OVERVIEW

- What does readiness look like for Meaningful Use (MU) Stage 3 for Immunization Information Systems (IIS) and the providers and EHRs who interface with them?
  - Technical Aspects
  - Operational Aspects
- How are specific IIS preparing for the transition?
- What resources are available to help?

WHAT'S ONE PROBLEM MEANINGFUL USE IS TRYING TO SOLVE?

Variation across systems is adversely affecting connectivity, completeness, accuracy, and timeliness

One EHR → Variation fairly painless → One IIS

500 EHRs → Variation frustrating, but manageable → One IIS

2000+ EHRs → Variation unmanageable and unsustainable → 57+ IIS

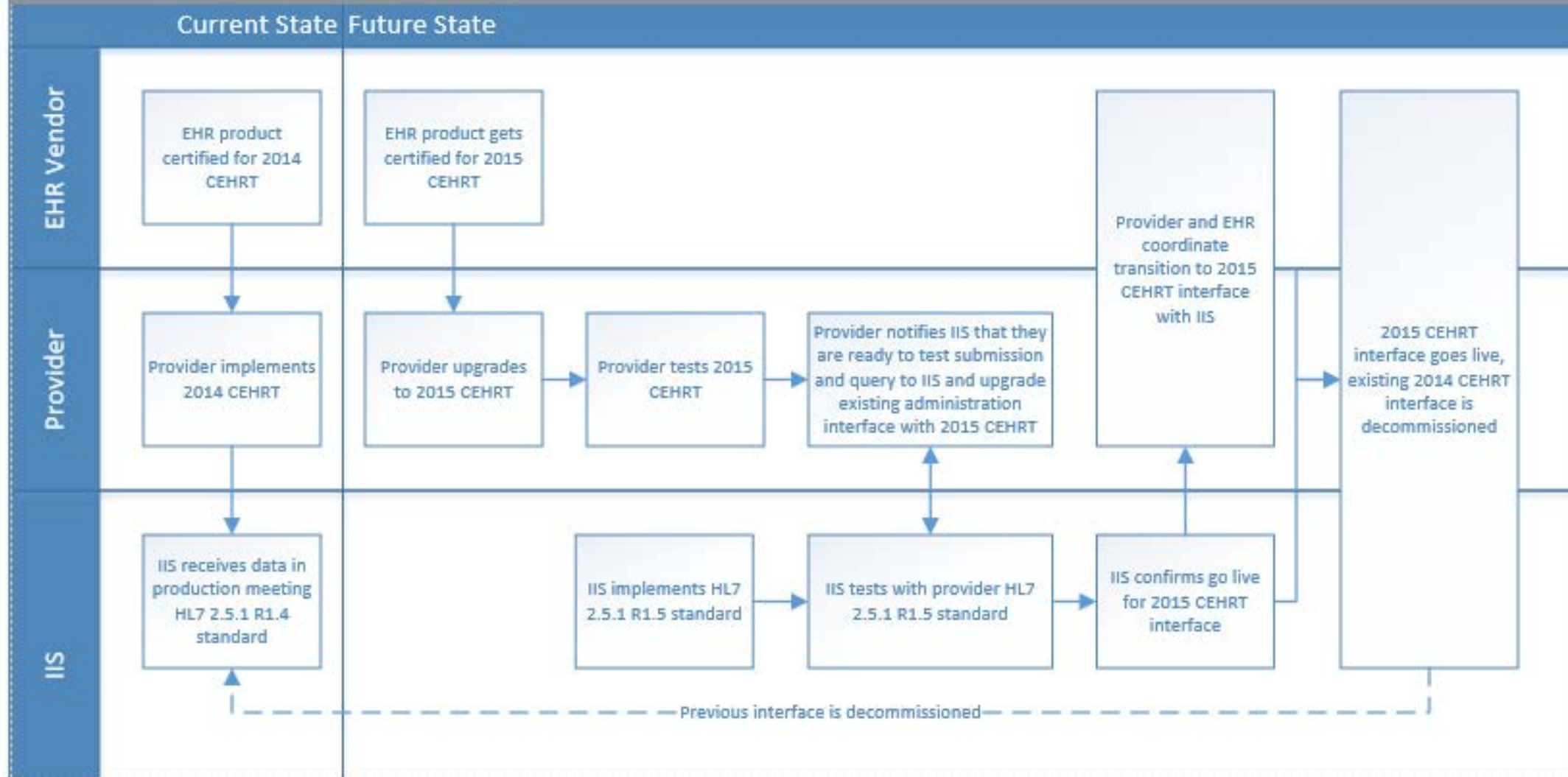# ADOPTION OF STANDARDS BY BOTH IIS AND EHRS

