AIRA Town Hall Meeting on IIS Submission and Query Assessment Measures

AIRA AMERICAN IMMUNIZATION REGISTRY ASSOCIATION

Immunization Information Systems for a New Era

November 2nd, 2016

4-5 pm ET
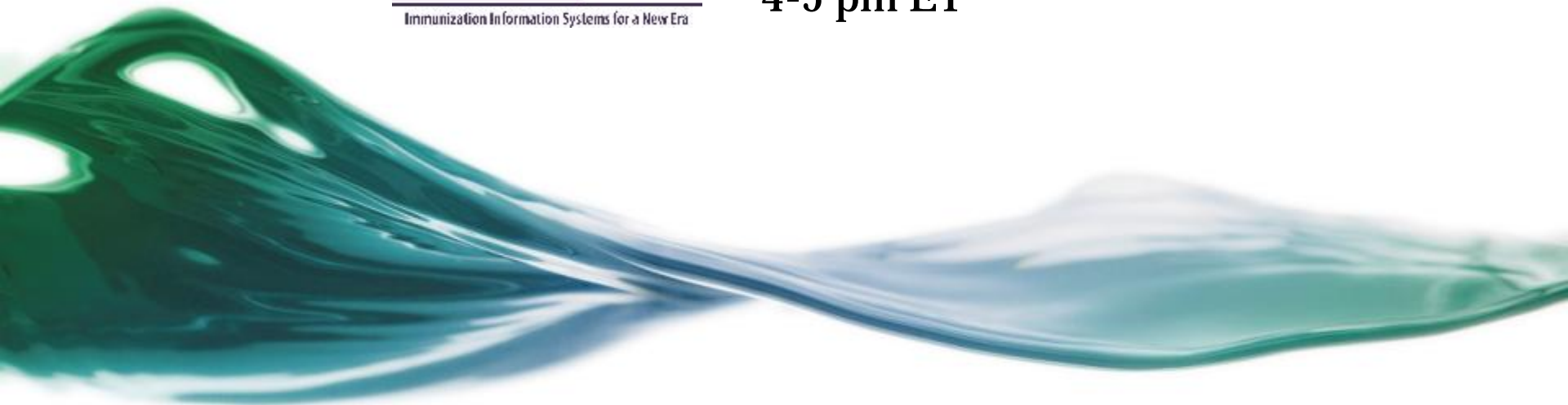
Agenda

- Goals for Today

- Review of IIS Assessment Process

- Assessment Concepts

- Submission Measures

- Acknowledgement Measures

- Query Measures

- Response Measures

- Next Steps

Goals for Today

- Introduce latest MACAW-developed measures for submission and query

- Get initial feedback from today's participants to gauge where we can expect comments

- Provide solid grounding to prep for review of measures and test cases by 11/16

Assessment Process

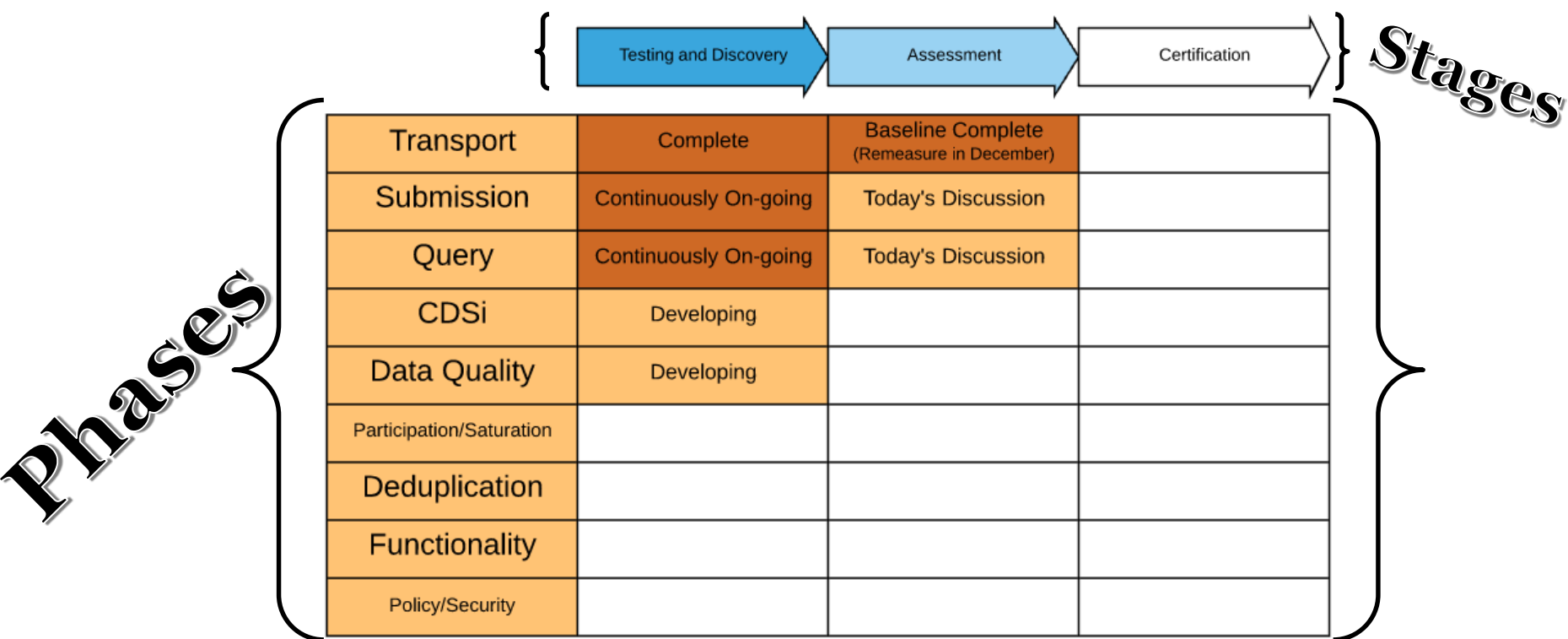# Measurement for Assessment and Certification Advisory Workgroup (*MACAW*)

