Immunization certification and future interoperability plans

Public Health - EHR Vendors Collaboration Initiative

June 21, 2016
Public Health – EHR Vendors Collaboration Initiative

URL: http://www.cdc.gov/ehrmeaningfuluse/public-health-ehr-vendors-collaboration-initiative.html
Question and Answer Session
How to submit or ask questions for the panel members?

Submit or Ask Questions
• Submit your text question and comments using the Question Panel

• Please raise your hand to be unmuted for verbal questions.
Immunization certification and future interoperability plans

PUBLIC HEALTH-EHR VENDOR JOINT WEBINAR
JUNE 21, 2016
Relevant Specifications

- ONC 2015 Edition HealthIT Certification Regulations call out the latest version of the Implementation Guide for Immunization Messaging
  - Release 1.5 (published October 2014) and the Release 1.5 Addendum (published July 2015)
  - The Addendum doesn’t specify additional requirements, only clarifies existing ones or corrects errors
  - Published jointly by the CDC and the American Immunization Registry Association (AIRA)
  - Similar to previous MU stages, the Immunization IG is not an HL7 balloted artifact
Certification Test Cases

- 2015 regulations call out both submission (continuing from previous rounds of certification) and bi-directional query/response (new with 2015)

- All submission exchange test cases require EHR generated messages to go through automated validation and a subset require the EHR to accept an acknowledgement message containing warnings or errors back

- Bi-directional exchange focuses on EHRs requesting an evaluated patient history and forecast from an Immunization Information System (IIS)
  - The EHR generates a query message which goes through automated validation and then the EHR must consume a response message and display the data (manual validation)
Test Case Guiding Principles

- Create messages that reflect actual usage
- Don’t overload any given test case
- Minimize the number of test cases
- Automate testing as much as possible
Administration Test Cases

- IZ-AD-1 Child with new and historical administrations
- IZ-AD-2 Adult with new and historical administrations
- IZ-AD-3 Patient protection and full first and middle names
- IZ-AD-4 Deletion of a previous documented administration
- IZ-AD-5 Refusal of a vaccine and multiple birth indicator/birth order
- IZ-AD-6 Update of a previous documented administration
- IZ-AD-7 Acknowledgement containing an Error
- IZ-AD-8 Acknowledgement containing a Warning
- IZ-AD-9 Acknowledgement containing multiple Warnings
- IZ-AD-10 Acknowledgement containing a System Error
Bi-directional Test Cases

- IZ-QR-1 Query for a child
- IZ-QR-2 Query for an adult
- IZ-QR-3 Query with no high-confidence match
- IZ-QR-4 Query with multiple high-confidence matches
NIST Immunization Test Suite

- Certification testing uses the NIST test suite using Context-based testing
  - [http://hl7v2-iz-r1.5-testing.nist.gov/iztool/#/home](http://hl7v2-iz-r1.5-testing.nist.gov/iztool/#/home)
  - Context-based testing allows testing of “Required but allowed to be empty” elements as well as requiring specific values in certain test cases
A two month old male infant, Russell Clinton Richardson, is brought to a clinic for a well child visit by his mother Maria Elizabeth Richardson (nee Billington) and his father John William Richardson. A clinic staff member collects basic patient demographic information including name, date of birth and sex. A clinic provider, Wilma Thomas (physician ID 654) reviews the patient's vaccination history and determines that the child previously received Hepatitis B vaccine 1 day after birth and 1 month after birth. The staff member determines that the patient needs DTaP, Hib, IPV, Rotavirus and Pneumococcal vaccinations. Because of the patient's status of Native American, he qualifies for all Vaccine For Children (VFC) supplied vaccines under the status of VFC eligible - American Indian/Alaska Native. The parents are given 5 Vaccine Information Sheets (VIS) to review. After reading them, they agree that the child should receive all the vaccinations recommended. They also agree that the data should be shared once it is incorporated into the local IIS. They indicate that reminders and recalls may be sent by any method. Appropriate doses of DTaP/Hib/IPV (Pentacel), Rotavirus (Rotarix) and Pneumococcal (Prevnar 13) are selected from the clinic's stock of publically funded vaccines. A clinician, Lily Jackson (ID 7824) prepares and administers the doses to the patient and then enters the data into the EHR and transmits it to the IIS.
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- **Set by the specification**
- **Must be present, but value doesn’t matter**
- **Must be present and make sense**
- **Set by the test case**
Test Message

- Provided for example only
- Do not code to these test messages
Juror Documents (Acknowledgements)

This Test Case-specific Juror Document provides a checklist for the Tester to use during certification testing for assessing the health information technology's ability to receive and process a Return an Acknowledgement Z23 message (in response to a “Send Unsolicited Immunization Update Using a VXU” Z22 message) in which an Error is returned in the message.

The exact wording and format of the display in the health information technology (HIT) is not in-scope for this test.

**Return an Acknowledgement**

The receiving HIT system being tested shall process the Z23 ACK error notification message correctly, the issue identified in the error notification must be made visible in the system.
Juror Documents (Query/Response)
Future Releases of the IG

- Primary focus of EHRs and the IIS community is on implementing Release 1.5
- AIRA and CDC are looking at making the IG an HL7 balloted document
  - Specifics are still under discussion
- Future releases will include:
  - How to construct messages including patient observations, special indications, contraindications, adverse reactions and immunities
  - Review of profiles and content relative to updated core data elements and functional requirements
  - Updated publishing and vocabulary tools using NIST authoring tools