HL7 Immunization User Group

MONTHLY MEETING

MAY 11, 2017

2:00 PM ET

Agenda

- Welcome

- Updates
  - SISC Update
  - HL7 Workgroup Meeting Update

- Call for EHR Contacts

- Discussion
  - 2017 AIRA Assessment for IIS

SISC Update

STANDARDS AND INTEROPERABILITY STEERING COMMITTEE (MARY WOINAROWICZ)

HL7 Working Group Meeting

REPORT OF MAY 2017 MADRID HL7 MEETING

HL7 Working Group Meeting

HL7 work is accomplished in Work Groups

- ◦ Standards volunteer work by industry professionals
- ◦ Meet by phone on weekly basis
- ◦ Internationally focused with US and other country experts

Working Group Meeting

- ◦ Allows face-to-face time for Work Groups
- ◦ Meets three times a year, two times in the US and once elsewhere
- ◦ Supports networking but primarily for technical folks to find those who can help them solve technical problems.

FHIR Connectathon

- ◦ Held the weekend before the conference

HL7 Working Group Meeting

Upcoming WGMs

◦ September 9-15, 2017 – San Diego CA
  ◦ Plenary Meeting
  ◦ Immunization Focus, building around Wednesday morning
    ◦ Conformance Tooling Demonstrations
    ◦ Conformance within Immunization Space
    ◦ Stay tuned for more information
◦ January 17- February 2, 2018 – New Orleans LA
◦ May 12-18, 2018 – Cologne Germany
◦ Sep 29-Oct 5, 2018 – Baltimore MD
◦ Jan 12-18, 2019 – San Antonio TX

HL7 Working Group Meeting

PHER Update

- ◦ Immunization Guide ballot has closed, comments are being reviewed
  - ◦ PHER will resolve minor, non-impacting changes
  - ◦ List of minor changes made will be shared with SISC
  - ◦ PHER will identify important issues and refer to SISC to review and comment

FHIR Update

FHIR Adoption and Interest Increases

- Work groups increasingly talk about issues related to FHIR development
- Countries that built HL7 v3 interfaces are now looking to replace with FHIR
- HL7 v3 is still being supported for currently defined uses
- New uses for HL7 v3 are not being proposed

Impact of FHIR on the Immunization Community

- HL7 v2 is still being improved and new versions will continue to be released
- In the US, HL7 v2 will remain for reporting and querying immunizations
  - IIS and EHR systems are heavily invested in HL7 v2 technology
  - End solution for FHIR is equivalent to what HL7 v2 provides for current use cases
  - FHIR is still under development, not yet ready to replace a mature standard
- FHIR makes more sense for new use cases

FHIR Update

Public Health and Emergency Response (PHER)
- Maintains two Immunization FHIR resources:
  - Immunization
  - ImmunizationRecommendation
- Sponsoring a project to create a standard for immunization forecasters
  - Project effort is being lead by Daryl Chertcoff from HLN
  - Participation from AIRA, NIST, Aegis, and CDC

Project: Clinical Decision Support (CDS) for Immunizations FHIR Implementation Guide
- First FHIR Implementation Guide for the Immunization Community
- Does not replace current standards to include CDS in HL7 v2 RSP messages
- Supports CDS functions in IIS by providing access to CDS engine

FHIR Update

CDS for Immunizations FHIR Implementation Guide

- Proposing a FHIR Operation
- The inputs will be:
  - Assessment date
  - Patient (constrained to only include the Date of Birth and Gender)
  - Immunization History
- The outputs will be:
  - Immunization History (with evaluations)
  - Immunization Recommendations
- Intended to replace currently available proprietary/custom interfaces
  - Several project participants have already expressed the intention of adding new FHIR operation to current custom interface

FHIR Update

CDS Hooks
- The Clinical Decision Support (CDS) recommended looking at CDS Hooks
- CDS Hooks allows external applications to provide guidance in specific points in an EHR workflow
  - CDS Hooks defines the concept of "Cards" that can be shown to the clinician
  - EHR can discover these services automatically
  - The Card could say "Due for MMR today". Or "Schedule for Hep B dose 2 on or after May 2, 2018 but before June 2, 2018"
- AIRA demonstrated feasibility of using CDS Hooks at the Connectathon
- But determined to be out-of-scope for project
  - CDS Hooks is clinician focused
  - Project proposes an API for system-to-system communication
  - CDS Hooks could be a great Phase 2 project to build on current project

http://cds-hooks.org/

CDS Hooks

Clinician selects "Patient View"
- EHR queries CDS Hooks app
- CDS Hooks app can return cards

AIRA wrote CDS Hooks app
- Takes Birthdate and Gender
- Recommends vaccines due today

