



AIRA
AMERICAN IMMUNIZATION
REGISTRY ASSOCIATION

AART User Group

Mini-Series

February 26, 2020

4:00 PM ET

Agenda

- Welcome
 - Mentimeter: How it works! Poll: who is attending?
 - Goals
- Background on AART
- AART User Group Series: Overview
- Future Topics for User Group
- Tour of AART



Polling



- We are using Mentimeter to capture your feedback and ideas on plans for future meetings
 - In future sessions, we will use Mentimeter to capture questions and poll the group in real-time to guide the discussion and make sessions interactive
1. Take out your smartphone
 2. Using your browser, go here: www.mentimeter.com, enter code 4647 89



Goals

1) Increase the use of AART to:

- ✓ identify areas for improvement,
- ✓ prioritize IIS enhancements,
- ✓ test new IIS functionality,
- ✓ and reflect on accomplishments.

2) Support your use of AART by convening a group of engaged users to share and learn from one another



Background

AART is... the Aggregate Analysis Reporting Tool

AART was developed to visualize and compile the testing results and information on community-driven measures and tests related to Functional Standards

Did you know...

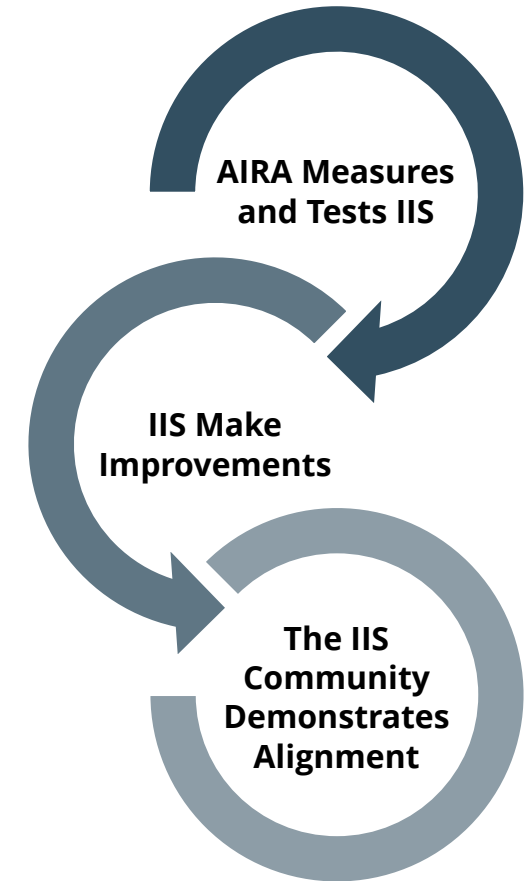
1. AART has been testing with IIS since 2015
2. There are over 6 million test cases in AART
3. You can view test results for your peer IIS at the content area level, and at the test case level



Measurement and Improvement Initiative – What Is it?



- The IIS Measurement and Improvement (M&I) Initiative began in 2015 as an effort to:
 - Test IIS alignment with standards
 - Provide IIS with information and assistance to improve
- All testing is conducted by AIRA staff, in large part through:
 - Connecting with test or pre-production systems
 - Submitting test messages
 - Analyzing returned messages



Who is Supporting This Process Along with AIRA?

MACAW

The Measurement for Assessment and Certification Advisory Workgroup, made up of IIS, Immunization Program Managers, Vendors, and Federal Partners

CDC

Centers for Disease Control and Prevention, our funders, supporters, and collaborators

NIST

National Institute of Standards and Technology, who collaborate with AIRA to develop tooling to support measurement

IIS and Imm Programs

IIS and Immunization Programs do the heavy lifting of analysis, planning, funding and implementation

