AIRA
AMERICAN IMMUNIZATION REGISTRY ASSOCIATION

Town Hall Meeting on Assessment for Clinical Decision Support

May 23, 2018, 3pm ET

Agenda

- Opening welcome, Agenda – Mary Beth Kurilo, AIRA
- Background and Review of Measurement and Improvement – Mary Beth Kurilo, AIRA
- Assessment, Clinical Decision Support – Eric Larson, AIRA
- Questions/Discussion

AIRA's Measurement for Assessment and Certification Advisory Workgroup (MACAW) Members recommend concepts and measures to the AIRA Board for approval

Jane Lammers, Nevada IIS - Co-Chair
Aaron Bieringer, Minnesota IIS - Co-Chair
Brandy Alstadter, STC
Shannon Coleman, STC
Roger Aikin, Arizona IIS
TBD, Indian Health Services (IHS)
Dave McCormick, Indiana Imm Program
Rob Snelick, NIST
Amy Metroka, NYC IIS
Wendy Nye, Michigan IIS
Josh Hull, Michigan IIS
Laura Pabst, IISSB, CDC
Eric Schuh, DXC
Kevin Snow, Envision Technology

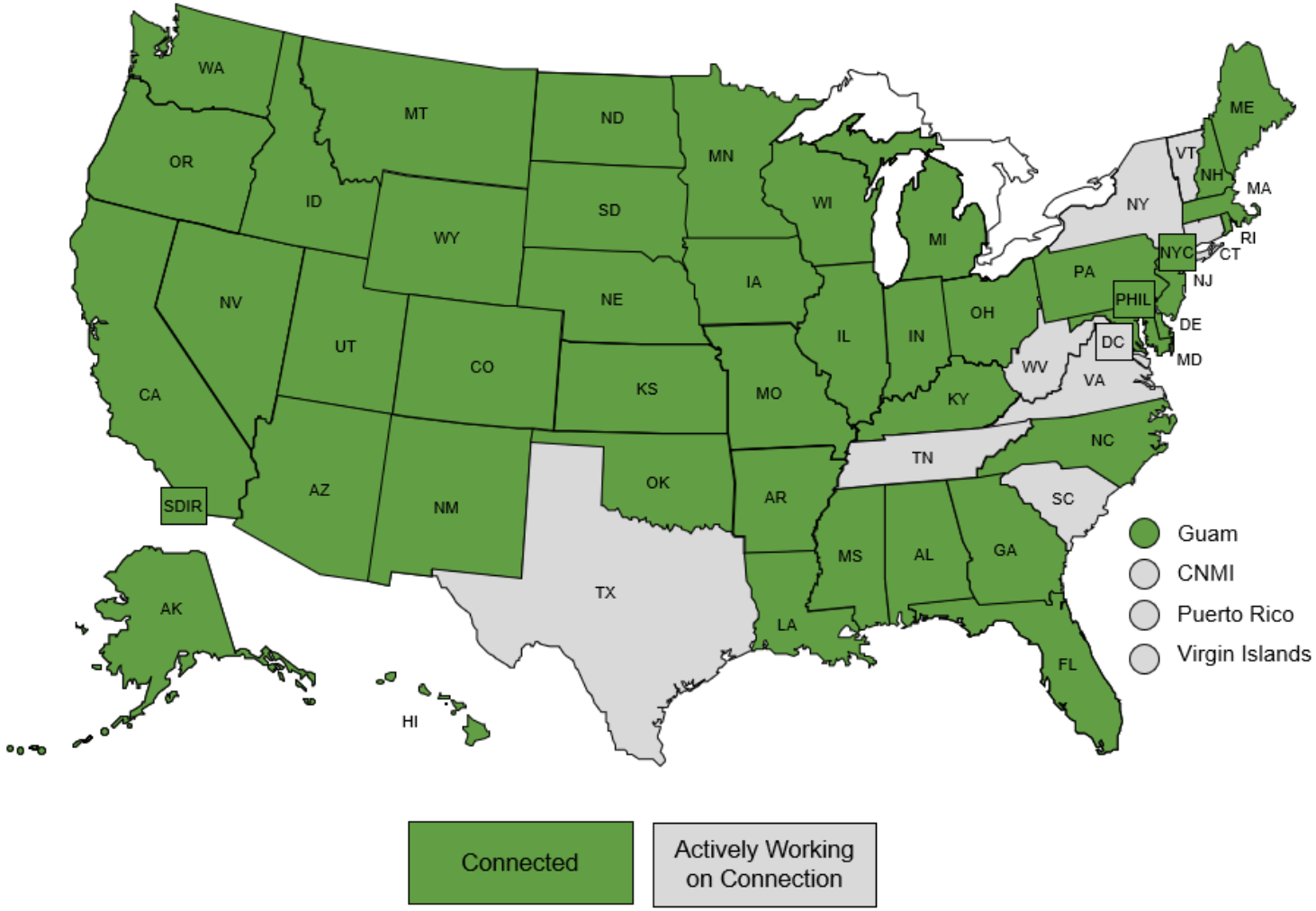
The Measurement and Improvement Initiative is a Phased, Rolling Process

