evaluation & Communication**

Project Partners

- CDC project sponsorship, expertise & support
- American Immunization Registry Association (AIRA) project leadership and immunization-related expertise
- Healthcare Information & Management Systems Society (HIMSS) –
 project management, marketing & communications, trusted voice
 within the health information & technology community
- Drummond Group clinical software vendor testing experience
- Consultants/SMEs technical, clinical & evaluation expertise









Executive Committee & Technical Council

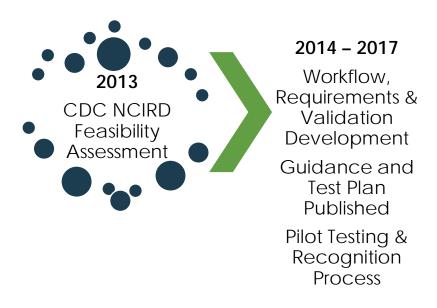
Executive Committee

- Surface, explore and prioritize issues to be addressed
- Achieve consensus on issues, best practices and solutions
- Promote awareness, communication and adoption

Technical Council

- Bring real-world experience in implementation, interoperability, conformance testing, standards and software development
- Assess and gain consensus on updates to the Testing & Recognition Initiative
- Serve as technical subject matter experts for Collaborative issues







2014 - 2017

Workflow, Requirements & Validation Development

Guidance and Test Plan Published

Pilot Testing & Recognition Process

2017 - 2018

Testing & Recognition Launched

Vendors Recognized

HIMSS Joined

CNI Advantage, LLC prime contractor



2014 - 2017

Workflow, Requirements & Validation Development

Guidance and Test Plan Published

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CNI Advantage, LLC prime contractor 2018 - 2020

Continued Vendor Testing

IIP Collaborative Formed

AIRA Joined 2020



2014 - 2017

Workflow, Requirements & Validation Development

Guidance and Test Plan Published

Pilot Testing & Recognition Process

2017 - 2018

Testing & Recognition Launched

Vendors Recognized

HIMSS Joined

CNI Advantage, LLC prime contractor 2018 - 2020

Continued Vendor Testing

IIP Collaborative Formed

AIRA Joined 2020

2020 - Present

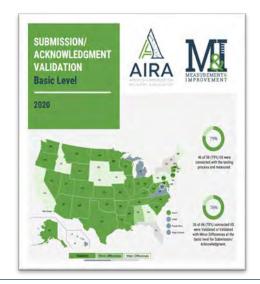
AIRA Prime Contractor

Program
Restructure &
Evaluation

Testing & Recognition

- Goal: Facilitate the adoption of consensus immunization-related capabilities within EHRs to improve clinical decision-making and information sharing with IIS
 - IIP tests EHRs for adopting & meeting core capabilities
 - Testing done by Drummond; test plan updated annually
 - Parallels AIRA's Measurement &
 Improvement initiative to measure and test
 IIS alignment with recognized standards





Recognized Vendor Products

Recognition	System Version
September 2017	Glenwood Systems GlaceEMR Version 6.0
October 2017	Qvera Interface Engine Version 3.0.44 Build 8640
December 2017	Cerner Corporation Cerner FirstNet (Immunizations) Version 2 and PowerChart Immunizations) Version 10
February 2018	Electronic Services Technologies The Physicians – Practitioners Office Assistant Immunization Capabilities Version 3.1
February 2018	HealthCareXchange, LLC TheVaccinator Version 5.2.36
August 2019	Office Practicum Office Practicum OP Version 20 Used IIP to Meet ONC Requirements







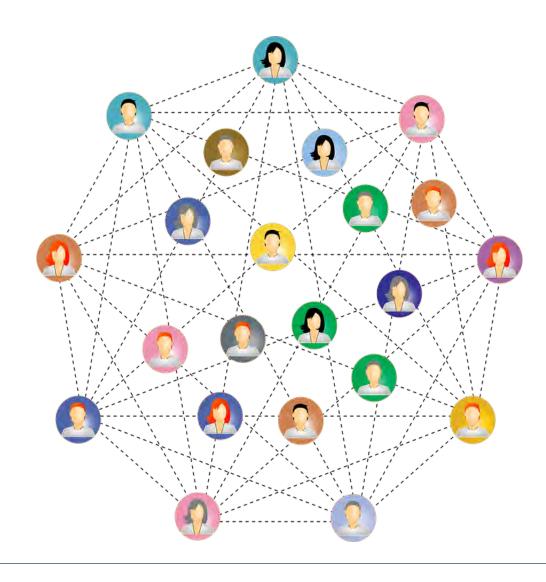






Collaborative

- Goal: Bring EHRs, IIS, HIEs and clinicians together to develop and drive the adoption of solutions to improve interoperability, information sharing and access to immunization information by clinicians and public health
 - Promote diverse representation and perspectives
 - Address topics directly
 - Triage topics to appropriate partner or organization