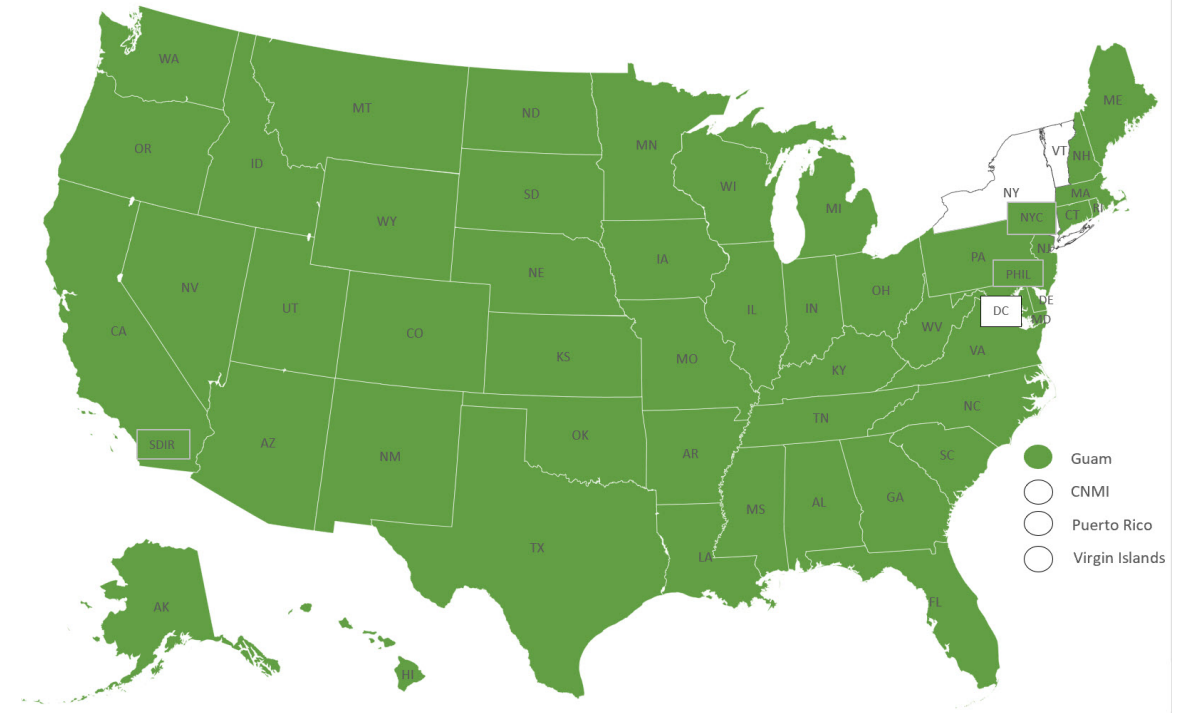
IIS Vendors

IIS Vendors support IIS and Immunization Programs in planning and implementation



Thank You For Engaging With Us!

- Participation is strong and results are being reviewed and acted upon
- Partners are publicly recognizing improvements in standardization across IIS
- We are seeing progress in all areas of quarterly measurement



AART Clinics

- In person, @ AIRA National Meeting
 - ✓ Sign up now for your spot for AIRA 2020
- In person, @ NIC
 - ✓ Sign up coming soon!
- Virtually, via online meeting tools
- Request a clinic or follow up clinic anytime!

Announcements and Welcome!

Welcome to the new AART dashboard! A brief summary video of recent changes to AART can be found [here](#). Click [here](#) for more details. The dashboard below allows you to quickly navigate to the results for each of the stages of Measurement. Hover over text to see links to results below.

AIRA Sandbox Dashboard

Assessment



Validation

Transport



Q3 2019

Submission and
Acknowledgement



Q3 2019

Query and Response



Q3 2019

CDS



Q2 2019

[See Discovery Reports](#)

Transport - Complete



2019



Validated

Submission and Ack
Basic



2019



Validated

Query and Response
Basic



2019



Major Differences



AART User Group Mini-Series



Goals

1) Increase the use of AART to:

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- ✓ and reflect on accomplishments.

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This is your User Group.



As participants, you will:

- ✓ drive the content, set the pace
- ✓ present your challenges and successes,
- ✓ ask questions of the community and your peers, and more.