Stages

Phases

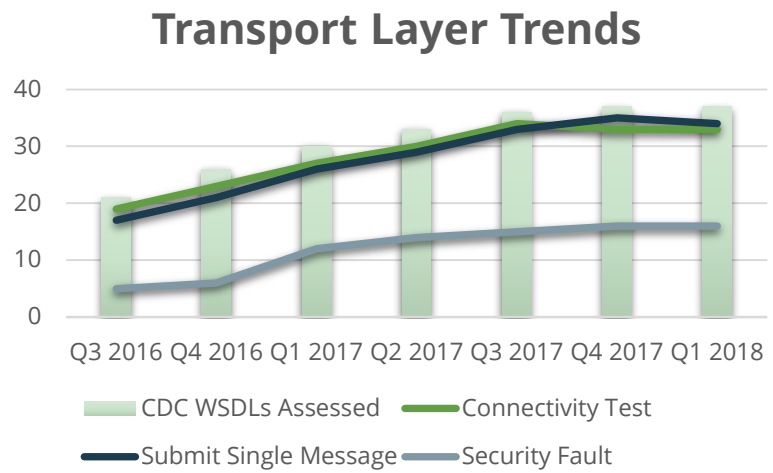
	Testing and Discovery Stage	Assessment Stage	Validation Stage
Transport			
Submission/ ACK			
Query/ Response			
CDS			
Data Quality (6)			
Functions (e.g. AFIX)			
Policy			
Security			