2020-2021 Collaborative Priorities

- 1 Acknowledgment Message Handling
 - 2 Standardized Transport Protocol Adoption
- Multiple Patients Matched in a Query
 - Patient Matching and Identification



Acknowledgment Message Handling

Goal:

Improve quality, completeness of immunization data both within the IIS and the healthcare provider setting



Increase awareness and usage of acknowledgment messages



Decrease immunization message errors and rejections



Diverse volunteer workgroup developed guidance on how to generate and interpret message reports



Promote and validate the guidance through partner pilot opportunities

Transport Protocol Adoption

Goal:

Promote adoption of standardized transport methods across EHRs and IIS to improve interoperability and information sharing



"Improving Immunization Information Sharing through Unified Adoption of a Transport Standard" report was published by HIMSS in November 2020



Offer technical assistance to jurisdictions interested in receiving support to implement SOAP Web Services and CDC WSDL



Collaborate with AIRA's IZ Gateway team to coordinate assistance with connectivity and interoperability



Identify channels to reach EHRs and explore technical assistance needs

Multiple Patients Matched in Response to a Query

Goal:

Address challenges associated with multiple patients identified by IIS in response to queries from EHRs



Understand factors and situational variations that contribute to multiple patient matches



Compiled list of metrics and created sample reports to help assess multiple match occurrence frequency



Developed guidance and associated EHR and IIS functionality to assist query originator with actions to address a multiple match



Leverage synergies with patient matching strategies and deduplication efforts

Patient Matching and Identification

Goal:

Raise awareness around patient identification and matching to support immunization information sharing and management



Provide unbiased education from multiple perspectives as a community of experts providing insight and consensus around immunization



Inform on current national patient matching strategies to emphasize the need for faster policy change

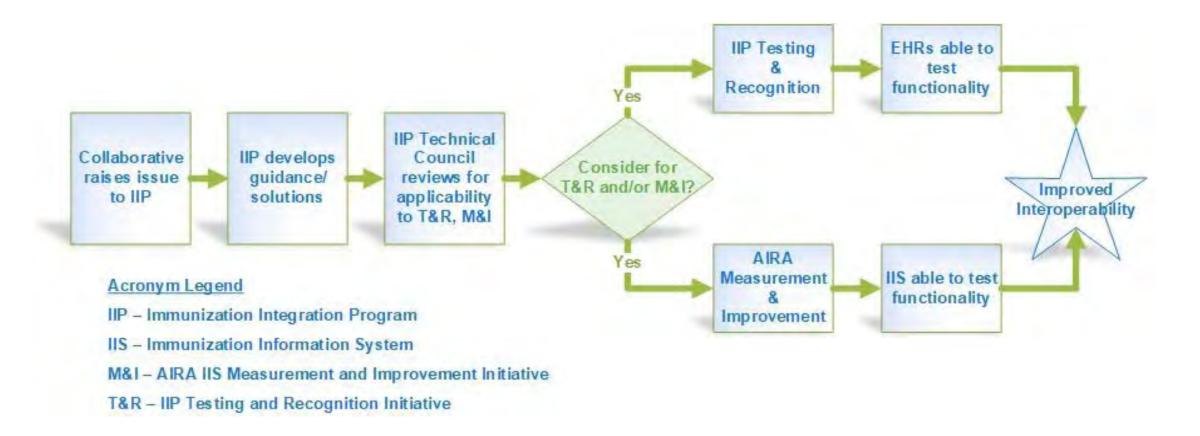


Developed an immunization-focused brief for policymakers



Disseminate the brief to educate and inform about patient matching importance, challenges, and implications of unique health identifier ban

Pipeline Approach



IIP Evaluation

Goal:

Conduct an indepth process and outcome evaluation to measure the impact of the IIP Evaluation plan and logic model development