Limitations
- Demo doesn't support
  - Vaccination history
- Only returns a limited amount of data

http://demo.cds-hooks.org/

demo.cds-hooks.org/#{"hook":"patient-view"}

⚡ **CDS Hooks** Demo   Rx View   Patient View   Change Patient

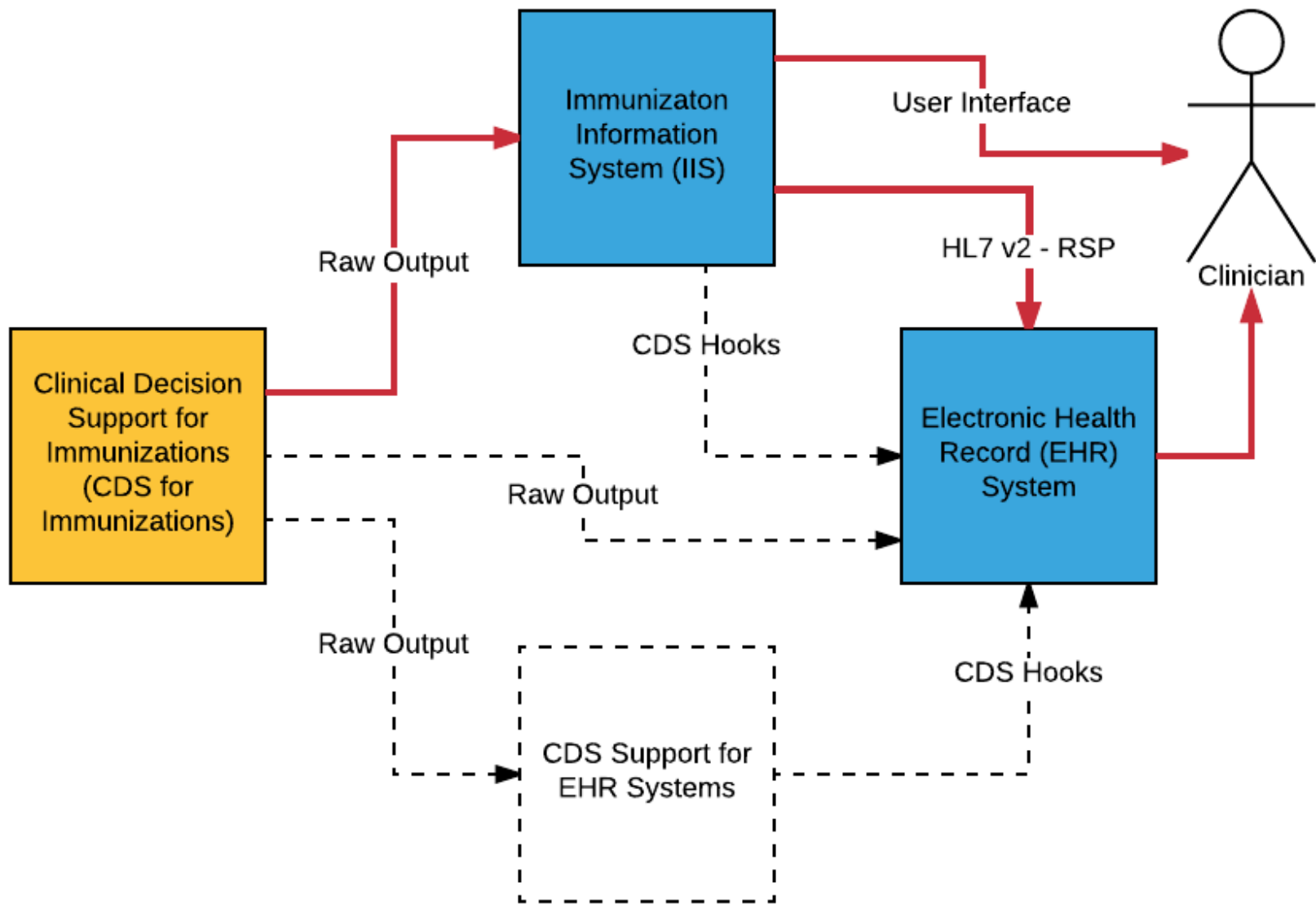**Patient View**

Daniel X. Adams

ID: 1288992 **Birthdate:** 1925-12-23

HepB Due Today
Source: TCH Forecast Tester
Dose 1 of HepB Due 1925-12-23.

Tdap Due Today
Source: TCH Forecast Tester
Dose 1 of Tdap Due 1932-12-23.

HepA Due Today

FHIR Update

What to expect next
- Publishing a proposed Implementation Guide for ballot
- Looking to ballot for September 2017

NIST is creating testing tool: FITS
- The new FHIR operation will be the preferred interface for testing CDS tools
- AIRA will work with NIST to provide adaptors to allow testing via:
  - HL7 v2 with an IIS
  - Selected proprietary/custom interfaces (those currently supported by the TCH Forecast Tester)

Want to be involved?
- Contact Daryl Chertcoff from HLN to join the project group

Call for EHR Contacts

Call for EHR Contacts

We want to do another EHR engagement User Group meeting

We want to continue enlarging the net to bring in more EHR contacts

Do you have EHR contacts you are willing to share?
- Looking for contacts you work with on a daily basis
- Would benefit from help from the wider community
- Can bring the EHR perspective to the group
- We will reach out to them and invite them

