

HL7 Immunization User Group

MONTHLY MEETING

FEBRUARY 9, 2017

2:00 PM ET

Agenda

- Welcome
- Updates
 - SISC Update
 - January HL7 Workgroup Meeting Update
 - Technical Assistance Review
- Discussion of Future Topics
 - Polling Question: What topics would you like to discuss on future calls?

SISC Update

STANDARDS AND INTEROPERABILITY STEERING
COMMITTEE (CRAIG NEWMAN)

Topics from Feb 8

Ratify SISC 2017 work plan

- Hold monthly SISC and Technical Work Group (TWG) calls
- Document functional guidance for immunization-relevant applications on prioritized topics (e.g., query)
- Support on-going development of the HL7 Implementation Guide
- Support AIRA's Partnership with HL7 Organization
- Present HL7 IG Tutorials/ Webinars for new IG releases, addendums, guidance documents, as needed
- Continue to expand and support a process for technical assistance provided by AIRA staff and others as part of the Assessment/Certification project
- Act as technical subject matter experts for external projects as needed
- Support and collaborate on vocabulary and code set work
- Support implementation of and updates to the recommended transport solution developed by AIRA and CDC
- Explore role of SISC in supporting mutually beneficial partnerships between HIEs and IIS
- Develop the messaging use case for IIS-IIS interjurisdictional exchange, including both VXU/ACK as well as QBP/RSP
- Plan, document, and operationalize communication and messaging methods to ensure community-wide visibility for AIRA technical work
- Review and update SISC Charter biannually
- Explore new technology and messaging standards, and their applicability and possible pilots for new interoperability methods (e.g., Structured Data Capture, CDS, etc.)
- Review, educate and coordinate community comments on regulatory rules and policies
- Serve as a liaison to AIRA Board, Staff, and membership on key SISC topics and outputs, including national meeting topics

Topics from Feb 8

Review draft statement on Serial Numbers and barcodes

- Unit of Sale 2D barcodes are starting to incorporate a new serial number data element
- Has implications for existing barcode scanning functionality

Review draft SISC position statement on v2.3.1

- Encourages sunseting support for v2.3.1 interfaces

CDC Vocabulary Project

- Looking at new ways to distribute CDC managed code sets (CVX, MVX)
- Pilot phase in 2017

Draft of the next IG release is available

- Comments due by March 3rd
- Going to HL7 ballot starting March 31st

Complex Message Structures

Extending the Basic Message Structure

Most systems are comfortable with how to send immunization event, evaluation and forecast data

Release 1.5 contains some guidance on sending concepts such as immunities, contraindications, indications and adverse reactions

- Guidance is limited to VXU messages
- No guidance on structuring the overall message

Several projects, vendors and IIS have been asking recently how to send this data in messages

We want to provide guidance for both 2.5.1 and 2.8.2 exchanges before diverse systems implement this differently

VXU Messages

<Repeating Order Group (one for each immunization event for the patient) where RXA-5 indicates the vaccine administered>

ORC

RXA

RXR

OBX(s) [0..*]

<Single Order Group where RXA-5 is 998 for any observation(s) that is not directly linked to an immunization event >

ORC

RXA

RXR

OBX(s) [1..*]

VXU Messages

<Repeating Order Group (one for each immunization event for the patient) where RXA-5 indicates the vaccine administered>

- **Patient eligibility status (required for new admins)**
- **Funding source (required for new admins)**
- **VIS related data (required for new admins)**
- Adverse reaction - when the adverse reaction can be directly attributable to a specific immunization event
- Indication (why the dose was administered) – in order to include this, RXA-20 must be CP or PA, indicating that a dose was given
- Contraindication (why a dose was not administered) - in order to include this, RXA-20 must be NA, indicating that a dose was not given
- Immunity (serological or presumed) – in order to include this, RXA-20 must be NA, indicating that a dose was not given
- Free text comment

<A single Order Group where RXA-5 is 998 for any observation(s) that is not directly linked to an immunization event>

- Adverse reaction when it can't be attributed to a specific immunization event
- General patient observation – something the system knows about a patient that could wind up as either an indication or a contraindication when the IIS does a forecast
- Immunity (serological or presumed)

VXU Messages

Other guidance

- There is no recommended order of OBX segments
- Related OBX segments, such as those related to VIS information, must be linked via an identical subID in OBX-4
- There are no required or even recommended OBX segments for historical administrations
- We are considering a new LOINC codes for a general observation (one that is neither an indication nor contraindication for a specific dose)
- Immunity are best sent in the general section
- In v2.8.2 observations that are not directly linked to an immunization event can be sent as an OBX segment following the PID segment rather than in a dedicated order group but for now we will recommend continuing to use the dedicated order group

RSP Messages

<Repeating Order Group for each immunization event in the patient immunization history where RXA-5 indicates the vaccine administered>

ORC
RXA
RXR
OBX(s)

