



**AIRA**  
AMERICAN IMMUNIZATION  
REGISTRY ASSOCIATION

# HL7 Immunization User Group

Monthly Meeting

March 14, 2019

2:00 PM ET

# Agenda

- Welcome
  - Poll: Which perspective do you primarily identify yourself with?
- Updates
  - SISC
- Presentations
  - IIS Dashboard and HL7
  - FAQs Discussion



# SISC Update

Heather Patrick



# IIS Dashboard and HL7

Nathan Bunker, AIRA



# Introduction

- Discovery Session – December 2018
  - Janet Fath & Bobbie Strickland, IISB, CDC
  - <https://repository.immregistries.org/resource/aira-discovery-session-iis-dashboard/>
- CDC Dashboard
  - <https://wwwn.cdc.gov/IISDashboard/Query.aspx>
- Related to:
  - Functional Standards
  - Immunization Information System Annual Report (ISSAR)



# Measure 1.0 - Summary

- The IIS contains complete and timely demographic and immunization data for children, adolescents, and adults residing or immunized within its jurisdiction.
  - Percentage of children, adolescents, and adults in IIS
  - Vital records data
  - Vaccinations administered, both public and private, in IIS
  - Reporting via NDC supported
  - Key identifying patient fields well populated in IIS



# Measure 1.0 - Seesaw

- IIS has all patients and all vaccinations
  - Strategy: Encourage submitters to send all data and accept as much as possible into the IIS
- Data in the IIS should be complete
  - Strategy: Don't accept data that doesn't meet completeness or other quality standards, ensure submitters correct submissions before accepting them into the IIS



# Measure 1.0 – NDC

- To properly support NDC and CVX, IIS must...
  - Not generate an error if NDC is sent
  - Recognize both types of NDC
    - Unit-of-Sale: The NDC printed on the packaging
    - Unit-of-Use: The NDC printed on the vial
  - Not require NDC be sent with a CVX
  - Not require NDC be sent without a CVX
  - Not require NDC be always sent for administered vaccinations





# Measure 1.0 – NDC

- IIS may...
  - Return CVX instead of original NDC when queried
    - There are no requirements for IIS to send NDC in query responses
  - Support all three NDC formats:
    - 11-digit format with dashes (preferred format)
    - 10-digit format with dashes
    - 11-digit format without dashes
  - Support NDC and/or CVX in RXA-5.1 and RXA-5.4



# Measure 4.0

- The IIS implements written and approved confidentiality policies that protect the privacy of individuals whose data are contained in the system.
  - In the last calendar year, the IIS has created and stored audit information, including the date, time, and the IIS user or site taking the action, when individual-level data in an IIS record are created, viewed, and modified.
- IIS will need to track:
  - Updates (VXU)
  - Query Responses (RSP)



# Measure 8.0

- The IIS exchanges data with health information systems in accordance with current interoperability standards endorsed by CDC for message content, format, and transport.
  - My IIS supports the SOAP Standard Interface 1.2 specification, Web Services Definition Language (WSDL) in production, as endorsed by CDC.
- AIRA measures this as part of Transport Validation
  - Majority of IIS have interface and have been tested
  - AIRA measures capability, not current level of usage in production
  - Contact AIRA to participate



# Measure 11.0

- The IIS manages patient status at the provider organization and jurisdiction levels.
  - In the last calendar year, the IIS user could update PAIS at the provider site level through the user interface and via an HL7 message.

## **PD1-16 Immunization Registry Status (IS) 01569**

Definition: This field identifies the current status of the patient in relation to the sending provider organization.. Refer to User-defined Table 0441 - Immunization Registry Status for suggested values.

This field captures whether the sending provider organization considers this an active patient. There are several classes of responsibility. The status may be different between the sending and receiving systems. For instance, a person may no longer be active with a provider organization, but may still be active in the public health jurisdiction, which has the Immunization Information System (IIS). In this case the provider organization would indicate that the person was inactive in their system using this field in a message from them. The IIS would indicate that person was active in a message from the IIS.