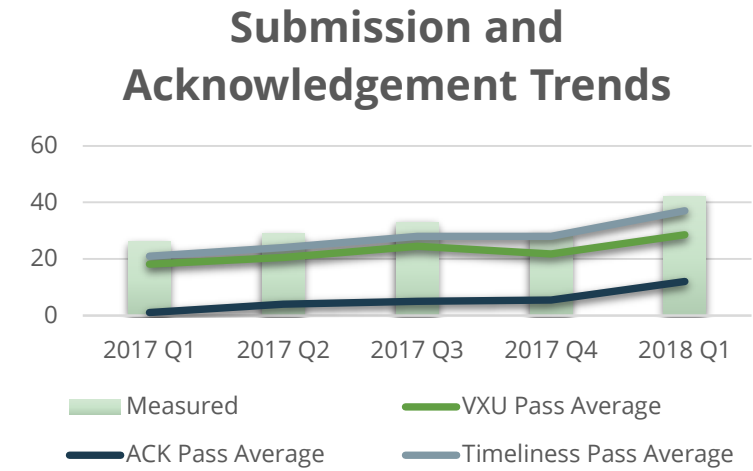
We are here

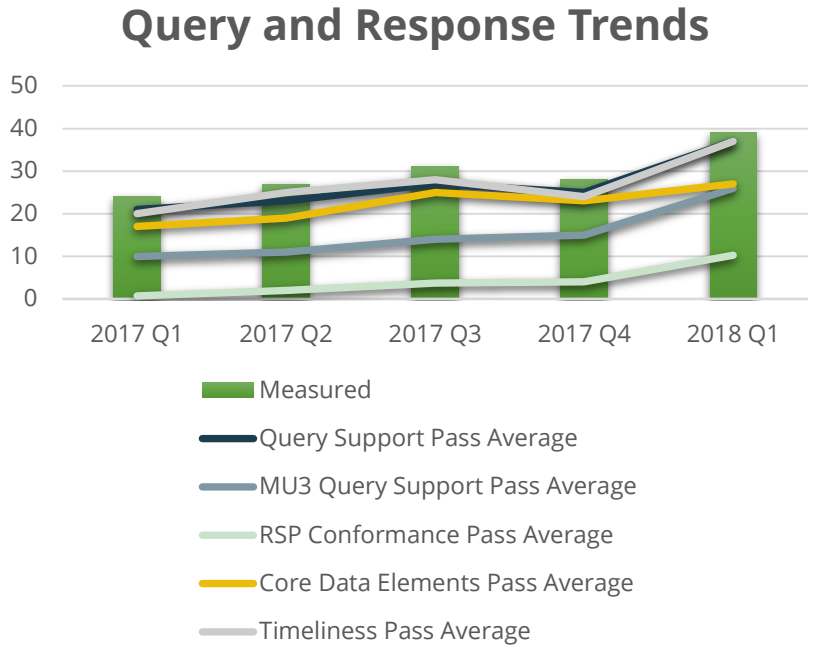


Who is Connected with AIRA and Testing?

Showing Improvement







Available at: www.immregistries.org/assessment

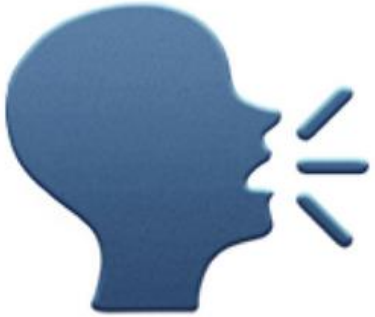
Clinical Decision Support Proposed Measures

Eric Larson

Proposed Measures Agenda

- Timeline
- Functional Standards and Supporting Material
- Foundational Decisions
- Measures and Tests
- Miscellaneous Items

MACAW Considered



MACAW Proposed

Timeline

Today

- Town Hall Introduction

Provide Comments

- Today through Wednesday June 6 (2 wks)

June 12

- MACAW In-person
- Reconcile comments

June 18

- AIRA Board Vote to confirm CDS Assessment Measures

Q4, 2018

- Assessment Begins

Functional Standard 10

The IIS forecasts *pediatric, adolescent, and adult* immunizations in a manner consistent with Advisory Committee on Immunization Practices (ACIP) recommendations.

- The IIS uses Clinical Decision Support (CDS) functionality that can be updated to reflect new or revised ACIP recommendations.
- The IIS displays and *sends an evaluated immunization history* that adheres to ACIP recommendations for each vaccination event.
- The IIS displays and *sends a forecast* that adheres to ACIP recommendations, *with status indicators* for each vaccine and vaccine family.
- The IIS CDS functionality is updated for the IIS *in a timely fashion* after new ACIP recommendations are incorporated into the CDC Clinical Decision Support for immunization (CDSi) resources published on the CDC website.

Supporting Material

- Clinical Decision Support for Immunization (CDSi)
- Functional Guide Volume on Query/Response
- Meaningful Use Stage 3 Testing Requirements for EHRs
- HIMSS Immunization Integration Program (IIP)

CDS Assessment Logical Framework

Measures and Tests

Scope

- What areas of ACIP are to be measured?
- What areas are of ACIP are not to be measured?

Concepts

- Which evaluation and forecasting attributes will be measured?

Methods

- How will the scope and concepts be tested?