- Charge:
    - To continue refining the process for Assessment and Certification
    - To oversee the development and testing of metrics
    - To review and provide input on communications to IIS community
    - To evaluate triggers and answer outstanding questions about potential move toward external-facing Certification

- Workgroup Members
    - Dana Goodloe/Roger Akin, Arizona
    - Kevin Snow, Envision Technology Partners
    - Eric Schuh, HPE
    - Amy Groom, IHS
    - Wendy Nye, Michigan
    - **Aaron Bieringer, Minnesota**
    - Scott Benedict, Nebraska
    - **Jane Lammers, Nevada**
    - Amy Metroka, NYC
    - Brandy Altstadter, STC
    - Laura Pabst, IISSB, CDC
    - Rob Snelick, NIST
    - AIRA Staff (Mary Beth Kurilo, Eric Larson, Nathan Bunker, & Nichole Lambrecht)

Stages and Phases of Measurement

Phases	Testing and Discovery	Assessment	Certification
Transport	Complete	Baseline Complete (Remeasure in December)	
Submission	Continuously On-going	Today's Discussion	
Query	Continuously On-going	Today's Discussion	
CDSi	Developing		
Data Quality	Developing		
Participation/Saturation			
Deduplication			
Functionality			
Policy/Security			

Stages

Assessment Scope and Concepts for Submission and Query

Functional Standards Being Assessed

Submission and Acknowledgement

- Functional Standard 1.5:
  - The IIS can receive submissions in accordance with interoperability standards
- Functional Standard 3.4:
  - The IIS can store all Core Data Elements.
- Functional Standard 3.6:
  - The IIS records and makes available all submitted vaccination and/or demographic information in a timely manner.

Query and Response

- Functional Standard 1.1:
  - The IIS provides individual immunization records accessible to authorized users at the point and time where immunization services are being delivered.
- Functional Standard 1.4:
  - When the IIS receives queries from other health information systems, it can generate an automatic response in accordance with interoperability standard
- Functional Standard 3.4:
  - The IIS can store all Core Data Elements.

Measure Action Verbs

Processes

- The IIS reads the incoming message and makes appropriate decisions (e.g., de-duplicates, stores, queries, rejects, etc.) based on the information in the incoming message and previously known information already in the IIS.

- For example:
  - The IIS **processes** an administered vaccine for a patient.

Responds

- The IIS returns a final resolution, or outcome, of processing the message with a conformant HL7 message (i.e., ACK, RSP).

- For example:
  - The IIS **responds** to a submission that has an error.

Assessment Outcomes

Fully Meets	Deviates From National Standard	Does Not Meet
The IIS meets the test case expectation without modification to the test case or test case expectation(s).	The IIS can meet the test case expectation with modification to the test case or test case expectation(s) which supports the local business need, policy, or law.	The IIS cannot meet the test case expectation either due to non-standard requirements, capability limitations, or otherwise arbitrary requirements which do not support local business need, policy, or law.

Measure and Test Case Definition

MEASURE <n>:

The IIS ...<measure statement>

Purpose	Supports
The purpose section defines why this measure is important to the IIS community and why IIS need to support it.	This will be a list of which Functional Standard(s) (FS) and Operational Guidance Statement(s) (OGS) this measure supports. In some cases, the measure can only address part of an FS and/or OGS and this should be noted.