Expectations

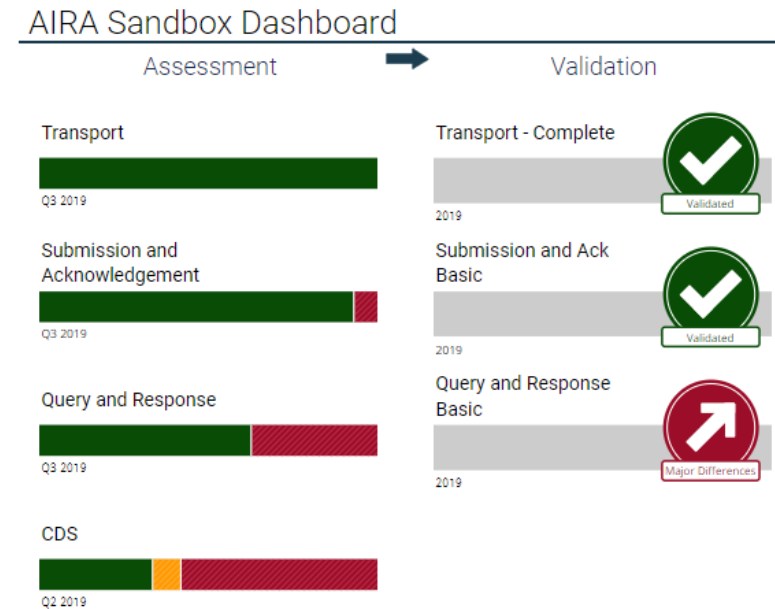
What can you expect?

- Opportunity to spend dedicated time thinking about what AART can do for your IIS and how you can use it more effectively.
- Learn from your peers about successes they've had and how they've leveraged testing results to prioritize and implement enhancements.
- Help us improve AART; what's working well? What could work better? What new functionality would help you in your work?



AART User Group Mini-Series

- Who: Immunization program managers, IIS managers, IIS teams, HL7 analysts, data exchange/quality analysts, existing AART users
- Schedule: February thru July
- 4th Wednesday of the month,
4:00 – 5:00 pm ET



AART User Group Mini-Series

Today!

Session 1: Introduction to Series, polling for future topics

Session 2: HL7 Discovery & Assessment Reports

Session 3: Clinical Decision Support

Session 4: User Experience – HL7 Assessment

Session 5: User Experience – Clinical Decision Support

Session 6: *topic TBD*



What topics are you interested in?

- **High-Level:**

For those who provide direction but don't need the technical details.

- Validation Program
- Assessment Program
- Discovery Program
- Participation and Sharing
- Prioritizing Changes
- History and My Peers



What topics are you interested in?

- **Mid-Level:**

For those who want to understand more details about specific topics.

- HL7 Discovery
- Transport Assessment
- Submission & Acknowledgment Assessment
- Query & Response Assessment
- CDS Discovery
- CDS Assessment
- Future Areas to be Tested



What topics are you interested in?

- **Detail-Level:**

For those who understand the technical details and want to hear specifics.

- How HL7 message testing works
- How CDS testing works
- How AART connects to IIS for testing purposes
- Recent / future changes in AART software
- Integration with NIST tooling that supports HL7 message testing
- Integration with NIST tooling that supports CDS testing (FITS)



What have we missed?

- What additional topics, features, challenges, are you interested in working on through the User Group?



What do you want to share/present on?