Call for EHR Contacts
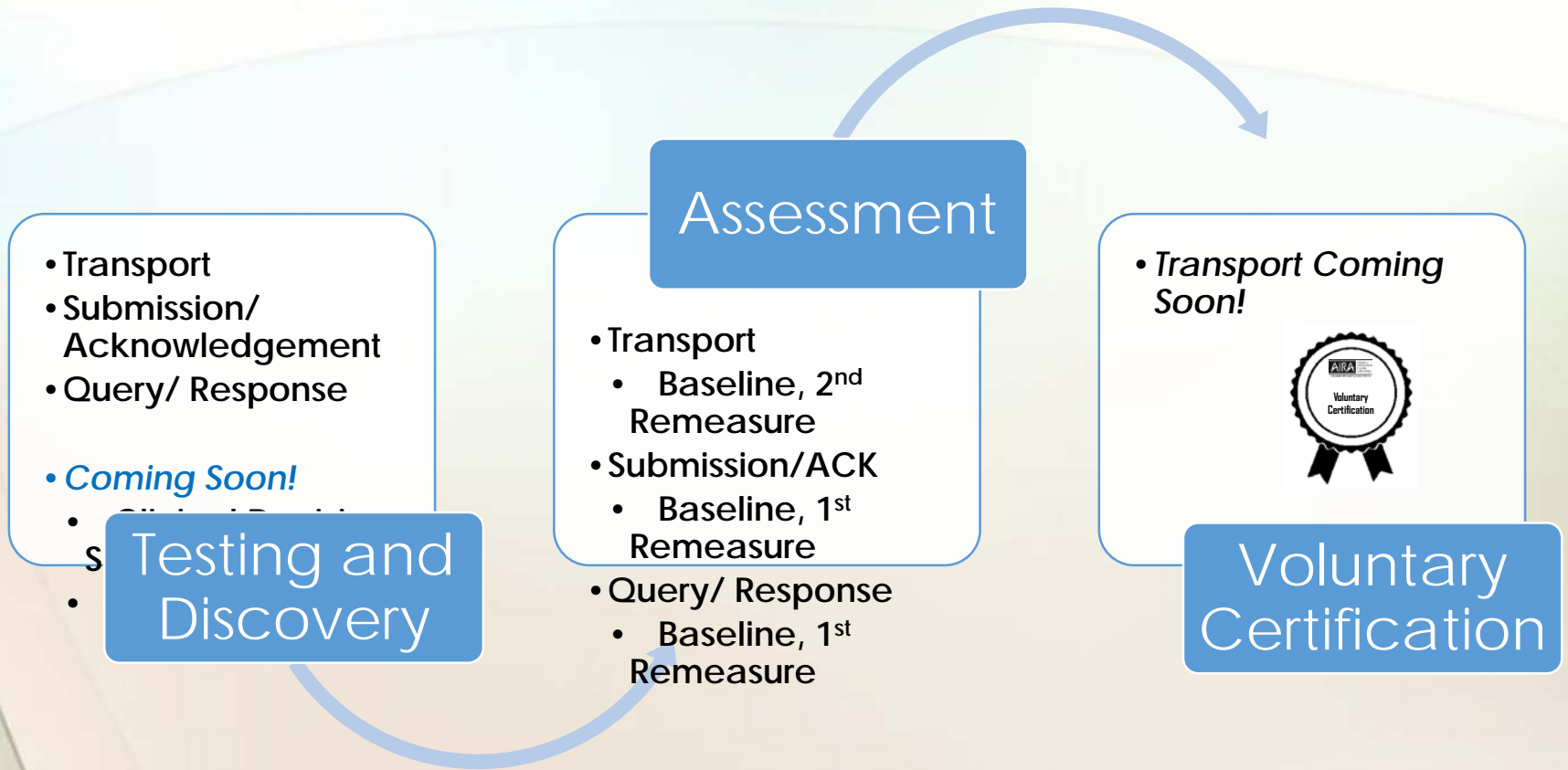
2017 AIRA Assessment for IIS

UPDATE ON PROGRESS

Contributors

- Measurement for Assessment and Certification Advisory Workgroup

  - Jane Lammers, Nevada - Co-Chair
  - Aaron Bieringer, Minnesota - Co-Chair
  - Roger Aikin, Arizona
  - Amy Groom, IHS
  - Scott Benedict, Nebraska
  - Dave McCormick, Indiana

  - Rob Snelick, NIST
  - Amy Metroka, NYC
  - Wendy Nye, Michigan
  - Laura Pabst, IIS Support Branch, CDC
  - Eric Schuh, DXC (formerly HPE)
  - Kevin Snow, Envision
  - Brandy Altstadter, STC