Sustainable evaluation planning

Qualitative and quantitative data collection

Recommendations development

Data analysis, synthesis and summarization

Key Findings & Recommendations

- Highly invested, collaborative and enthusiastic partners and volunteers
- Low program awareness and impact
 - Increase strategic promotion efforts using multiple channels
 - Improve communication about roles and stress value of all perspectives
 - Incorporate impact analysis to encourage impactful and realistic opportunities for IIP work
- Value of Testing & Recognition unclear
 - Listen to partners and implement improvements to create value
 - Explore opportunities to improve onboarding

Collaborative Issue Selection

- Currently collecting interoperability issues
- Convened tiger team to guide process
- Screening, ranking and researching
- Goal to select new issues by early November
 - Relevant
 - Feasible
 - Impactful



We Welcome Your Topic Suggestions!

- What problem are we trying to solve?
- What partners are involved?
- What is the impact on IIS, EHR, HIE, Healthcare Provider, HIT partners?
- Has any work already been done? By whom?
- Do relevant and accessible data exist?
- How feasible is a solution? What would potential solutions need to consider?



What's Next for the IIP?

- Immunization interoperability issue identification and prioritization
- Testing & Recognition relaunch planning
- Acknowledgment pilot/technical assistance opportunities
- Multiple patients matched in a query output development
- Upcoming conferences:
 - HIMSS21, August 9 13th, Las Vegas
 - APHA 2021, October 24 27th, Denver



Connect with the IIP!

- IIP@himss.org
- <u>www.himss.org/what-we-do-initiatives/immunization-integration-program</u>

HIMSS21 Global Conference & Exhibition (next week!)

- HIMSS Spot, 8/10, 10-10:45am
- AIRA information & networking event, 8/10, 11-1pm
- General education session, 8/11, 1-2pm
- Panel discussion at the HIMSS Interoperability Showcase Theater, 8/11, 3:45-4:45pm
- Panel discussion at the HIMSS Interoperability Showcase Theater, 8/12 9:30-10:30am



Outline

- Background
- About the Onboarding Shared Services Program
- Work with pilot jurisdictions
- Request assistance/get involved

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Background

2018 Investigation and Planning:

- Context and Rationale for Onboarding Shared Services
 - Historical efforts around Shared Services
 - 2018 CDC Investigation
 - o Identified Services ranked:
 - Multi-record Message DQ Testing tool for EHRs
 - Central Document and Resource Library
 - o Provider, EHR Vendor, and IIS electronic DX profiles
 - Onboarding Training Modules
 - o Provider & Vendor Onboarding HL7 Message Help Desk
 - CDC Town Hall December, 2018
 - Proposed Next Steps



2021 CDC/AIRA Partnership:

- > Impact of COVID-19 on data reporting:
 - Highlighted needs
 - Prioritized Project Areas
- CDC/AIRA Partnership
- Next Steps: Development of new Onboarding Shared Services Program

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Onboarding Shared Services Program

What is the Onboarding Shared Services (OSS) program?

- Dedicated support to IIS for provider onboarding provided by AIRA and funded by CDC
- Utilizes and promotes the <u>Onboarding Consensus-</u> Based Recommendations



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Onboarding Consensus-Based Recommendations



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OSS goals

EHRS & IMPORTANCE OF STANDARDS



- Understanding EHR staffing structures and product business models
- Coding to standards
- Implementation of multi-state solutions
- Special guidance for pharms or other specialty vaccinators

MANAGING THE BACKLOG



- Limited resources and staffing
- Managing a queue (tracking, prioritization, timelines)
- Creating efficiencies (check lists, prerequisites, pre-prep activities, reporting hubs)
- Reduce IIS backlogs of providers waiting to onboard
- Enhance and accelerate jurisdictional ability to onboard
- Increase standardization to improve
 - Timeliness of interfaces
 - Completeness and accuracy of data

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OSS planning and development

Define, build, and pilot

Refine and expand

Phase 1 (January '21 – December '21)	Phase 2 (January '22 – TBD)
OSS phase 1 services	OSS phase 2 services
Onboarding TA Requests	OSS phase 2 protocols
OSS protocols	OSS training
Onboarding and interoperability training	Onboarding templates and samples
Onboarding templates and samples	Implementation Guide Template in NIST
Test data testing tool (IGAMT)	Live data testing tool
Pilot OSS	Scale up program