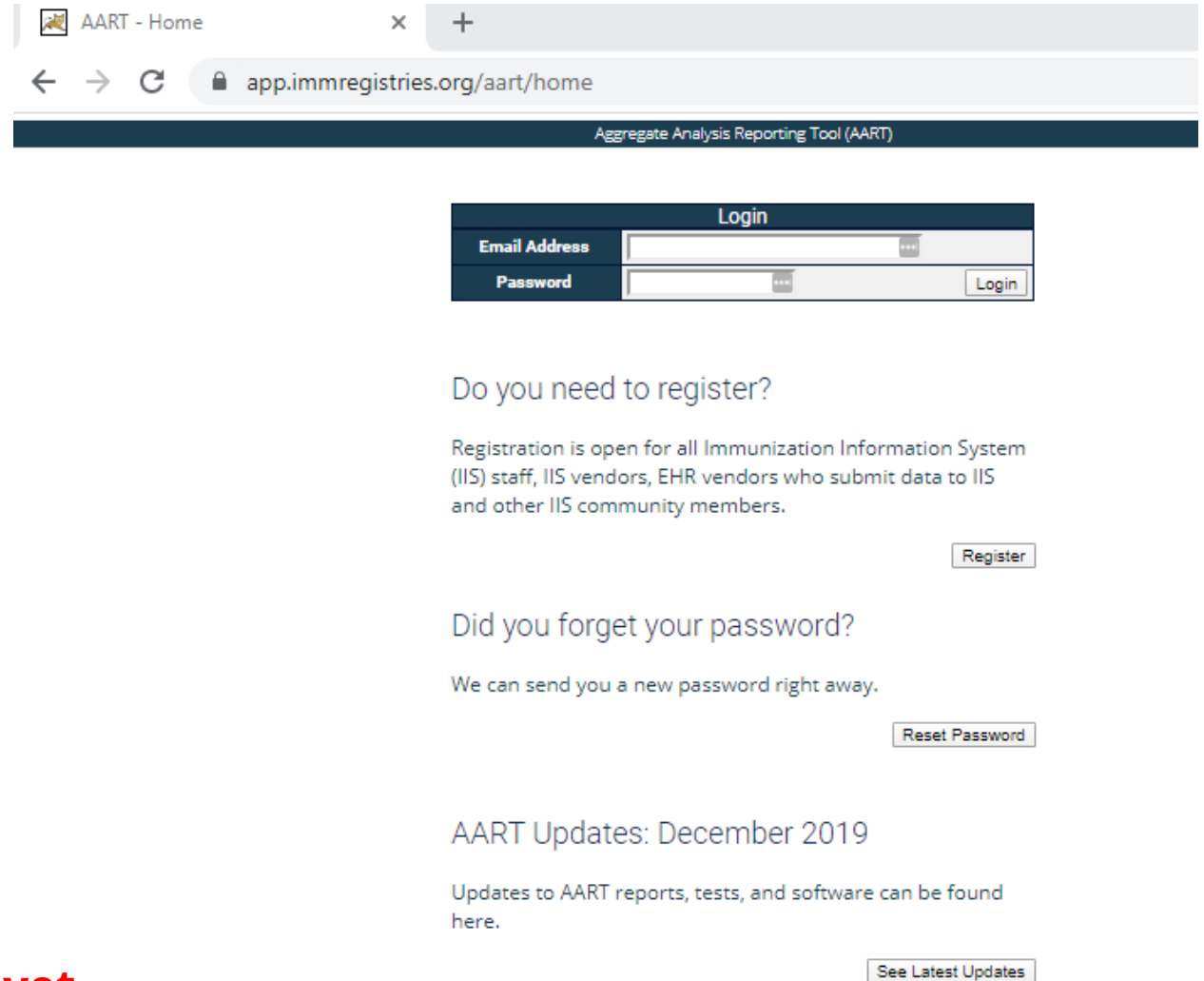
- What are you interested in sharing with the User Group in a future session? What ways have you used AART to evaluate your system and/or prioritized enhancements?



AART Tour

- AART login page
- Register here
 - Forgot your password
- AART Updates

**Reminder! If you haven't registered yet
you can do that today!**



The screenshot shows the AART Home page in a web browser. The browser tab is labeled 'AART - Home' and the address bar shows 'app.immregistries.org/aart/home'. The page title is 'Aggregate Analysis Reporting Tool (AART)'. The main content area features a 'Login' section with fields for 'Email Address' and 'Password', and a 'Login' button. Below the login section, there is a link 'Do you need to register?' followed by a paragraph explaining that registration is open for all Immunization Information System (IIS) staff, IIS vendors, EHR vendors who submit data to IIS, and other IIS community members. A 'Register' button is provided. Below this, there is a link 'Did you forget your password?' followed by a paragraph stating 'We can send you a new password right away.' and a 'Reset Password' button. At the bottom, there is a link 'AART Updates: December 2019' followed by a paragraph stating 'Updates to AART reports, tests, and software can be found here.' and a 'See Latest Updates' button.

AART - Home

app.immregistries.org/aart/home

Aggregate Analysis Reporting Tool (AART)

Login

Email Address

Password

Login

Do you need to register?

Registration is open for all Immunization Information System (IIS) staff, IIS vendors, EHR vendors who submit data to IIS and other IIS community members.

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Did you forget your password?

We can send you a new password right away.

Reset Password

AART Updates: December 2019

Updates to AART reports, tests, and software can be found here.