- AIRA Board of Directors
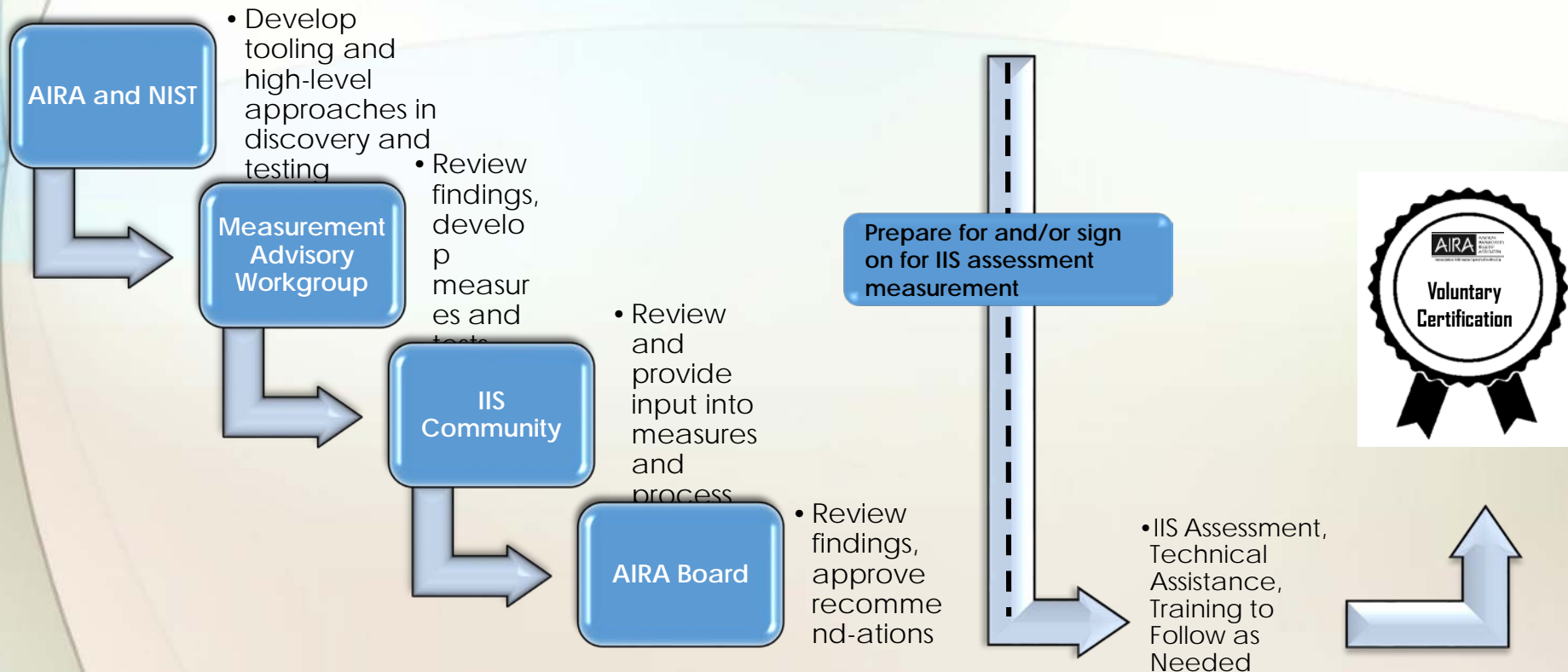- Partners at NIST
- Partners at CDC

Overview

- Review of the simplified process for IIS measurement and improvement

- The ground we've covered to date

- What are the data telling us?
  - Participation
  - Results
  - Recommendations

- AART – not just any analysis tool

MACAW Measurement and Improvement

Testing and Discovery

- Transport
- Submission/ Acknowledgement
- Query/ Response

- *Coming Soon!*
  - S
  -

Assessment

- Transport
  - Baseline, 2nd Remeasure
- Submission/ACK
  - Baseline, 1st Remeasure
- Query/ Response
  - Baseline, 1st Remeasure