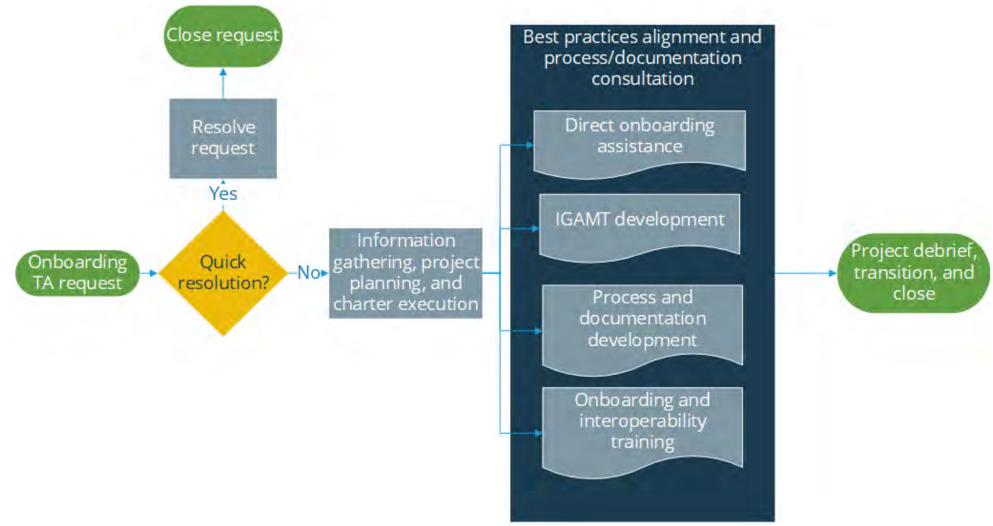
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Services provided

- Direct onboarding assistance
- Local Implementation Guide development in NIST's <u>IGAMT</u>
 - NIST: National Institute of Standards and Technology
 - IGAMT: Implementation Guide Authoring Management Tool
- Onboarding process and documentation development and consultation
- Onboarding and interoperability training

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Your onboarding support journey



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Work with pilot jurisdictions

Pilot jurisdictions



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Direct onboarding assistance process

Need

- 23 organizations in queue
- Staff pulled to work on a priority HIE project

Planning

- Review of onboarding process
- Consider access to PHI
- Adapt onboarding process & develop SOP
- Set up self-service testing using NIST

Onboarding

- Facilitate communications
- Facilitate selfservice testing
- Facilitate troubleshooting

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Direct onboarding assistance: NIST tools

- Support HL7 message testing and validation for VXU and QBP messaging
- Support conformance testing: national IG and local requirements
- Reduce messaging errors
- Accelerate provider onboarding



Direct onboarding assistance: making a local IG actionable for testing

- Used NIST's <u>IGAMT</u> and General Validation Tool (<u>GVT</u>)
- Created an electronic version of local IG
- Supports testing against local constraints

WY HL7 Interface Onboarding Pre-test Instructions

Tooling
Message Types
Document Type

NIST HL7 VXU and QBP Draft 06/14/2021

Introduction

The purpose of this document is to support WY providers in preparing their systems to meet WY HL7 Implementation guide requirements for HL7 VXU and QBP messages (as applicable) prior to onboarding to the Wyoming Immunization Registry (WyIR). Onboarding is the term used to describe the process that establishes an interface connection between a healthcare provider's electronic medical record (EMR) system and the WyIR. An established interface automatically transmits immunization data via HL7 messages to the WyIR when vaccination events are recorded in the EMR. All providers interested in onboarding to the WyIR are highly encouraged to complete this self-service testing as a pre-onboarding step. Successful completion of the pre-test ensures the EMR system can produce compliant HL7 messages, reduces the potential for experiencing issues during onboarding, decreases overall time spent onboarding, and increases data quality.

The pre-test is completed through a tool provided by the National Institute of Standards and Technology, or NIST. NIST tools and utilities support conformance to the HL7 v2.x messaging standard. Using the NIST HL7 v2 Standards Development and Testing Platform and the instructions below, providers can test both VXU and QBP messages, review validation reports, and reduce message errors and improve HL7 data quality.

If you have any questions about these instructions or encounter any issues as you proceed through your pre-test, please reach out to the AIRA Onboarding Analyst who provided you with these instructions.

Instructions

As you plan for the pre-test, please note that the validation test should be performed using test data. If using the EMR's test environment, it should mirror the production environment for this validation to be effective.