- Alignment with current transport and messaging standards will:
  - Speed up onboarding
  - Help to stabilize interoperability
  - Improve data quality
  - Move IIS community closer to our mission of making consolidated immunization records and forecasts available when and where needed

ANTICIPATED SCENARIOS FOR MU3

- **New** Eligible Providers (EPs), Eligible Hospitals (EHs), or Critical Access Hospitals (CAHs) will initiate testing (aka active engagement) to interoperate with an IIS using 2015 Certified EHR Technology (CEHRT)
  - This should include registration of intent to submit to/query an IIS
- **Existing** EPs, EHs, or CAHs will enhance their current interfaces to meet 2015 CEHRT
  - This will likely take place while IIS are actively rolling out enhancements to meet HL7 2.5.1 Release 1.5 functionality
  - It will be important to limit disruption to current interfaces in production

Transition to MU3, EHR-IIS Interfaces, V3

Current State | Future State

EHR Vendor

- EHR product certified for 2014 CEHRT
- EHR product gets certified for 2015 CEHRT
- Provider and EHR coordinate transition to 2015 CEHRT interface with IIS

Provider

- Provider implements 2014 CEHRT
- Provider upgrades to 2015 CEHRT
- Provider tests 2015 CEHRT
- Provider notifies IIS that they are ready to test submission and query to IIS and upgrade existing administration interface with 2015 CEHRT
- 2015 CEHRT interface goes live, existing 2014 CEHRT interface is decommissioned

IIS

- IIS receives data in production meeting HL7 2.5.1 R1.4 standard
- IIS implements HL7 2.5.1 R1.5 standard
- IIS tests with provider HL7 2.5.1 R1.5 standard
- IIS confirms go live for 2015 CEHRT interface

— Previous interface is decommissioned —

Note: Current state should remain active state until all parties are ready to transition to new interface