<Single Order Group for the forecast where RXA-5 is 998>

ORC
RXA (RXA-20 = NA)
RXR
OBXs

<Single Order Group for all patient observations where RXA-5 is 998>

ORC
RXA (RXA-20 = NA)
RXR
OBXs

<Repeating Order Group for each refused immunization event for the patient where RXA-5 indicates the vaccine refused (if the system tracks refused vaccines)>

ORC
RXA (RXA-20 = RE, RXA-18 populated)
RXR
OBX

RSP Messages

<Repeating Order Group for each immunization event in the patient immunization history where RXA-5 indicates the vaccine administered>

This section would only include given administrations and would not include any doses messaged by a submitter as either contraindicated or not given because of an immunity

Except where noted, there is no recommended order of OBX segments

Information about the immunization event

- Patient eligibility status

- Funding source

- VIS related data

- Adverse reaction (when the adverse reaction can be directly attributable to a specific immunization event)

- Indication (when reported by the original submitter)

- Free text comment

Evaluation of the immunization event (each of these would have to be linked by the same subID)

Vaccine Group (required) – this must be the first OBX segment in a set of related OBX segments

Dose validity (required)

Reason for the validity (Often this would be a reason a dose is invalid, but it could also explain an unexpected valid dose (in which case it would potentially overlap with the indication in the section about the immunization event))

- Series name

- Total number of doses in the series

- Dose number of the evaluated event

- Schedule used

RSP Messages

<Single Order Group for the forecast where RXA-5 is 998>

This order group may contain multiple “sets” of related OBX segments with each set detailing a recommendation for a single future administration, these sets are linked via an identical subID in OBX-4 (each forecasted administration must have a unique subID)

Except where noted, there is no recommended order of OBX segments

Vaccine/vaccine group being recommended (required) – this must be the first OBX segment in a set of related OBX segments

Dates (**earliest (required), recommended (required)**, overdue and latest) – dates are only required for an actual forecast, and not when indicating that the series status is complete or contraindicated

Series name

Total number of doses in the series

Dose number of the recommended administration

Reason for the recommendation

Status in the immunization series - could include completed and contraindicated series (in which case there would be no dates)

Schedule used

RSP Messages

<Single Order Group for all patient observations where RXA-5 is 998>

There is no recommended order of OBX segments

Adverse reaction (when the adverse reaction cannot be directly attributable to a specific immunization event)

Immunities (serological or presumed)

General patient observations (Indications or Contraindications (including effective and expiration dates))

<Repeating Order Group for each refused immunization event for the patient where RXA-5 indicates the vaccine refused (if the system tracks refused vaccines)>

free text comment

Documenting and Distributing

The goal is to get this all into a guidance document similar to that which was published for Acknowledgement messages

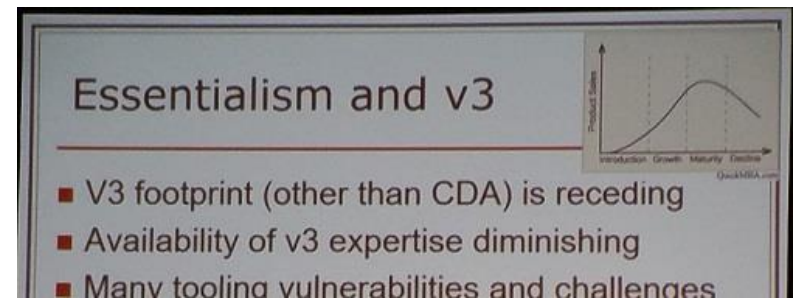
Will be part of the next release of the IG

- A draft version of the v2.8.2 IG is available for comment now
- Will be going to an HL7 ballot in May

HL7 WGM

HL7 WORK GROUP MEETING (NATHAN BUNKER)

HL7 V3 Update



History

- Originally designed to replace HL7 v2
- HL7 2.3 was slated as last HL7 v2 standard
- HL7 v3 Reference Implementation Model (RIM) was amazing but complex

Status Today

- V3 footprint (other than CDA) is receding
- Availability of v3 expertise diminishing
- HL7 will continue to support HL7 v3 but will be looking for efficiencies

Take Home for Immunization Community

- Not expecting nationwide adoption of V3 standards at any time in the future
- Perhaps some use of CDA in certain circumstances

FHIR Update

FHIR Continues to grow and mature

- Still a Standard for Trial Use (STU)
- FHIR DSTU release 2 is currently available
- FHIR STU release 3 is expected to be released summer 2017
- FHIR release 4 will be published end of 2018, the first “normative version”
 - Most stable parts will be normative
 - Immunization related resources will almost certainly still be STU
- Expect revisions to these dates
- Latest information here: <https://onfhir.hl7.org/>

HL7 v2 Update

HL7 v2

- HL7 v2.9 is expected to be published Spring 2017
- The immunization community is informing improvements in the base standard around ACK messaging
 - Immunization is taking the lead in helping the base HL7 v2 standard improve
 - Those who adopt the current and future CDC guide will be in good position to be successful in the future as HL7 v2 evolves and improves