Major Foundational Decisions

Scope	Concepts	Methods
• Pediatric • Adolescent • Adult • Increased Risk • Etc.	• Evaluation Status • Earliest Date • Recommended Date • Past Due Date • Etc.	• HL7 • User Interface • Hybrid approaches

Scope

Functional Standard 10
The IIS forecasts *pediatric, adolescent, and adult* immunizations in a manner consistent with Advisory Committee on Immunization Practices (ACIP) recommendations.

- Routine age-based recommendations
  - Pediatric
  - Adolescent
  - Adult
- Catch-up Schedule
- Immunities
- Contraindications
- Increased Risk

Proposed Scope

Functional Standard 10
The IIS forecasts *pediatric, adolescent, and adult* immunizations in a manner consistent with Advisory Committee on Immunization Practices (ACIP) recommendations.

Pediatric	Adolescent	Adult
		
Birth through 6 years	7 years through 18 years	19 years and above
DTaP HepA HepB Hib MMR Pneumo (PCV) Polio Rotavirus Varicella Influenza	HPV Meningococcal Tdap/Td Influenza HepA HepB Hib MMR Polio Varicella	Tdap/Td Zoster Pneumo (PCV, PPSV) Influenza HPV Varicella Meningococcal

- Routine age-based (including catch-up) recommendations will be tested.
- Increased Risk, Immunities, and Contraindications are out of scope at this time.

Major Foundational Decisions

Scope	Concepts	Methods
• Pediatric • Adolescent • Adult • Increased Risk • Etc.	• Evaluation Status • Earliest Date • Recommended Date • Past Due Date • Etc.	• HL7 • User Interface • Hybrid approaches

CDSi and HL7 Evaluation Concepts

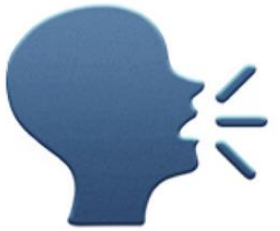
Functional Standard 10.2

- The IIS displays and *sends an evaluated* immunization history that adheres to ACIP recommendations for each vaccination event.

Evaluation Concepts

- Evaluation Status
- Evaluation Reason
- Dose Number in Series

Proposed CDS Evaluation Concepts



Functional Standard 10.2

- The IIS displays and *sends an evaluated* immunization history that adheres to ACIP recommendations for each vaccination event.

Evaluation Concepts

- Evaluation Status
- ~~Evaluation Reason~~
- ~~Dose Number in Series~~

CDSi and HL7 Forecast Concepts

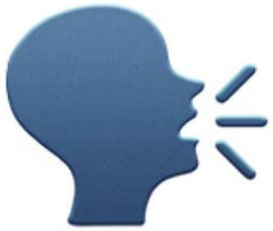
Evaluation Concepts

- The IIS displays and *sends a forecast* that adheres to ACIP recommendations, *with status indicators* for each vaccine and vaccine family.

Forecast Concepts

- Earliest Date
- Recommended Date
- Past Due Date
- Latest Date
- Series Status
- Dose Number in Series

Proposed CDS Forecast Concepts



Evaluation Concepts

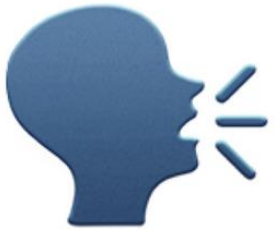
- The IIS displays and *sends a forecast* that adheres to ACIP recommendations, *with status indicators* for each vaccine and vaccine family.

Forecast Concepts

- Earliest Date
- Recommended Date
- Past Due Date
- Series Status

- ~~Latest Date~~
- ~~Dose Number in Series~~

Proposed Concepts Summary



Concept	Definition
Evaluation Status	The determination if the vaccine event “counted”
Earliest Date	The date at which point the patient could receive the next dose if the patient was likely to not return or has other reasons to accelerate the schedule quicker than the recommended date.
Recommended Date	The date at which point the patient should receive the next dose.
Past Due Date	The date at which point the patient is considered overdue for the next dose.
Series Status	The status of the patient towards protection against the vaccine preventable disease (e.g., complete, immune, contraindicated, not complete, too old, etc.)