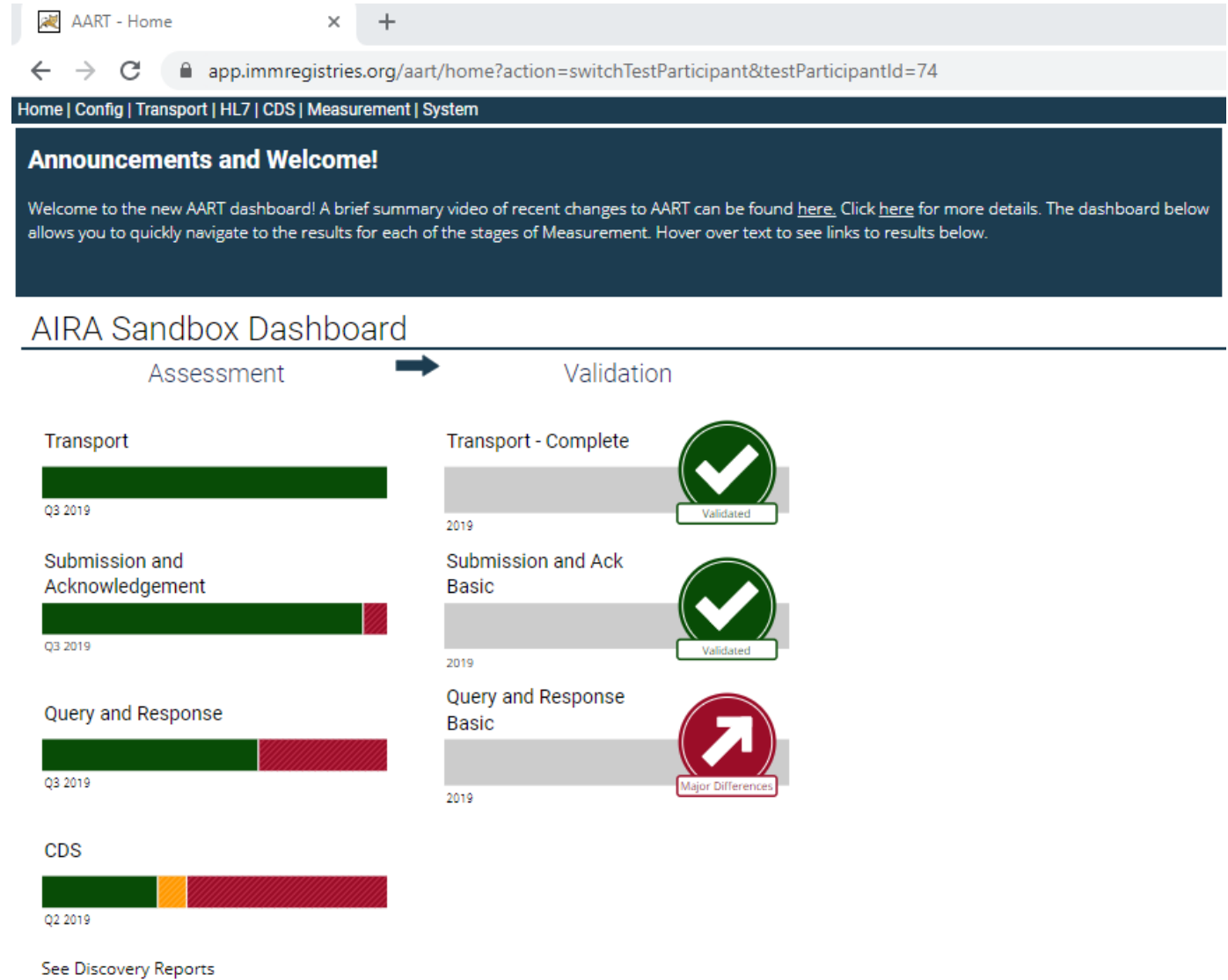
See Latest Updates



AART Tour

AART Dashboard

- Assessment Reports
- Validation Reports
- Link to Discovery Reports



AART Tour

Click through the Assessment Report to get into deeper levels of detail.

AIRA Sandbox

Prepared for AIRA Sandbox

IIS Assessment Connectivity Details

| | |
|----------------|---|
| IIS | AIRA Sandbox |
| Created By | Eric Larson |
| Completed Date | 07/23/2019 Request New Report |
| Report Status | Released |

Background

In 2015, AIRA launched an Interoperability Testing Project to determine the level of alignment between current Immunization Information Systems (IIS) and the community's interoperability standards. The project is heavily informed by IIS Functional Standards and Operational Guidance Statements. The testing process connects with IIS directly and submits sample messages to IIS development platforms.

This report provides information for IIS jurisdictional use for improvements and internal distribution as needed. AIRA will not redistribute any individual IIS results outside of their respective jurisdiction and self-selected sharing settings within this AART tool.