Test Case	Test Case Expectations
This defines each test case in significant enough detail to describe the intent of the test case, what the test case is looking for, and what it isn't looking for. Further, a test case may involve more than one step (e.g., a VXU followed by a QBP). These need to be defined here.	Test Case Expectations define what the IIS should do based on the Test Case. For example, the expectation could be that the IIS accept the submitted data and respond with a conformant ACK message.
Subsequent test case and test case expectations will each be on their own row.	

MEASURE 1:

The IIS processes an administered vaccine for a patient.

Purpose	Supports

The processing of a vaccination event is the core of EHR to IIS electronic data exchange. The purpose is to measure that an IIS can process administered vaccination events in accordance with the National IG across common scenarios. The ACK from the IIS will be reviewed for acceptance of the submitted message, but conformance to the ACK standard is not part of this measurement. Other measures address ACK conformance.	**Functional Standard 1.5:** The IIS can receive submissions in accordance with interoperability standards endorsed by CDC for message content/format and transport
	    OGS 1.5.4: IIS accepts VXU consistent with the current CDC-endorsed HL7 IG from authorized users and systems (See HL7 Version 2.5.1 Implementation Guide for Immunization Messaging)
	
	Functional Standard 3.4: The IIS can store all IIS Core Data Elements.
	    OGS 3.4.1: The IIS can receive and store all core data elements, as endorsed by CDC, from the IIS User Interface and from electronic data transfer.
	        Note: This only measures the "receipt" portion of this OGS. The "store" portion is measured leveraging query and response.

Test Case	Test Case Expectation
1a) A patient receives and MMRV at age 12 months. The submission is fully populated with all nationally "required" (R) and "required, but may be empty" (RE) usage segments and fields including VIS and VFC information.	The IIS responds with an ACK indicating it has accepted the message.
1b) A patient receives a Tdap at age 11 years. The submission contains the following: **Patient Related Information:** All R, RE usage segments and fields are included. **Vaccination Event Related Information:** Only NDC and vaccination date are included. All remaining R and RE usage fields related to the vaccination event (e.g., lot number, VFC, VIS, etc.) are omitted.	The IIS responds with an ACK indicating the message was accepted or rejected based on local business rules. If rejected, the message must be rejected due to missing information which should have been supplied per the national standard, not related to other reasons.

Questions and Discussion

Submission Measures

- 12 measures

Submission Measures – 1 of 3

Measure	Purpose
1) The IIS processes an administered vaccine for a patient.	The processing of a vaccination event is the core of EHR to IIS electronic data exchange. The purpose is to measure that an IIS can process administered vaccination events in accordance with the National IG across common scenarios.
2) The IIS processes a historical vaccine for a patient.	The processing of a vaccination event is the core of EHR to IIS electronic data exchange. The purpose is to measure that an IIS can process historical vaccination events in accordance with the National IG across common scenarios.
3) The IIS processes the submission of a full immunization record for a patient.	The processing of a full immunization record for a patient is necessary to support new provider onboarding where full patient histories are submitted to the IIS and in situations where a patient has paper records which are transcribed into an EHR and submitted to the IIS.
4) The IIS processes a request to update a previously submitted vaccination event.	The processing of an updated record is necessary to support error corrections of previously submitted vaccination events and to consolidate information from more than one submitting provider.

Definition of 'Processes': The IIS reads the incoming message and makes appropriate decisions (e.g., de-duplicates, stores, queries, rejects, etc.) based on the information in the incoming message and previously known information already in the IIS.

Submission Measures – Cont'd (2 of 3)

Measure	Purpose
5) The IIS processes a request to delete a previously submitted vaccination event.	The processing of a deleted record is necessary to support removal of previously submitted vaccination events which may have been submitted erroneously.
6) The IIS processes a submission where the patient does not give consent to share data.	The consent (e.g., opt-in, opt-out, consent, protection, etc.) laws vary from jurisdiction-to-jurisdiction. HL7 supports this through the use of a "Protection Indicator" and should be supported by IIS.
7) The IIS processes a refusal to vaccinate.	The processing of a parent refusal of a vaccination event is a core data element for IIS to collect. This information can be used for AFIX visits and patient education indicators.
8) The IIS processes an adverse event.	The processing of an adverse event related to a vaccination event is a core data element for IIS to collect. This information can be used to contraindicate future vaccinations and inform physicians through query/response.

Definition of 'Processes': The IIS reads the incoming message and makes appropriate decisions (e.g., de-duplicates, stores, queries, rejects, etc.) based on the information in the incoming message and previously known information already in the IIS.

