IIS Cross-jurisdictional Data Exchange Pilot

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Introduction

- The Public Health Immunization Pilot Project was launched to address the need to share immunization cross jurisdictional boundaries.
- Upon completion of the project providers will be able to request a patient’s record from another immunization registry and retrieve that data across jurisdictional boundaries.
- By creating a transport hub, participating pilot sites will be able to exchange immunization data across jurisdictional boundaries through the centralized hub via a SOAP Web Service utilizing adopted and approved standards for interoperability.
Background & Context

Current IIS Data Exchange
- Limited exchange across jurisdictions
- This exchange is currently done point-to-point; mainly batch files; not real time

ONC Initiative
- Pilot states will transfer data via a data hub with partner jurisdictions
- Pilot states will use an adapted version of the CDC Web Services Definition Language (WSDL)
- Pilot states will use the HL7 Immunization Implementation Guide V1.5 (HL7 2.5.1 IZ IG V1.5)

Future?
- All IIS will interface with the hub and exchange data with all other IIS
- All IIS will use the adapted CDC WSDL and HL7 IZ IG V1.5

Advantage of HUB Solution:
- Promotes use of adapted CDC WSDL and HL7 IZ IG V1.5 which will drive interoperability
- Will improve use of bidirectional querying by IIS
- Scalable solution
  - More IIS can easily be added to the hub
  - IIS will be able to theoretically communicate with any other IIS on the hub

Project Goal & Solution Advantage

Goal:
- To enhance cross-jurisdictional immunization data exchange by:
  - Providing participating pilot sites with a data hub via which they can exchange immunization data
  - Committing pilot sites to implement the HL7 Immunization Implementation Guide V1.5 and use the adapted CDC WSDL

Advantage of HUB Solution:
- Promotes use of adapted CDC WSDL and HL7 IZ IG V1.5 which will drive interoperability
- Will improve use of bidirectional querying by IIS
- Scalable solution
  - More IIS can easily be added to the hub
  - IIS will be able to theoretically communicate with any other IIS on the hub
- HUB model looks at “envelope” only; does not open contents. PHI passes securely through HUB without being stored; enabled by WSDL updates.
Project Scope

It was determined that the following items would fall in and out-of-scope:

<table>
<thead>
<tr>
<th>In-Scope</th>
<th>Out-of-Scope</th>
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<tbody>
<tr>
<td>• Using current bi-directional messages to enable the exchange</td>
<td>• Dealing with policy issues around data exchange</td>
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<td>• Establishing a Data Hub that will be utilized by the pilots</td>
<td>• Editing/updating information in registries by Consumers</td>
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<td>• Allowing for the initiation of data exchange thru the following three methods: Physician directly to Immunization Registry; Physician via EHR to Immunization Registry; Consumer via Patient Portal</td>
<td>• No transformation, translation, or reading of message content as it passes thru the hub (hub does not store any patient information or data)</td>
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<td>• Implementation of release 1.5 of IZ IG</td>
<td>• The hub will not ensure that all requesters of information, are authorized to receive immunization data</td>
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<td>• Updated WSDL (corrects issues and adds ability for intermediary player)</td>
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IIS Data Exchange Use Case Diagram

Use Case Objective: For an Immunization Information System (IIS) to respond to a transaction that contains current or historical addresses that are outside its jurisdiction by triggering a QBP or VXU to the other jurisdiction’s IIS.
Pilot Outreach

- Conducted outreach to jurisdictions publicizing the hub solution
- Outlined the project expectations for jurisdictions so that they could assess their ability to participate
  - The following map displays all areas where outreach was conducted

Project Outreach

Ideal Pilot Pairs:
1. Washington and Oregon
2. Minnesota and Wisconsin
3. DC and Virginia
4. New York City and New York State

Outreach Color Key:
- Outreach conducted
- Current participating pilot sites
Pilot Criteria

All pilot sites must...

- Upgrade to the new CDC WSDL adapted for the Data Hub Solution
  - The WSDL is backwards compatible
  - Adopt the HL7 Version 2.5.1 IG Immunization Messaging Release 1.5
  - Implement any changes required to setup the Data Hub as an integration partner
  - Configuring firewalls, ports, etc.
  - Maintain a test and production instance of the IIS and utilize the test version of the Data Hub for Testing and the Production version of the Data Hub for Pilot (production)
  - Have the capacity to issue queries via a QBP
  - Have the capacity to accept and process RSPs
  - Have the capacity to consume a VXU (assumed)
  - Have the ability to create or handle any additional errors from the WSDL or HL7 ACK
  - Configure firewalls, ports, etc.
  - Maintain a test and production instance of the IIS and utilize the test version of the Data Hub for Testing and the Production version of the Data Hub for Pilot (production)
  - Have the capacity to issue queries via a QBP
  - Have the capacity to accept and process RSPs
  - Have the capacity to consume a VXU (assumed)
  - Have the ability to create or handle any additional errors from the WSDL or HL7 ACK

- Adapt the IIS to process business rules that:
  - Recognize when a new patient’s current address (jurisdiction) is in a partner IIS’ jurisdiction
  - Recognize when a patient’s address (jurisdiction) in the IIS has changed from a partner IIS’ jurisdiction to this IIS’ jurisdiction

All pilot sites should...

- Provide capacity to generate an explicit request (i.e. via a "button" or process that requested the data from a partner jurisdiction)

Project Metrics for Success

Functional metrics:
- Data hub development time
- Registry interface development time
- Number of participating pilot sites and sub sites
- Percent of messages sent thru the hub correctly

Data hub technical metrics:
- Traffic Volume
- Average response times
- Production volumes
- Error rates
  - Total errors
  - Total queries
- Query processing time
- Availability/uptime
- Peak message volume throughput

State metrics:
- Errors
  - Queries Sent
  - Queries Received
- Message response times
- Percentage of messages rejected due to multiple match
- Number of end users
  - Number of unique users providing queries

Need to update
Questions?

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