Assessment Measure Summary Results

MACAW convened an in-person meeting in July of 2016 to define measures and high-level scenarios for submission of immunization related data to an IIS and querying for immunization related data within an IIS. This report focuses on the measures and tests for submission of immunization related data to an IIS. A companion report focuses on measures and tests for querying for immunization related data within an IIS.

The following words were carefully chosen and defined to mean the following within each measure:

- **Processes:** This means 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.
- **Responds:** This means the IIS returns a final resolution, or outcome, of processing the message with a conformant HL7 message.

| Measure | Measure Title | Result |
|---------|--|---------------|
| 1 | The IIS processes an administered vaccine for a patient. | Meets |
| 2 | The IIS processes a historical vaccine for a patient. | Meets |
| 3 | The IIS processes the submission of a full immunization record for a patient. | Meets |
| 4 | The IIS processes an update to a previously submitted vaccination event. | Meets |
| 5 | The IIS processes a delete to a previously submitted vaccination event. | Meets |
| 6 | The IIS processes a submission where the patient does not give consent (i.e., patient data is protected) to share data. | Meets |
| 7 | The IIS processes a refusal of a vaccination. | Meets |
| 8 | The IIS processes an adverse event. | Meets |
| 9 | The IIS processes an observation about a patient which results in a contraindication or immunity to a vaccine preventable disease. | Meets |
| 10 | The IIS processes messages in accordance with the HL7 2.5.1, release 1.5 guide. | Meets |
| 11 | The IIS processes both complete and incomplete/partially administered doses. | Meets |
| 12 | The IIS responds to a correctly formatted message with no errors. | Meets |
| 13 | The IIS responds to a submission that has an error. | Does Not Meet |
| 14 | The IIS responds to a submission with an ACK within 5 seconds or less for 95% of the records submitted. | Meets |



AART Tour

- Summary Notes for this Assessment Report
- History, My Peers

AIRA Sandbox

Report Details History My Peers

Prepared for AIRA Sandbox

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AART Tour

List of Measures for Submission & Acknowledgment

| Measure | Measure Title | Result |
|---------|--|---------------|
| 1 | The IIS processes an administered vaccine for a patient. | Meets |
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AART Tour

Drill down from Measure 13 to test cases 13.1 and 13.2

13: The IIS responds to a submission that has an error.

Purpose

The purpose of this measure is to validate the conformance of the ACK message when a problematic VXU message is submitted to the IIS.

Functional Standards

This measure is supported by the following version 4.0 functional standards:

- **Functional Standard 8.2:** The IIS receives submissions and returns acknowledgements consistent with the current CDC-endorsed HL7 Implementation Guide.

Test Outcome

| Test Case Results | | |
|-------------------|---|---------------|
| Test Case | Test Case Title | Result |
| 13.1 | ACK conformance validation on message with data quality issue | Does Not Meet |
| 13.2 | ACK conformance Validation on missing critical data element | Meets |



AART Tour

View the test case details,
the VXU submitted and
the ACK returned by the
IIS

| | | | |
|------------------|---|-----------|--------|
| Description | ACK conformance validation on message with data quality issue | | |
| Test Case Number | SA.13.1.1 | Test Type | Update |
| Test Position | 43 | | |
| Expected | Reject | Actual | AA |
| Accepted | Yes | Result | Fail |

[Submit Feedback](#)

Update Message Submitted

```
MSH|^~\&|||20190714102500-0600||VXU^V04^VXU_V04|rp-SA.13.1.1|P|2.5.1|||ER|AL|||Z22^CDCPHI
PID|1||B71C75712^^^AIRA^MR||Waldo^Kayleen^Aisling^^^L|Greenlee^Kyla^^^^M|20150703|F||2106-3^W
PD1|||||||02^Reminder/Recall - any method^HL70215|N|20190714|||A|20190714|20190714
NK1|1|Waldo^Greenlee^Marion^^^L|MTH^Mother^HL70063|38|Bakey Ln^^Walker^MI^49544^USA^P|^PRN^PH^^^G
ORC|RE|AB71C75712.1^AIRA|BB71C75712.1^AIRA
RXA|0|1|20140702||94^MMRV^CVX|999|||01^Historical^NIP001|||||||CP|A
```