# Measure 22.0

- The IIS reliably exchanges information electronically with IISs in other jurisdictions consistent with the current CDC-endorsed HL7 Implementation Guide.
  - Query another IIS (at least once)
  - Update another IIS (at least once)
- Recommendations:
  - Treat all data from another IIS as “historical”



# Measure 25.0

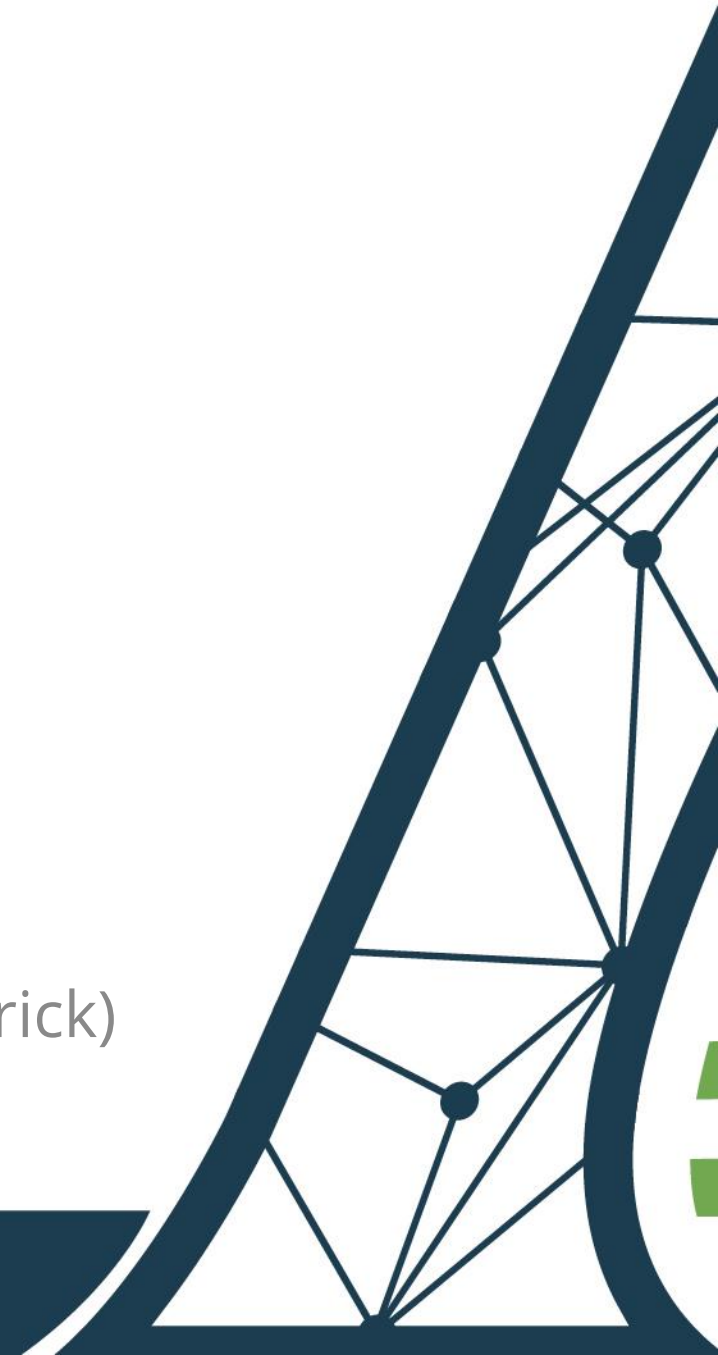
- The IIS supports provider site level vaccine inventory management and reconciliation according to VFC and state and local immunization program requirements.
  - IIS supports decrementation



# Frequently Asked Questions

Nathan Bunker

(with content from Tracy Little, Eric Larson, Heather Patrick)