Voluntary Certification

- *Transport Coming Soon!*

The Assessment Process, Simplified

AIRA and NIST

- Develop tooling and high-level approaches in discovery and testing

Measurement Advisory Workgroup

- Review findings, develop measures and tests

IIS Community

- Review and provide input into measures and process

AIRA Board

- Review findings, approve recommend-ations

Prepare for and/or sign on for IIS assessment measurement

- IIS Assessment, Technical Assistance, Training to Follow as Needed

Voluntary Certification

The Road Ahead:
Measure, Improve, Rinse, Repeat

Engage IIS in Testing, Assessment

Develop independent measures with broad community support, visibility

Test and share actionable information with IIS, vendors

Provide support, training and visibility toward progress

Re-measure, demonstrate improvement
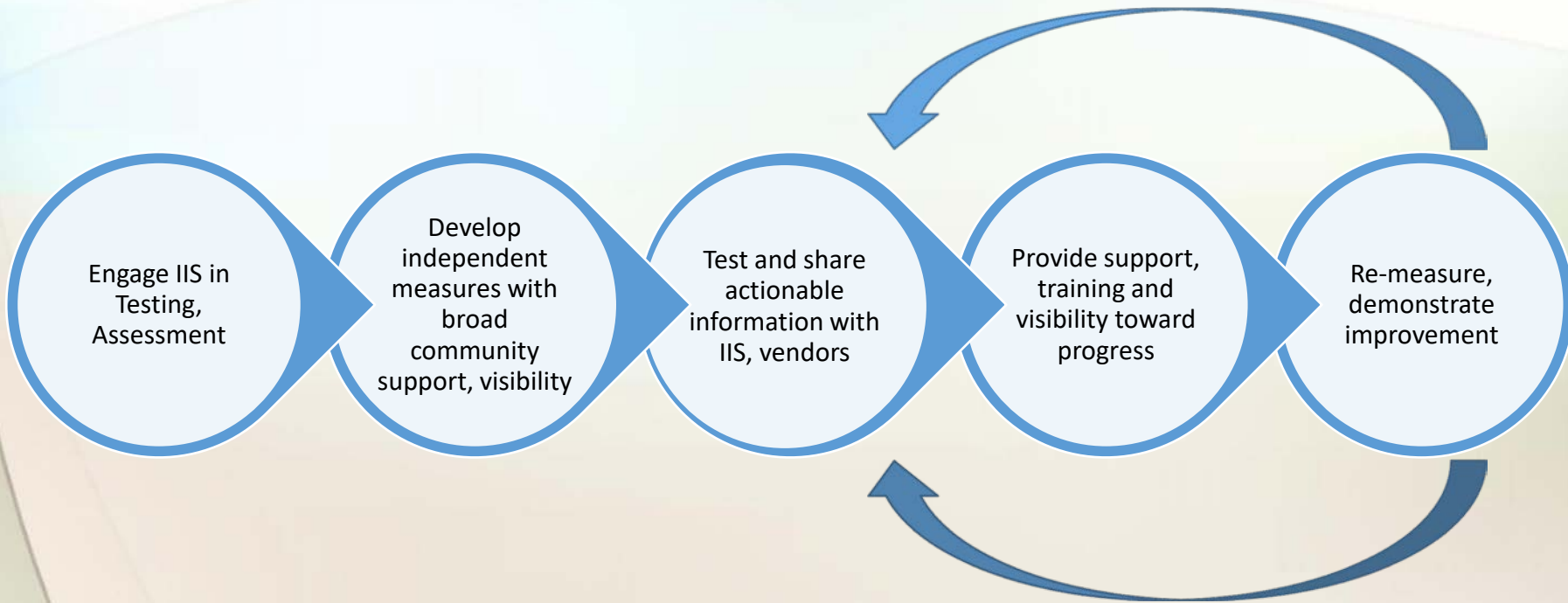
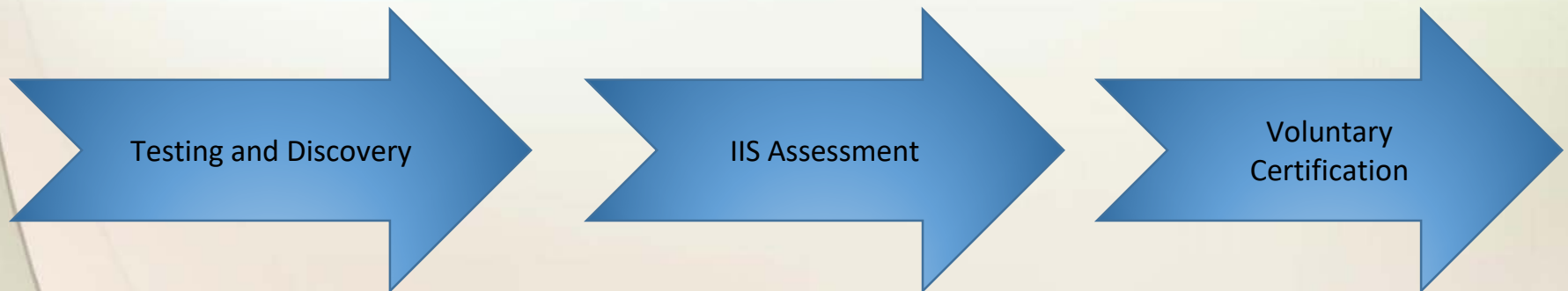# Aligning with Standards: What's the Impact?

Benefits

- Speeds up onboarding and helps to stabilize interoperability
- Improves data quality
- Allows IIS to hold EHRs more accountable
- Moves IIS community closer to its mission of making records and forecasts available at point of care
- Exposes those areas where standards are unclear or don't yet exist

Challenges

- Enhancements (and even connecting with testing) may require human and financial resources
- Nation-wide or community-wide standards may be at odds with jurisdictional policies and practices
- Will need to consider impact to existing interfaces