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TECHNICAL ASPECTS
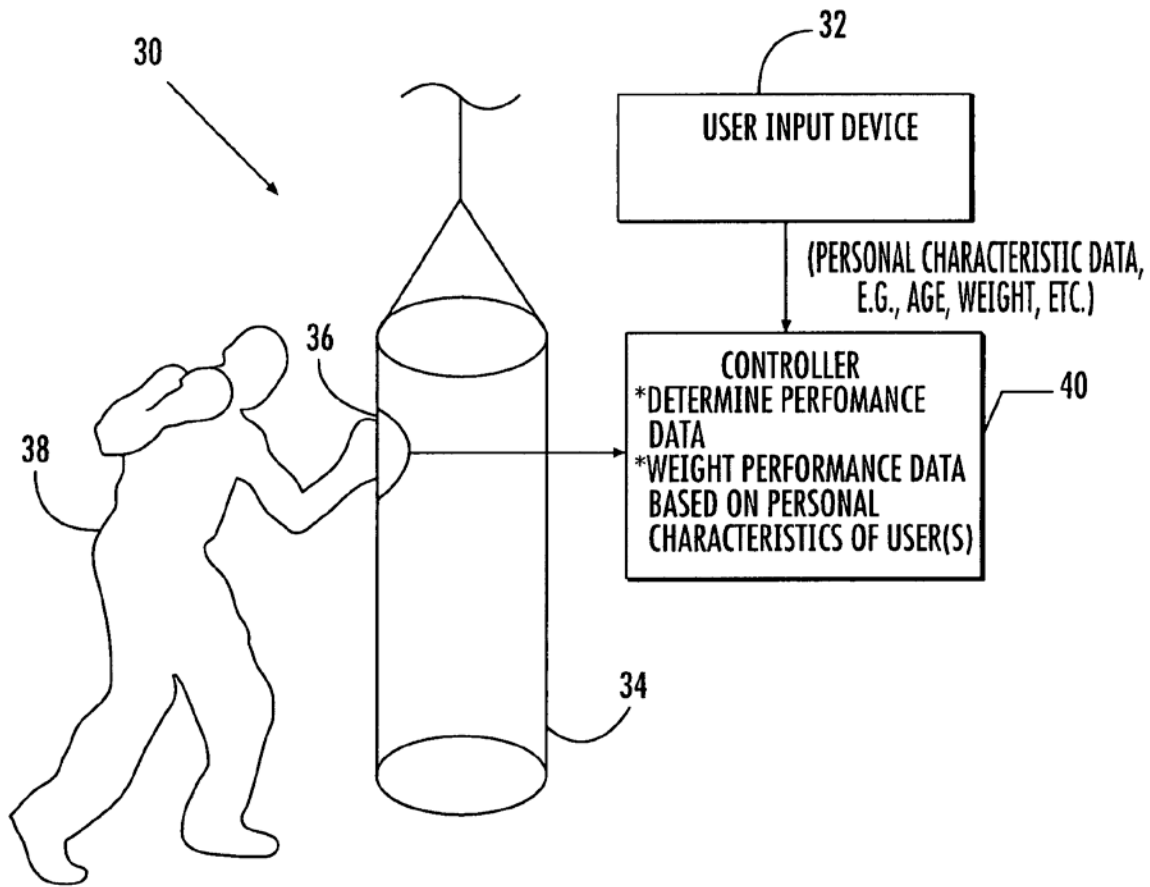
NIST 2015 SUBMISSION (VXU) TEST MESSAGES:

- EHRs are required to generate 6 VXU message test cases to meet 2015 Certified EHR Technology (CEHRT) criteria. IIS should be prepared to accept messages that resemble these scenarios. They cover:
  - Child administration
  - Adult administration
  - Patient does not consent
  - Update to an immunization
  - Deletion of an immunization
  - Refusal of an immunization

ACCEPT NATIONAL DRUG CODES (NDC) FOR ADMINISTERED VACCINES

- Stage 3 requires the use of NDC for administered vaccines
  - Historical vaccines continue to use CVX codes
  - IIS need to be able to accept and process NDC for administered vaccines
  - IIS will likely need to accept and process both
    - Unit of Use (UoU, or vial/syringe)
    - Unit of Sale (UoS, or package/box) NDC codes

ACKNOWLEDGMENT MESSAGES (ACK) CONFORM TO RELEASE 1.5

- **Conformance:** IIS must return conformant acknowledgment messages

- **Outcome of processing:** IIS must ensure the acknowledgment message returned to the EHR is representative of the processing performed by the IIS on the submitted VXU

- **Return to sender:** If an HIE (or some other intermediary) is in between the EHR and the IIS, it should return the IIS ACK to the EHR for parsing/reporting to the end user

NIST 2015 QUERY (QBP) SUPPORTED

- EHRs are required to generate 4 Query message test cases. IIS should be prepared to accept messages that resemble these messages. They are all related to Query Profile (Z44) and cover the following scenarios for both Query and Response:

  - Query for a child

  - Query for an adult

  - Query for a patient that does not exist in the IIS

  - Query for a patient which matches to multiple patients

RESPONSE MESSAGES, INCLUDING CLINICAL DECISION SUPPORT, CONFORM TO RELEASE 1.5

- The Z42 profile is the response which must include the clinical decision support (e.g., forecaster). EHRs are required to display the response from the IIS including the clinical decision support.
  - IIS must be returning conformant messages for EHRs to display.
  - IIS should ensure that all consolidated data is returned per jurisdictional policy.