# Data Type Flavors – OBX-2

## CDC-defined NIP003 - Observation identifiers

Use in OBX-3)<sup>44</sup>

Data within this column is a mixture of base HL7 data types (CE, DT, etc) and data type flavors defined by the implementation guide (TS\_NZ). When a guide specific flavor is specified, OBX-2 of the message should be populated with the base HL7 data type for that flavor. For example, if DT\_D is listed in the table, OBX-2 will be populated with DT.

| <b>LOINC<br/>®<br/>Code<sup>45</sup></b>   | <b>Description</b>                           | <b>Corresponding<br/>data type<br/>(indicate in<br/>OBX-2)</b> | <b>Corresponding observation value<br/>EXAMPLE OR code table to use (value in<br/>OBX-5)</b> |
|--|--|--|--|
| <b>Vaccine Funding Program Eligibility Category</b> —Use in OBX-3 to indicate that OBX-5 will contain the funding program eligibility category for a given immunization. |  |  |  |
| 64994-7  | Vaccine funding program eligibility category | <u>(CE)</u>  | HL70064  |





# Data Type Flavors

- Data Type Flavors
  - A standard set of restrictions on a standard data type
  - For the purposes of documentation
  - Never transmit them in HL7
- Data Type
  - Use them in OBX-2 to indicate the format of the data in OBX-5



# Sending Refusals in RSP

- CDS engine should not consider refusals
- Refusals should not affect recommendations in RSP
- Function Guide & Implementation Guide
  - IIS may send refusals in query response
- **WARNING:** IIS should consider only sending refusals when certain receiving party will handle them properly



# REST vs SOAP for Transport

- CDC encourages IIS to support SOAP
  - EHR can easily connect to IIS
  - IIS will have reduced integration time
- IIS may support any number of other transport standards
- New SOAP standard supports the same method as the old REST standard
  - Differences are only at the technical level
- Official CDC documentation here:
  - <https://www.cdc.gov/vaccines/programs/iis/technical-guidance/soap/services.html>



# Timezone in MSH-7

- Sending systems can express time in any timezone
  - Not required that sending system use correct timezone
  - Offset indicates difference from UTC
- Receiving system
  - Must read timezone offset when reading/understanding time
  - Should not require a specific timezone to be used
  - IIS may require that messages should be created in the future
  - Consider having some leeway to account for
    - Minor differences in exact time set (at least 1 minute?)
    - Mistakes in using timezone (at least 65 minutes?)