Submission Measures – Cont'd (3 of 3)

Measure	Purpose
9) The IIS processes an observation about a patient which results in a contraindication or immunity to a vaccine preventable disease.	The processing of an observation about a patient which may result in a contraindication or immunity is a core data element for IIS to collect. This information can be used to contraindicate or prevent unnecessary future vaccinations. The information can also be useful information for physicians through query/response.
10) The IIS processes messages in accordance with the HL7 2.5.1, release 1.5 guide.	Release 1.5 of the HL7 2.5.1 implementation guide specifies the core requirements of an HL7 message across various vaccine-related information that can be submitted. The purpose of this measure is to measure IIS ability to capture the information when only the minimal information is supplied.
11) The IIS processes a demographic only submission.	The purpose of this measure is to support a situation where only demographic information is sent.
12) The IIS processes both complete and incomplete doses.	The purpose of this measure is to support situations where a dose is only partially administered (e.g., the child jumped).

Definition of 'Processes': The IIS reads the incoming message and makes appropriate decisions (e.g., de-duplicates, stores, queries, rejects, etc.) based on the information in the incoming message and previously known information already in the IIS.

Questions and Discussion

Acknowledgement Measures

3 measures

Acknowledgement Measures

Measure	Purpose
13) The IIS responds to a correctly formatted message with no errors.	The purpose of this measure is to validate the conformance of the ACK message when a clean and simple VXU message is submitted.
14) The IIS responds to a submission that has an error.	The purpose of this measure is to validate the conformance of the ACK message when a problematic message is submitted to the IIS.
15) The IIS responds to a submission with an ACK within 5 seconds or less for 95% of the records submitted.	The purpose of this measure is to support timely interfaces which will not disrupt – but rather support – clinical workflow. The same timeliness metrics (5 seconds or less for 95% of messages) found here are also found in the Query and Response measures.

Definition of 'Responds': The IIS returns a final resolution, or outcome, of processing the message with a conformant HL7 message (i.e., ACK, RSP).

Questions and Discussion

Poll Question 1

Query Measures

2 Measures

Query Measures

Measure	Purpose
1) The IIS processes a query requesting a patient's immunization record.	The purpose of this measure is to validate an IIS is able to process a query requesting a patient's complete immunization record.
2) The IIS processes a query requesting a patient's evaluated immunization record and forecast.	The purpose of this measure is to validate an IIS is able to process a query requesting a patient's evaluated immunization record and forecast.

Definition of 'Processes': The IIS reads the incoming message and makes appropriate decisions (e.g., de-duplicates, stores, queries, rejects, etc.) based on the information in the incoming message and previously known information already in the IIS.

Questions and Discussion

Response Measures

6 Measures

Response Measures

Measure	Purpose
3) The IIS responds to a query for a known patient (one-to-one match).	The purpose of this measure is to validate an IIS is able to respond with a conformant response (RSP) message when exactly one patient is found.
4) The IIS responds to a query for a patient this is not in the IIS.	The purpose of this measure is to validate an IIS is able to respond with a conformant response (RSP) message when no patients are found.
5) The IIS responds to a query that results in multiple possible patients.	The purpose of this measure is to validate an IIS is able to respond with a conformant response (RSP) message when multiple possible patients are found.

Definition of 'Responds': The IIS returns a final resolution, or outcome, of processing the message with a conformant HL7 message (i.e., ACK, RSP).

Response Measures

Measure	Purpose
6) The IIS responds to a query that has a significant error that cannot be accepted.	The purpose of this measure is to validate an IIS is able to respond with a conformant response (RSP) message when the query is erroneous or otherwise incomplete.
7) The IIS responds to a query for a known patient and returns known Core Data Elements.	The purpose of this measure to detect storage of Core Data Elements through a query to the IIS for a known patient. A subset of Core Data Elements was chosen which are critical for informing vaccination decisions the clinician must make and support patient identification.
8) The IIS responds to a query with an RSP within 5 seconds or less for 95% of the queries submitted.	The purpose of this measure is to support timely interfaces which will not disrupt – but rather support – clinical workflow.

Definition of 'Responds': The IIS returns a final resolution, or outcome, of processing the message with a conformant HL7 message (i.e., ACK, RSP).

Questions and Discussion

Poll Question 2

Next Steps

Next Steps at a Glance

November

Measure and Test Case Review

- **REVIEW NEEDED by 11/16:**
  - Please review and provide feedback for consideration by MACAW and AIRA Board

- Two documents will be sent out for review
  - Submission and Acknowledgment
  - Query and Response

- Each document includes all measures discussed today and corresponding test cases

December

Baseline Assessment

- **ACTION NEEDED by 12/8:**
  - Log into AART and agree to participate in assessment for Submission/ACK and Query/Response
    - Same process as Transport, but reminder instructions will be resent

  - If AIRA hasn't connected to your IIS yet for testing and discovery, please reach out to us, we want to hear from you!

- **ASSESSMENT BEGINS on 12/9**

Thank you!

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