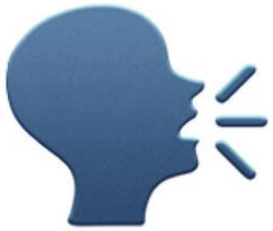
Major Foundational Decisions

Scope	Concepts	Methods
• Pediatric • Adolescent • Adult • Increased Risk • Etc.	• Evaluation Status • Earliest Date • Recommended Date • Past Due Date • Etc.	• HL7 • User Interface • Hybrid approaches

Testing Methods Considered

#	Method	Description
1	HL7	Use the current HL7 standard (VXU and QBP) as defined and tested against today.
2	Hybrid – HL7 w/ Extract	Use the current HL7 VXU to submit the test cases and then have the IIS extract the information about the patient including all the CDS concepts we intend to measure.
3	Hybrid – HL7 w/ UI	Use the current HL7 VXU to submit the test cases and then utilize the IIS User Interface to look up the patient and/or save off a patient report for validation.
4	IIS Direct Entry	Use only the User Interface for both the creation of the test cases and validation of the results

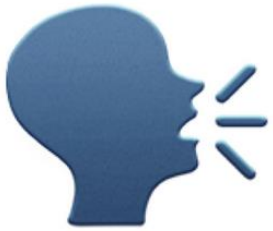
Proposed Testing Method



#	Method	Description
1	HL7	Use the current HL7 standard (VXU and QBP) as defined and tested against today.

- Fully testing a CDS engine requires a considerable number of test cases so automation is critical.
- At the time of this decision, AIRA had connections to 25 IIS who return CDS within their HL7 engine with more building the capability in preparation for Meaningful Use Stage 3. NOTE: This is now up to 36.
- Testing via HL7 continues to build on existing areas of assessment (e.g., transport, HL7). This reduces the effort by IIS programs to participate and continues to build on the real-world relationship between a provider and an IIS.

Proposed Foundational Decisions



Scope	Concepts	Methods

• Age-Based
  • Pediatric
  • Adolescent
  • Adult
• Includes Catch-up
	• Evaluation Status
	• Earliest Date
	• Recommended Date
	• Past Due Date
	• Series Status
		• HL7

Building Measures on the Foundation

Measures and Tests

Scope

- Pediatric
- Adolescent
- Adult

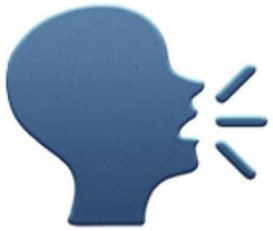
Concepts

- Evaluation Status
- Earliest Date
- Recommended Date
- Past Due Date
- Series Status

Methods

- HL7

Proposed Measure Approach



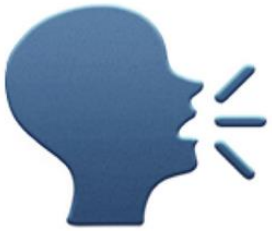
- Break up Measures by the 5 concepts (e.g., Evaluation Status, Earliest Date, Recommended Date, Past Due Date, Series Status)
- Each concept has a set of 4 measures
  - Capability measure for returning the concept
  - Accuracy measure for routine age-based pediatric recommendations
  - Accuracy measure for routine age-based adolescent recommendations
  - Accuracy measure for routine age-based adult recommendations
- Splitting this way provides for:
  - Understanding of which concepts are returned separate from accuracy of concept when it is returned
  - Isolation of age specific ACIP recommendations can help pinpoint areas of alignment/difference
  - Extendable to other areas in the future by adding a new measure (e.g., Increased Risk, Contraindications, Immunities)
  - Greatest flexibility for selection when moving assessment measures to validation

Recommended Date Measures

- The IIS HL7 interface returns a Recommended Date for each forecasted dose.
- The Recommended Date returned by the IIS matches the expected value for routine age-based ***pediatric*** recommendations.
- The Recommended Date returned by the IIS matches the expected value for routine age-based ***adolescent*** recommendations.
- The Recommended Date returned by the IIS matches the expected value for routine age-based ***adult*** recommendations.