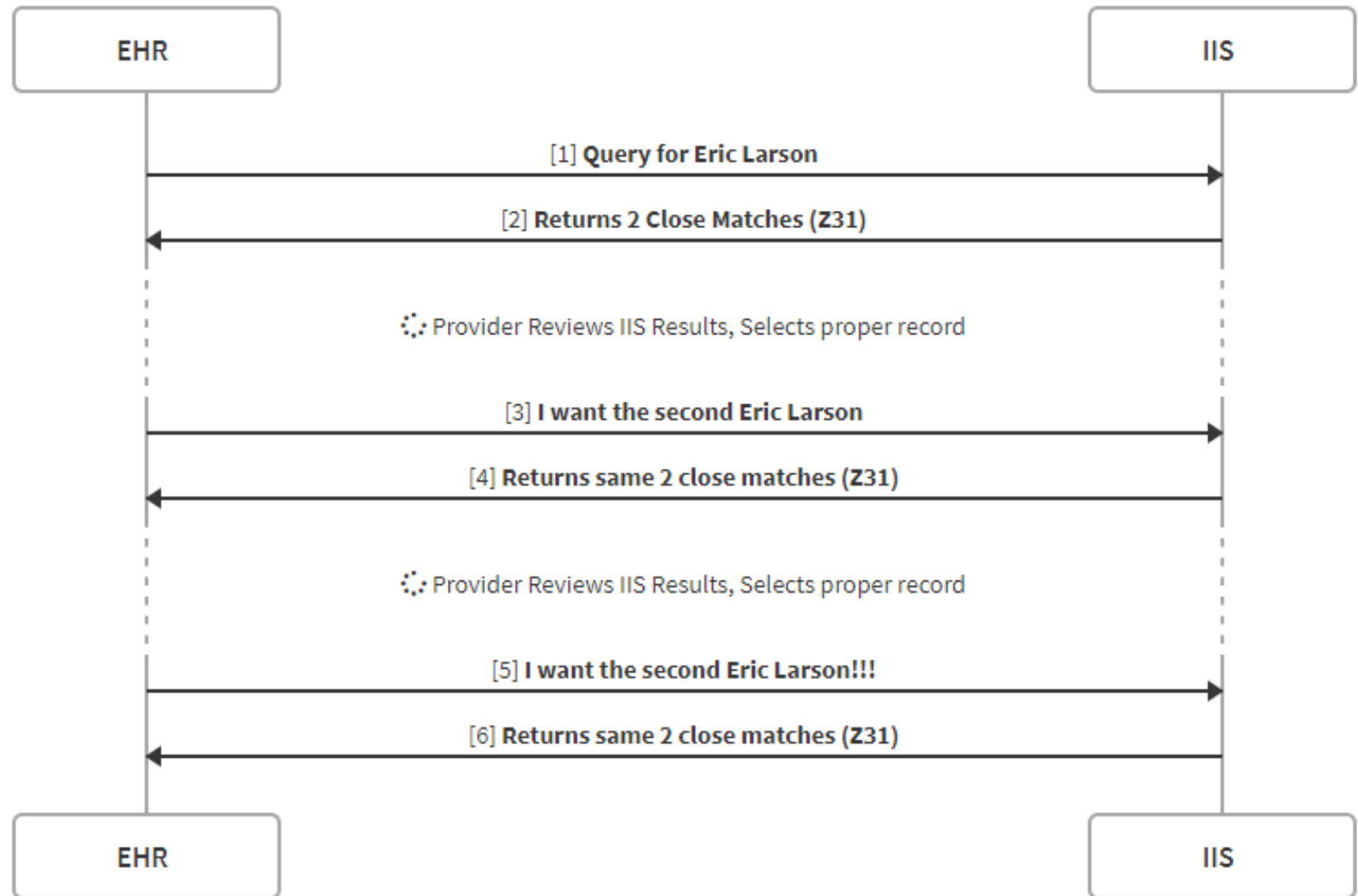
# Re-query After Z31 RSP

- When a provider queries for a patient, the IIS might return a Z31 (Return Candidate Clients) if the IIS is unsure exactly who the provider is looking for.
  - Note: Not all jurisdictional policies allow for multiple patients to be returned
- The provider selects the proper patient from the Z31 and issues a re-query to the IIS
- NOTE: This is **NOT** a patient matching problem where the provider believes the IIS hasn't properly merged. The two+ records presented to the provider are indeed unique people.



# Problem

## QBP followed by Z31 (Multiple Match)



# Community Documents – Quick Review

## HL7 2.5.1 Release 1.5

- Z31 Goal
  - The **goal** of this response is to return a complete list of candidate patients in response to a request for a person's record. This will support re-query by the initiator, **based on selection of a member of the list.**
- IG states it does not address how a patient matching algorithm works

## Functional Guide Volume 1

- Chapter 6 Addresses a re-query
  - EHR shall include all data from the patient returned by the IIS including IIS Patient ID (SR ID).
- patient matching was out of scope.