LIMIT CONSTRAINTS, ELIMINATE CONFLICTS TO RELEASE 1.5

- Constraints – requiring something the National IG does not require – are allowed, but should be limited whenever possible. All constraints should be reviewed to determine if they are truly needed (e.g., required by local law/policy).
  - Example: Requiring address

- Conflicts – breaking the rules of the base HL7 standard – are not allowed. The IIS should work to fix these situations. For the most part, these conflicts are historical and simply need to be fixed.
  - Example: Not accepting refusals, history of disease

CDC WSDL

- While not required for MU3, Web Services and the use of the CDC WSDL is an IIS community-selected standard for transport.
  - Note: It doesn't have to be the ONLY method in production, but is useful as ONE common method of transport all implementers can support
- It is being adopted as a "baked-in" transport method by many EHRs
- It is also being measured as the first phase of IIS Assessment.
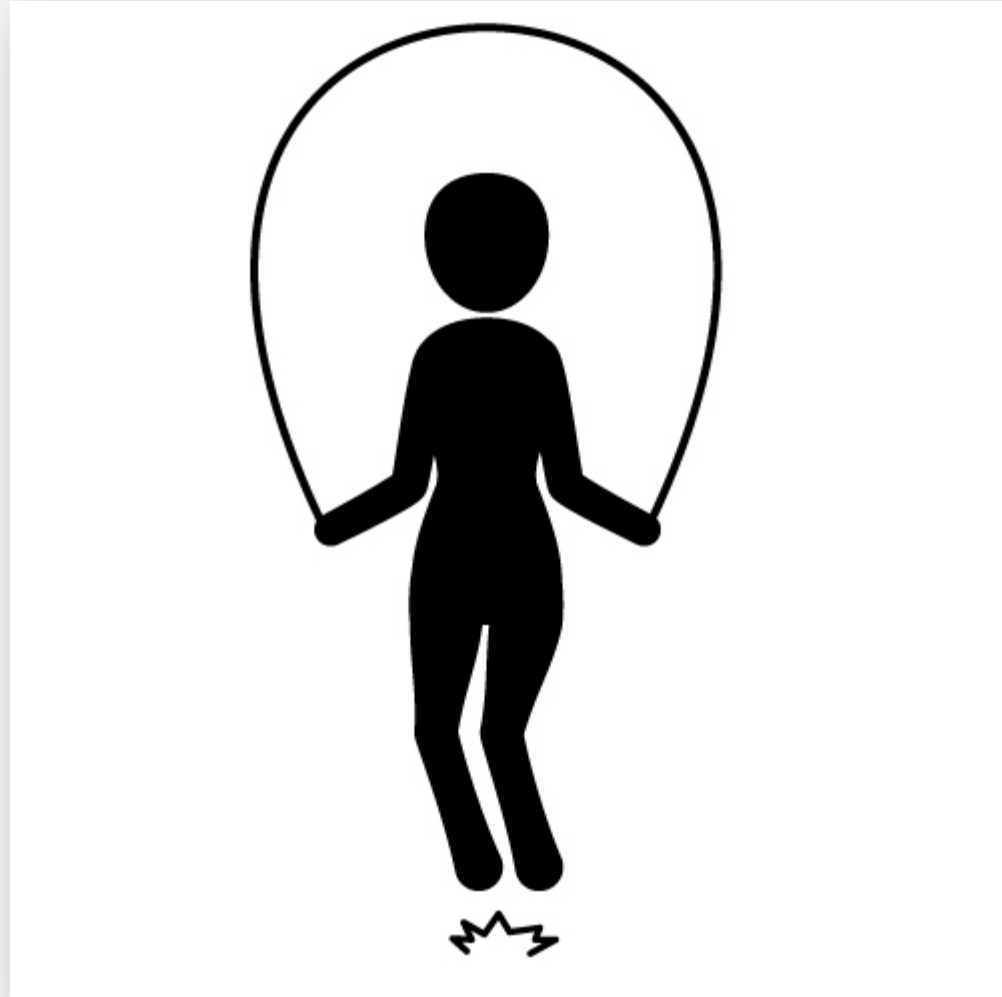
OPERATIONAL ASPECTS