Measurement and Improvement Process
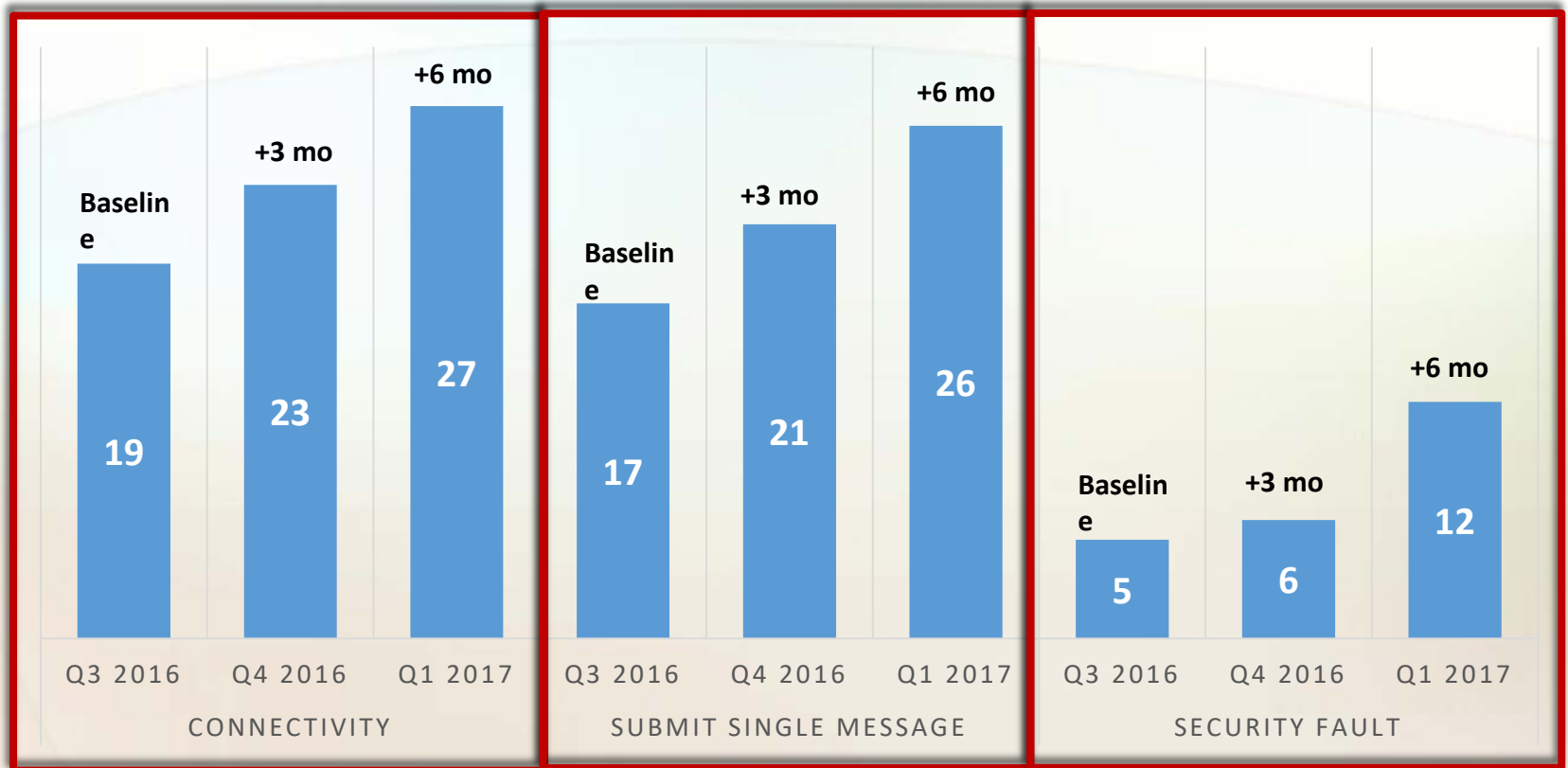
What we initially thought it would look like…

Testing and Discovery → IIS Assessment → Voluntary Certification

Where are we today?

Overall Testing and Discovery Participation

- **55 out of 59 IIS have participated**

- **43 jurisdictions are actively connected**

- **16 remaining**
  - **Future enhancements**
  - **IIS In transition**
  - **technical/policy issues with HIEs**
  - **contingencies on separate funding streams**

Last Updated: May 10, 2017

Transport Assessment

Transport – IIS Fully Meeting Measures

Transport Recommendations

- Review conformance test results and work to improve areas of non-conformance.

- Utilize conformance tooling provided by NIST when developing and/or improving implementation of the CDC WSDL.

- Publish and make available all transport layer requirements for use by potential trading partners.