# Best Practice from SISC

- EHR should requery with data found in Z31 RSP
  - NOT with data from EHR
  - Send patient name, address, SR ID, etc as the IIS knows it
- IIS should be looking to use the SR ID to bump matching score up
- Should keep from getting into infinite loop

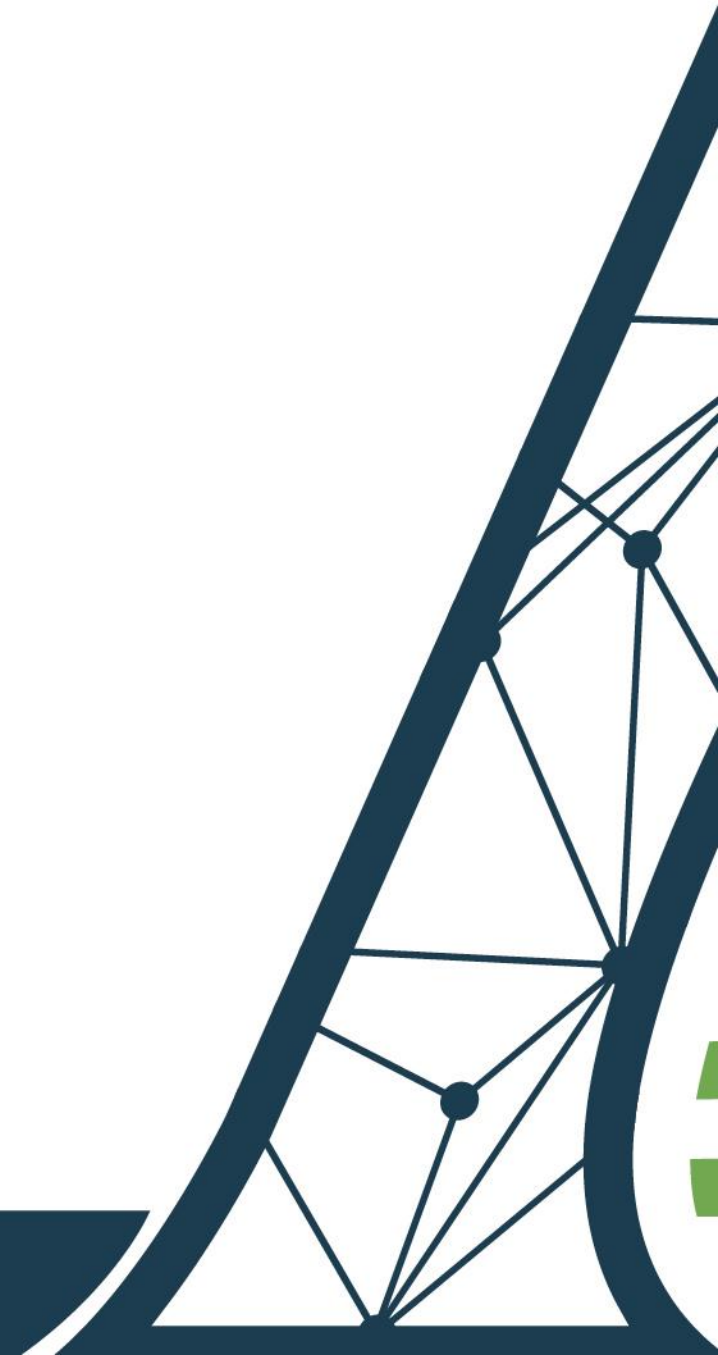




# Next Meeting

April 11, 2019

2:00 pm ET / 11:00 am PT



# More Information

- Web Links

- Subscribe to immunization group

<http://www.hl7.org/participate/UserGroups.cfm?UserGroup=Immunization>

- Public User Group Wiki

<http://www.hl7.org/special/committees/iug/index.cfm>

- Private User Group Wiki

<http://iugwiki.hl7.org/>

- HL7 Press Release

[http://www.hl7.org/documentcenter/public\\_temp\\_F760602A-1C23-BA17-0C0D326E635471F9/pressreleases/HL7\\_PRESS\\_20140402.pdf](http://www.hl7.org/documentcenter/public_temp_F760602A-1C23-BA17-0C0D326E635471F9/pressreleases/HL7_PRESS_20140402.pdf)

- AIRA Press Release

<http://www.immregistries.org/events/2014/04/10/hl7-immunization-user-group>



# Contact Information

If you have any questions or comments:

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Thank you!