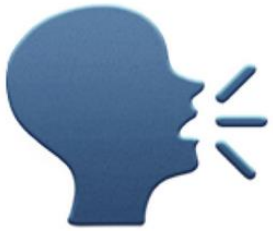
Proposed Measure Summary

20 Total Measures



Concept	Definition	Measures
Evaluation Status	The determination if the vaccine event “counted”	1 Capability 3 Accuracy
Earliest Date	The date at which point the patient could receive the next dose if the patient was likely to not return or has other reasons to accelerate the schedule quicker than the recommended date.	1 Capability 3 Accuracy
Recommended Date	The date at which point the patient should receive the next dose.	1 Capability 3 Accuracy
Past Due Date	The date at which point the patient is considered overdue for the next dose.	1 Capability 3 Accuracy
Series Status	The status of the patient towards protection against the vaccine preventable disease (e.g., complete, immune, contraindicated, not complete, too old, etc.)	1 Capability 3 Accuracy

Proposed Test Cases



- Leverage as many CDC CDSi test cases as possible
  - Some will need to be excluded for scope and/or technical reasons
- Develop a small number of AIRA/MACAW test cases
  - Test what CDSi doesn't (e.g., the on-schedule kid)
- Measures will be stable, but test cases within a measure will change over time
  - **Functional Standard 10.4:** The IIS CDS functionality is updated for the IIS in a timely fashion after new ACIP recommendations are incorporated into the CDC Clinical Decision Support for immunization (CDSi) resources published on the CDC website.
  - Proposal is to use the CDSi published test cases provided at least 30 days have elapsed since publication

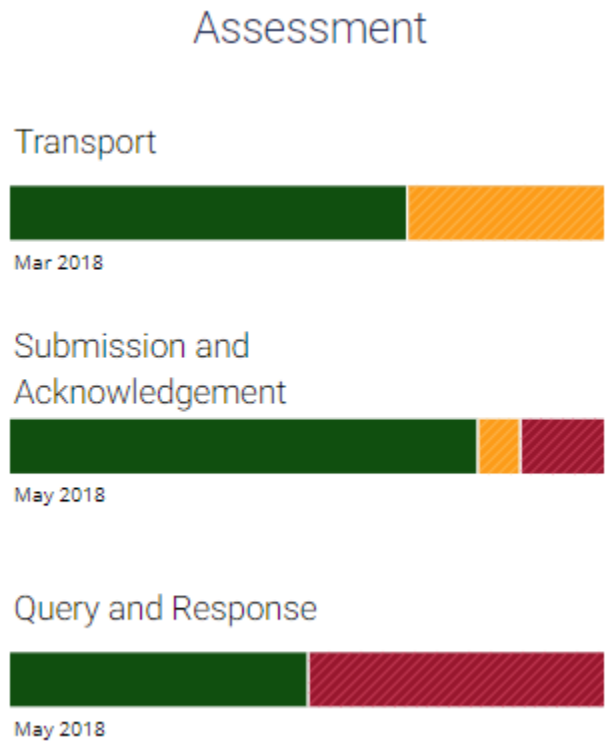
Miscellaneous Items

- Local Policy Considerations
  - Per ACIP, the 4-day Grace Period can be omitted locally
  - Some IIS may not provide CDS for Adults

- Others?

Miscellaneous Items

- Assessment Measures have one of three outcomes
  - Fully Meets, Deviates, and Does Not Meet
- CDS Assessment will have 700+ test cases
  - What percentage of test cases need to pass to be considered Fully Meets? (e.g., 90%, 95%, 99%, 100%)
  - What about Deviates?
  - What about Does Not Meet?



Questions/Discussion

1. Clinical Decision Support Measures
2. General Questions About Measurement and Improvement

Next Steps

- By Wednesday **6/6,** Provide feedback
  - Please send any feedback to Kristi Siahaya at ksiahaya@immregistries.org
- On Monday **6/18,** Board Discussion and Approval Vote
- In **Q4 2018,** Assessment Begins

Thank you!

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Send comments to Kristi Siahaya at ksiahaya@immregistries.org.