DECLARE READINESS

- Must be declared publicly, typically on the jurisdiction's website, no later than July 1, 2017 for the January 1, 2018 start of MU3

- Since 2017 is an optional year for MU3, it is in the best interest of IIS to declare readiness as soon as possible

- The IIS may have also chosen to voluntarily list their registry on the recently announced CMS Centralized Repository, but this should augment, not replace, the more detailed information posted on your jurisdiction's website

ONBOARDING

- Create a procedure for "Re-Onboarding" as needed.
    - Sites are not required by MU3 to reregister; however, IIS may opt to require re-registration to assist in tracking MU3-participating organizations.

COMMUNICATION

Even small changes (e.g., acknowledgement conformance) must be sequenced into the development cycle, communicated and explained to hundreds of data sources, interfaces retested, and in some cases, workflows modified.

The operational burden for IIS, EHRs and providers should be considered when setting expectations of timelines and resources.

Providers modify workflows

EHRs and providers modify interfaces

IIS modifies system

For every change/ clarification in use of standard (IG, etc.)
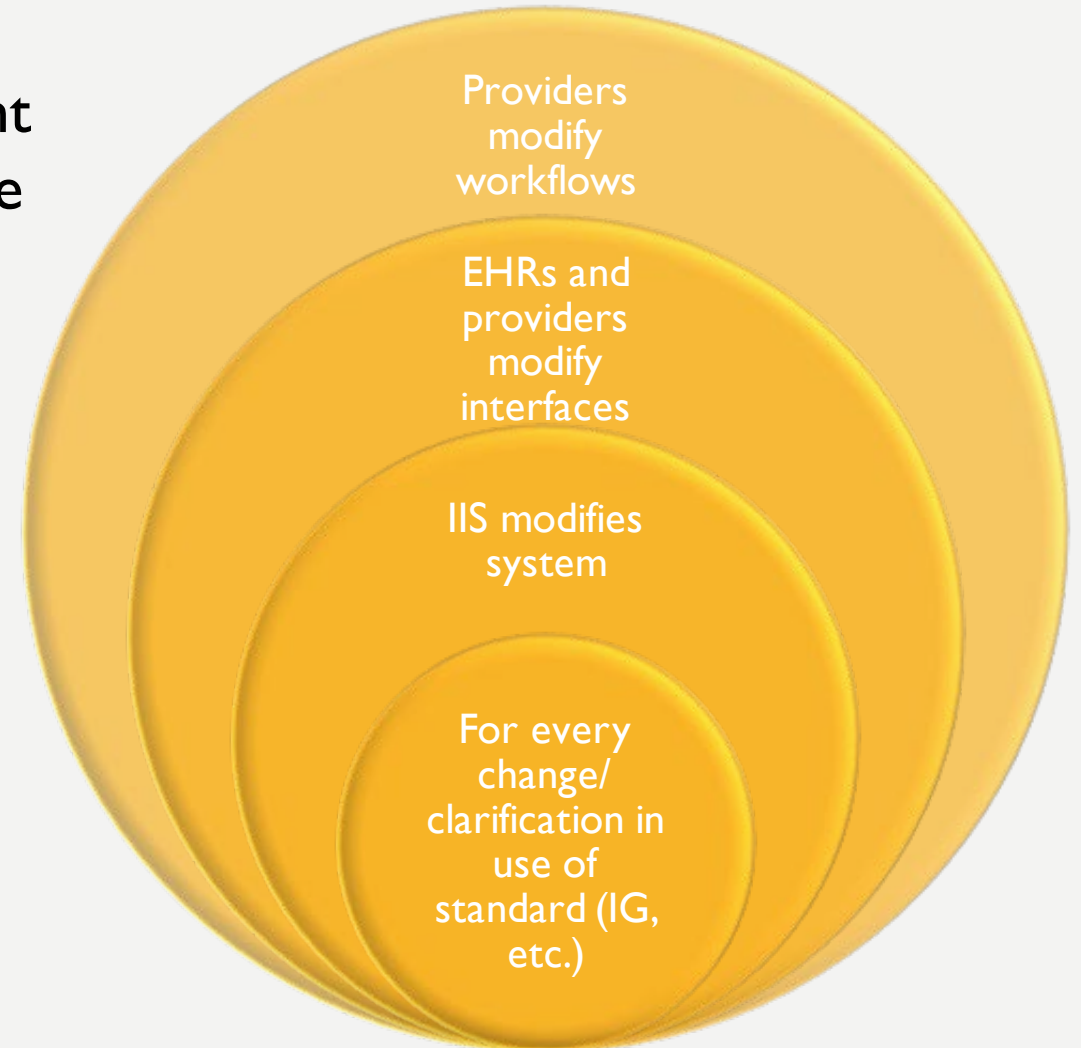
PREPARATION FOR AUDITING