Submission/Acknowledgement Assessment

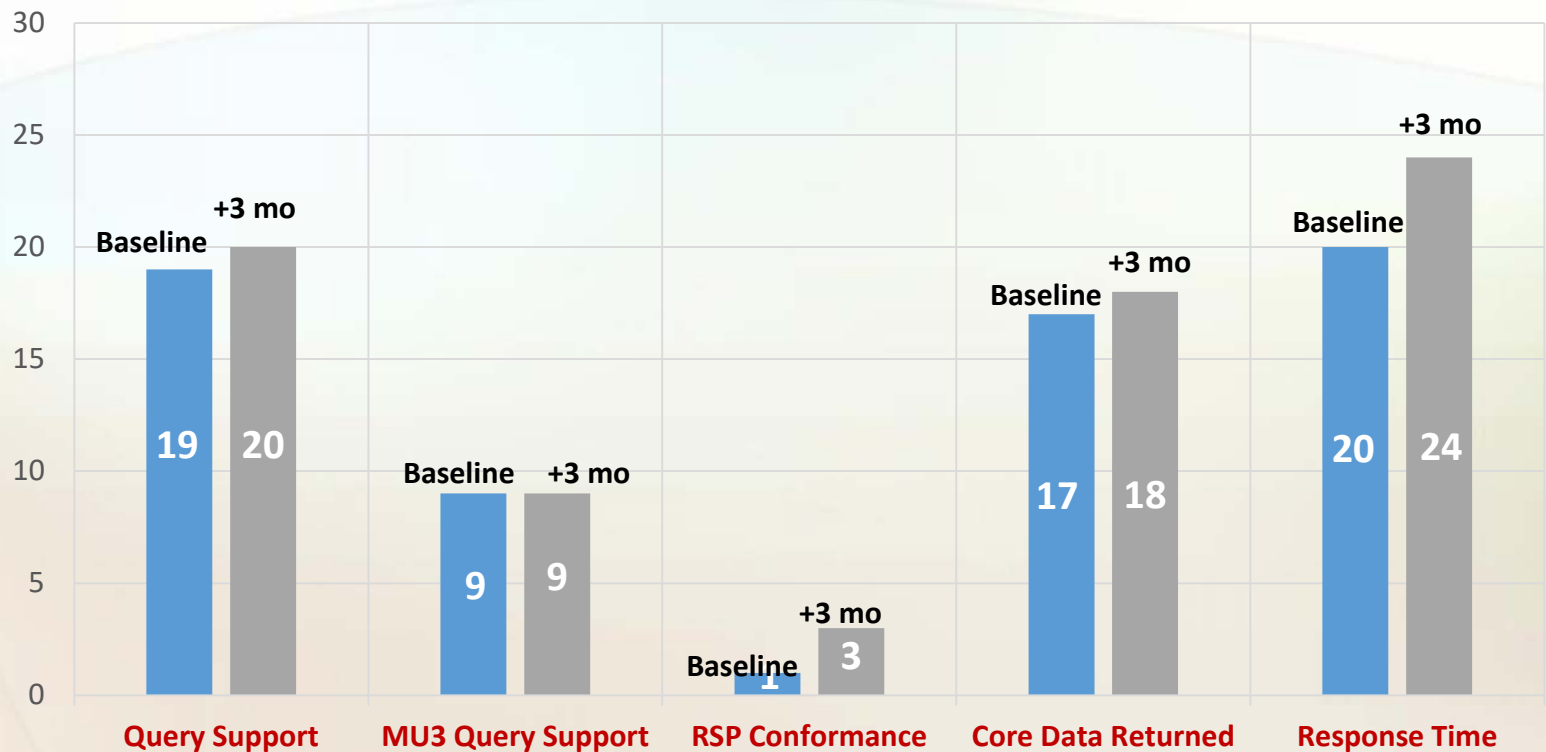# Submission/Acknowledgment Baseline and Preliminary 3-month Results
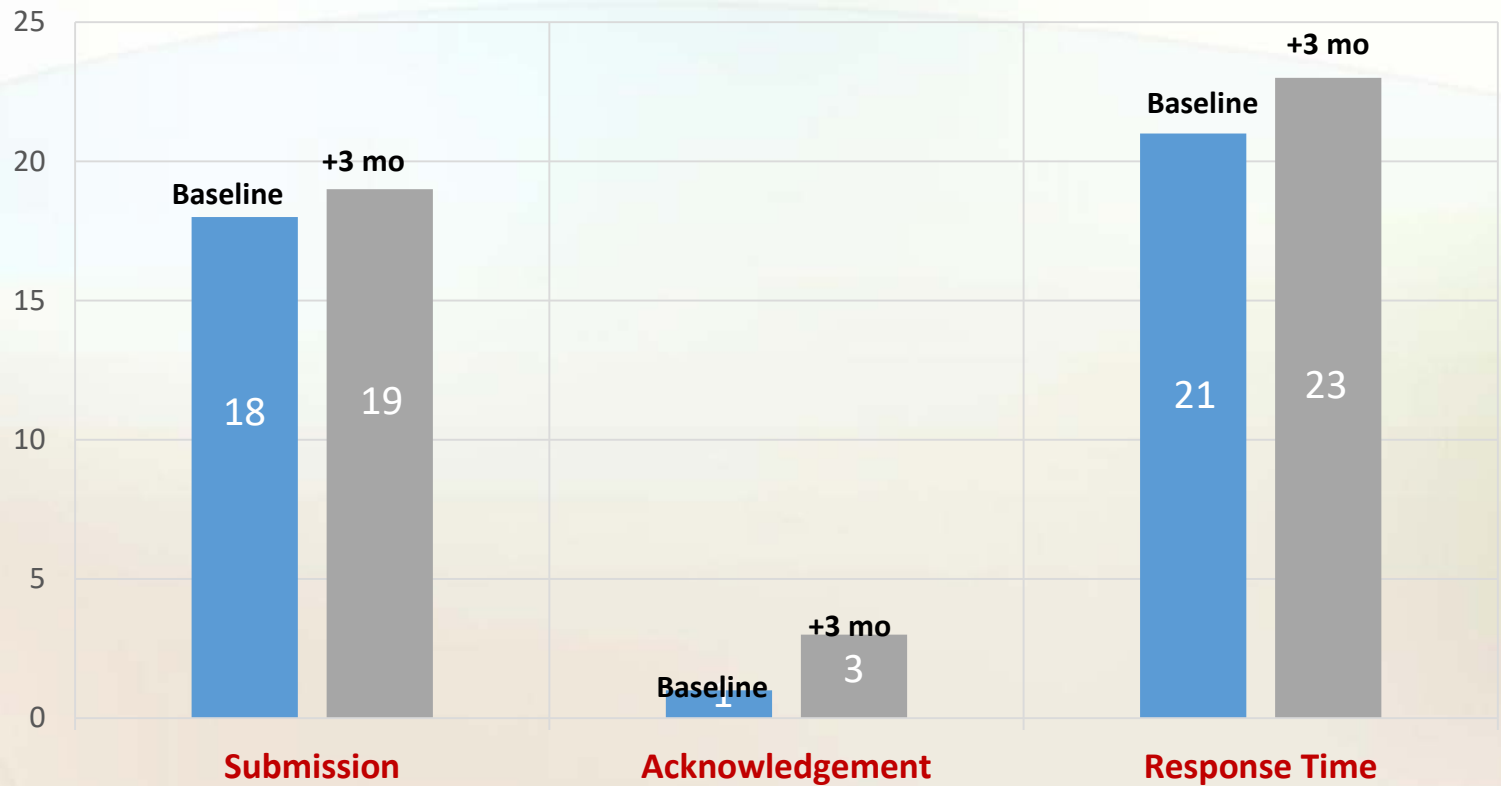
Submission/ACK Recommendations