Onboarding process and documentation development: templates

Onboarding process guide

Data exchange registration

Onboarding project tracking

Data exchange questionnaire

Local "Delta"
Implementation
Guide

Example: Registration template

Pilot jurisdictions

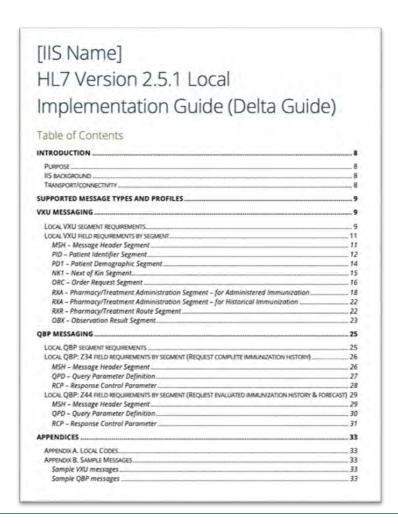
- Need for a way to systematically capture information from providers wanting to onboard
- Implementation based on tools available



Example: Local IG template

Pilot jurisdictions

- Lack of a local IG presented challenges in communicating local requirements & troubleshooting interoperability
- Full size IG difficult to navigate and identify local constraints



Onboarding and interoperability training

- Live instructor-led group training
 - Spring 2021
 - Anticipated fall 2021
- Onboarding modules
- Tailored, one-on-one training

Understanding your IIS

SOAP and CDC WSDL

HL7 messaging

Onboarding roles and responsibilities

Onboarding process

Testing and data quality in onboarding

Onboarding documentation



Get involved!

Reach out for onboarding support

- Backlog of providers to onboard?
- Want to make your IG actionable and fully use the NIST tools?
- Need process and/or documentation support?
- Need training on onboarding practices?
- General questions?

Enhance and optimize your onboarding process

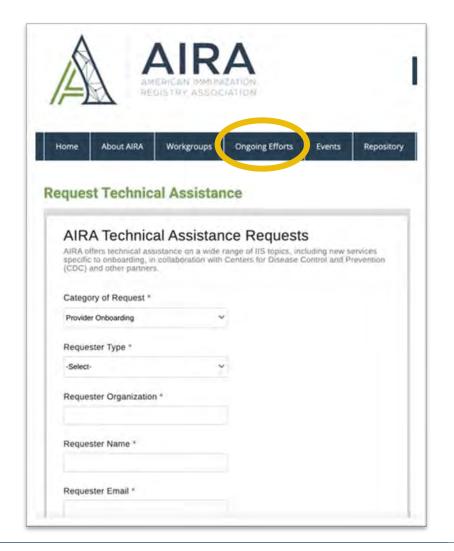


Ensure timely and complete data in your IIS

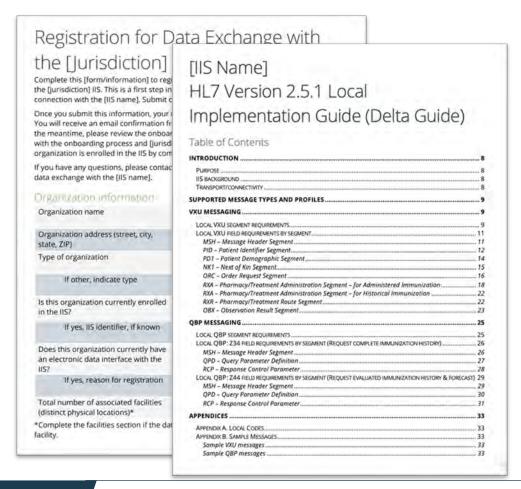
Complete an AIRA Technical Assistance

Request

- <u>Technical Assistance</u>
 <u>Request</u>
- AIRA > Ongoing Efforts
 > Technical Assistance



Provide feedback on templates in development



Reach out to Sara Sanford at ssanford@immregistries.org

- Request draft copies of templates in development
- Help make these more useful for the community!

Acknowledgements

Project Team

- Kafayat Adeniyi & IISSB, CDC
- Mary Beth Kurilo
- Michelle Hood
- Sara Sanford
- Nathan Bunker
- Jenn Combes
- Karen Curtis
- Ezenwa Dike
- Eric Larson
- Rachael Miles
- Erin Roche
- Kristi Siahaya

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