- Determine what documentation is necessary for IIS to support future CMS audits of EP/EH/CAH participation for MU3, and create a procedure to track efficiently. At a minimum, your site should track:
  - A dated confirmation/receipt of intent to register for new registrants
  - An EP/EH/CAH's original registration date (noting that they don't need to re-register for MU3)
  - The dates the IIS reached out to request action on the part of the EP/EH/CAH, and the dates the EP/EH/CAH responded (or didn't)
  - The date (if applicable) that the EP/EH/CAH started actively sending VXUs/QBPs into production

PARTNER WITH OTHER AREAS OF PUBLIC HEALTH

- Ensure solid communication with your jurisdiction's Medicaid office, as well as other public health programs such as Syndromic Surveillance, Cancer, Electronic Lab Reporting, etc.
  - Note that you may be viewed as one Public Health entity by many providers and partners, so consistent messaging is important

MICHIGAN TRANSITION TO SUPPORTING MU3 INTEROPERABILITY

THERESE HOYLE
INTEROPERABILITY LEAD
MICHIGAN CARE IMPROVEMENT REGISTRY (MCIR)

MICHIGAN SPECIFIC RULES

- MCIR will require NDC and CVX codes for submissions
- If a provider administers vaccines they must be submitting VXUs before they can onboard for QBP
- MCIR does not have a vendor sandbox for testing. Vendors must connect with a provider to test their HL7 interfaces in Michigan
- Michigan is an HIE state and all HL7 messages pass through the Health Information Exchange

HL7 IMPLEMENTATION GUIDES

- Updated MCIR Interface will be available January 1, 2017 to receive HL7 2.5.1 Release 1.5 for:
  - VXU (Submission)
  - QBP (Query)

- New MCIR HL7 Implementation Guides will be posted the first of January, 2017 on MCIR.org

- Providers will have access to an HL7 viewer in MCIR that will display all the HL7 messages the IIS has received and processed

NEW HL7 ACK MESSAGES

- Michigan is updating their ACK messages

- Developing ACKs according to AIRA/CDC Guidance for HL7 ACK Messages to Support Interoperability

- Goal is to implement new ACK messaging by January 2018

ACKNOWLEDGEMENT CODES

Scenario	MSA-1 Value	Sender Expectation
No errors	AA	Message Accepted
Error in a segment	AA	Message Accepted Information returned (NDC code correct but CVX code was wrong)
Application Error	AE	Message was processed and errors are being reported. (no inventory deduction, lot number is not recognized in system)
Application Reject	AR	Message is rejected (example unable to authorize access to MCIR)

NORTH DAKOTA TRANSITION TO SUPPORTING MU3 INTEROPERABILITY

INFORMATION SHARED BY:

MARY WOINAROWICZ, MA

NORTH DAKOTA IMMUNIZATION INFORMATION SYSTEM (NDIIS) MANAGER

NORTH DAKOTA DEPARTMENT OF HEALTH

NDIIS TRANSITION

- Transition to support HL7 2.5.1 release 1.5
    - Work is currently underway and will be complete in January 2017
    - Using feedback from AIRA's Aggregate Analysis Reporting Tool (AART) report for guidance on changes
    - Will continue to use current CDGinspired WSDL for HL7 2.5.1 release 1.4 messaging
    - Setting up a second instance using the standard CDC WSDL for 2.5.1 release 1.5 messaging
- Sunsetting support for HL7 2.3.1
    - ND made the decision to discontinue support of 2.3.1 messaging as of December 31, 2017
    - Currently have 4 health systems, representing 189 individual provider locations using 2.3.1
    - Sent communication to providers in July 2016

NDIIS TRANSITION COMMUNICATION

- Published a Declaration of Readiness statement on our immunization program web site, and submitted statement of readiness to CMS voluntary repository

- Standard response letter to providers wishing to establish a new connection

- Drafted letter to send to providers currently in production informing them that the NDIIS can support HL7 2.5.1 release 1.4 and release 1.5 messaging
  - Will send once messaging system updates are complete
  - Send communication to primary technical contacts and interoperability project sponsors for each connection

TRACKING OF PROVIDER TRANSITIONS

- NDIIS team has developed an on-boarding tracking application
  - Tracks provider sites from time they are begin the on-boarding process through post-production
  - Includes issue-tracking, automated notifications, capturing notes and saving files
- Will be able to use the system's current functionality to track testing progress and production status of providers making the transition to using HL7 2.5.1 release 1.5

OREGON TRANSITION TO SUPPORTING MU3 INTEROPERABILITY

INFORMATION SHARED BY:

TRACY LITTLE
LEAD INTEROPERABILITY AND DATA EXCHANGE ANALYST
OREGON ALERT IIS

OPERATIONAL PLANS

- Declare readiness by July 1, 2017

- Implement a "re -onboarding" plan for providers and EHRs that are partially meeting MU3 now

- Host MU3 conference calls for vendors and clinics to answer questions about the testing/onboarding process

- Prepare request for CMS 90/10 funding to support MU activities and onboarding

READINESS CHECKLIST

Ready

- ✓ Accept all six VXU message test cases required for NIST 2015 testing
- ✓ Accept all four QBP message test cases required for NIST 2015 testing
- ✓ Utilize CDC WSDL

In Progress

- ✓ Accept National Drug Codes (NDCs) for Administered Vaccines
- ✓ Acknowledgement messages (ACK) conform to release 1.5
- ✓ Response messages (RSP) conform to release 1.5, Z42 profile

CHALLENGES

❑ IIS can update HL7 2.5.1 message processing to meet release 1.5 requirements. *however, there is no simple way to distinguish if a provider is submitting the updated 2.5.1 format.*

❑ For MU1 and MU2 we moved senders to CVX codes for administered doses. For MU3 providers will move to NDC codes. *Maintaining an updated NDC code crosswalk will impact workload on IIS and provider practices, and potentially introduce data quality issues.*

❑ IIS must be proactive in managing the onboarding and testing process with EHR vendors and providers. Having a sustainability plan for the interoperability team is important. *IIS onboarding analyst becomes default project manager during onboarding/testing process.*

OPPORTUNITIES FOR COLLABORATION

✓ Improve process for coordinating with vendors on which practices are ready for onboarding or 'up next'

✓ Create schedule for testing at the vendor level (i.e., who is ready now, can test early, etc.)

✓ Partner with other public health programs to enhance MU registration system

✓ Collaborate with other IIS jurisdictions and AIRA to share lessons learned around testing, onboarding, status/process documentation

RESOURCES

Meaningful Use Stage 3 Readiness Checklist

- MU3 Overview

- MU3 Readiness Checklist

- NIST Validation Tool Summary

- Aggregate Analysis Reporting Tool (AART)

- AIRA Technical Assistance Team TA Request Form: http://www.immregistries.org/resources/technical-assistance

DISCUSSION/QUESTIONS

THANK YOU!

Further questions? Contact:

- Mary Beth Kurilo at **mbkurilo@immregistries.org**
- Eric Larson at **elarson@immregistries.org**

Visit the AIRA Website at **www.immregistries.org** for referenced tools and resources.