Accepted by IIS

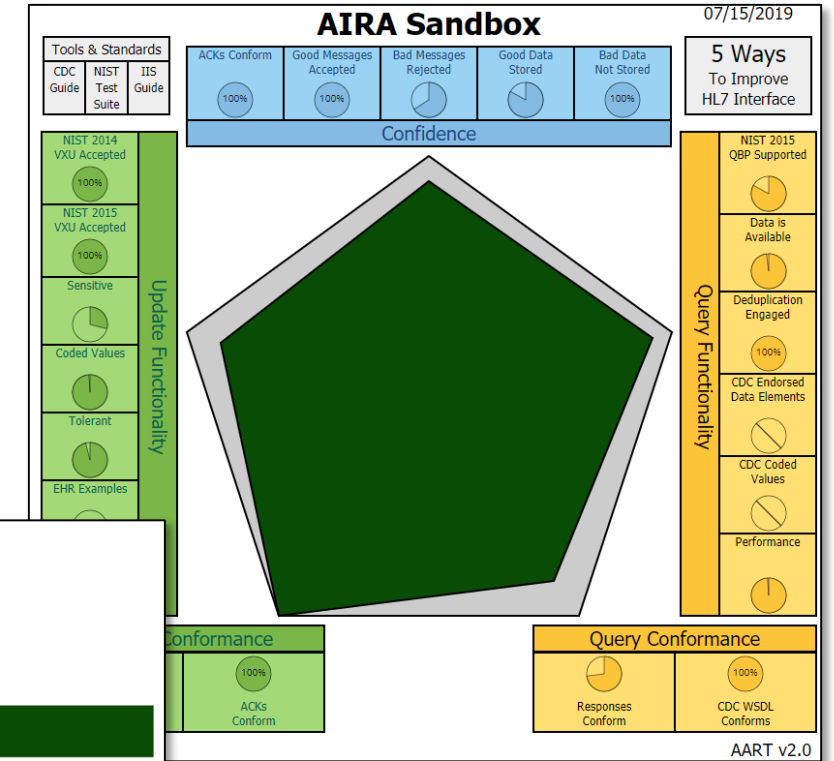
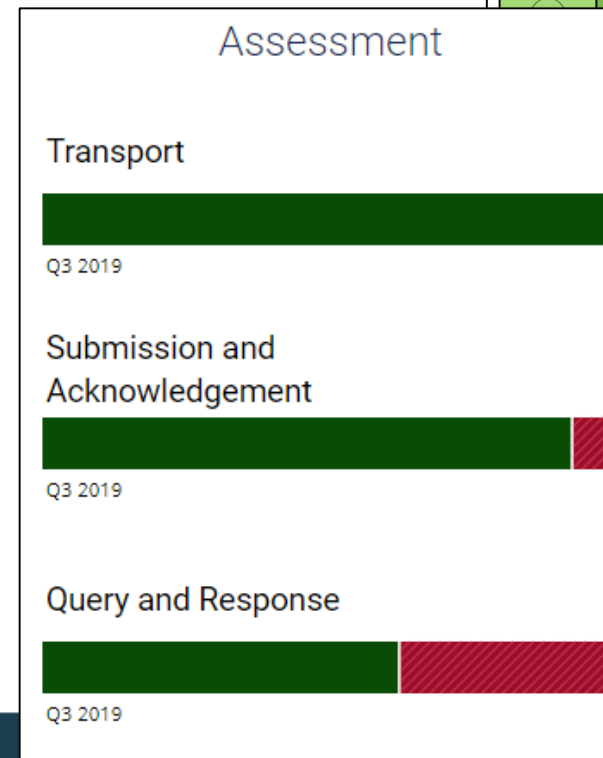
```
MSH|^~\&||IIS Sandbox v0.1.04||20190715104326-0600||ACK^V04^ACK|1563209006986140|P|2.5.1|||NE|
MSA|AA|rp-SA.13.1.1
```



Preview of Session 2

HL7 Discovery & Assessment Reports

- History of HL7 V2 Testing
- Testing Process
- Intro “Pentagon” Report
- Assessment Reports
- Making Improvements



Join Us Next Month!

- Wednesday, March 25
 - 4:00 – 5:00 pm, ET



Contact Information

If you have any questions or comments:

- Tracy Little tlittle@immregistries.org
- Nathan Bunker nbunker@immregistries.org

Thank you!