- Continued education and direction is needed on ACK messaging to ensure IIS are implementing standards consistently across all systems.

- National direction is needed on commitment to VIS data or removal of VIS data as a key data element for IIS to capture, maintain and use.

- Improving future National IGs will help stabilize these messages and implementation. In the meantime, guidance should be provided to implementers who are planning for the future or looking to improve on this area of their IIS.

- It is important to communicate to partners that modifications may demand short-term work but yield long-term gains in faster and easier interoperability and interface development.

- IIS should utilize conformance tooling provided by NIST when developing and/or improving implementation of the HL7 standards.

Query/Response Assessment

Query/Response Results Baseline and Preliminary 3-month Results

Query/Response Recommendations

- Continued education and direction is needed on ACK messaging to ensure IIS are implementing standards consistently across all systems.

- In general, IIS are using the correct HL7 profile when returning their response (RSP), but most of them contain technical conformance errors which make understanding the RSP more difficult.

- Measure 5 should be reviewed and either improved so it can better measure a condition where multiple patients are found or removed until such time it can be better measured.

- Overall, success in matching the patient was achieved, but some IIS are quite strict in finding a match and minor demographic differences, submitting too much data, and/or slightly too little data seemed to have different impacts and outcomes across different IIS.

- IIS should utilize conformance tooling provided by NIST when developing and/or improving implementation of the HL7 standards.

All Test Results are Available in AART

- The Aggregate Analysis Reporting Tool (AART) is a Central Testing Resource

- Three quarters of the IIS community is currently connected for ongoing measurement

- To date, we've run **1.7 million** test messages through AART
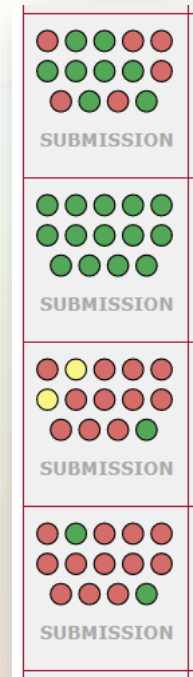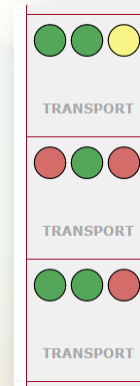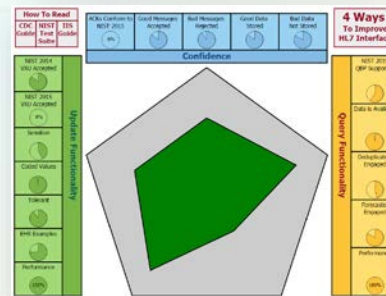
51 IIS programs and 7 vendors/implementers are viewing their own data and results in AART; where selected, they can also share data in named or unnamed form.

Questions?

Thank you!

Please contact us with comments, additional questions:

AIRA Technical Team: info@immregistries.org

Next Meeting

THURSDAY, JUNE 8TH

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

- AIRA Press Release
  http://www.immregistries.org/events/2014/04/10/hl7-immunization-user-group

Contact Information

If you have any questions or comments:

- Kim Salisbury-Keith Kim.SalisburyKeith@health.ri.gov

- Nathan Bunker nbunker@immregistries.org

- Kevin Snow ksnow@envisiontechnology.com

Thank you!