HL7 v2+

- After HL7 v2.9 is published a new effort will begin for future versions of HL7 v2 standards
- Preview of new tooling to be used to publish HL7 v2+
- Publication will more closely align with how FHIR is published
- Expect HL7 v2 to continue to be supported and used in the coming years

HL7 Organization Updates

HL7 Infrastructure and Process Improvements

- Fully participating in HL7 work groups is daunting to the uninitiated
- Much of the coordination work is done by antiquated, disjointed systems or by emailing word documents
- CTO Wayne Kubick joined HL7 last year and is now pushing for improvements to basic HL7 processes
- Should hear new changes coming in this next year

HL7 Board

- A lot of discussion about a new initiative to bring fresh perspectives to the otherwise highly technical HL7 Board
- The Board is looking to recruit and train potential board members
- There was concern voiced at the meeting about the details of this initiative

Next Work Group Meetings

May 2016

- WGM + Mini Plenary
- Madrid Spain

September 2017

- WGM + Plenary
- Immunization Focused Meetings
- San Diego California

Technical Assistance Review

NATHAN BUNKER

Sending NDC and CVX

Just a reminder that RXA-5 MAY NOT repeat, but it is permitted to carry an ID and an alternate ID

- ID^Text^Coding System^Alternate ID^Alternate Text^Alternate Coding System
- 49281-0560-05^Pentacel^NDC^120^DTaP-Hib-IPV^CVX

Applications should be looking at the Coding System and not assuming an ID type based on position

Keep an eye for this as you talk to your colleagues

Primary Language (PID-15)

Language codes are quite complex as there are a number of value sets in use (some of which are abridged, some of which use 2 characters while others use 3 characters, etc)

This is an optional element in Release 1.5 but the IG does say that ISO639 shall be used for Language and references a PHINVADS value set

- PHINVADS seems to have adopted the ISO 639-2B variant which contains 3 character codes based on the language name in English (as opposed to the native language)

The draft 2017 ONC Standards Advisory references RFC 5646 which encompasses another of other standards including ISO 639

- RFC 5646 requires the shortest available code (which would normally be the 2 character code from 639-1 but if a language isn't coded in 639-1, then a 3 character code from some other version of 639 would be used)

The moral of the story seems to be that if you are supporting PID-15, think carefully about what codes you are using and document it well

- We'd like to learn more about how Language is implemented, so please let us know how you are doing it today

As always, we recommend that you not reject an entire message because of an error in a non-critical field

Non-consenting Patients

What are the messaging options when a patient chooses not to share their data?

- The IG specifies how to use PD1-12 to indicate if patient data needs to be protected
 - We've had previous conversations on how we should recommend applying protection at the patient and dose levels
- An alternative we've seen is a request to filter messages in the sending system
 - Don't send the message at all
 - The IG doesn't mention this as it doesn't cover the triggering of individual messages
 - Topic for a future functional guidance document

Topic that still requires more discussion and we are interested in how local policy, regulations and requirements drives technical requirements

Evaluations and Combination Vaccines

When messaging an evaluation of a combination vaccine, which CVX codes should be sent in the OBX segments

The CDC website includes mappings from CVX codes to Vaccine Groups

- <https://www2a.cdc.gov/vaccines/iis/iisstandards/vaccines.asp?rpt=vg>

Combination vaccines should be broken down into vaccine groups and an evaluation sent for each group

- e.g. a dose of MMRV should include an evaluation for both MMR and Varicella

The CVX code in the OBX should correspond to the vaccine group and not the combination vaccine

- e.g. use 03 (MMR) and 21 (Varicella) rather than 94 (MMRV) in the OBX segments

Requiring IIS IDs

One IIS is now requiring that VXU messages contain the patient's IIS ID

This is not part of the EHR certification test cases and we've warned IIS against assuming that their trading partners can support this

This is a policy decision that could have significant adverse effects

Future Topics

ANY ADDITIONAL QUESTIONS?

Future Topics

What topics would you like to hear about in the coming months?

VXU/ACK Messages:

- Appropriate triggers for when message should be sent
- Proper construction of message by EHR
- Proper processing of message by IIS
- Proper acknowledgement of message by IIS

QBP/RSP Messages:

- Appropriate triggers for when message should be sent
- Proper construction of message by EHR
- Proper processing of message by IIS
- Proper acknowledgement of message by IIS

Future Topics

What topics would you like to hear about in the coming months?

HL7 Processing Support

- Integration of patient matching with VXU and QBP
- Integration of vaccination matching with VXU and QBP
- Interaction and support for lot inventory tracking
- Interaction and support for Vaccines for Children program
- Inclusion of forecast and evaluation in RSP
- Supporting data quality activities and reporting

Future Topics

What topics would you like to hear about in the coming months?

Special Focus Areas

- Newborn reporting of unnamed children
- IIS consent
- Registry status
- Next-of-kin and guardian information
- Reporting insurance information
- Updating and deleting vaccinations
- Vaccine eligibility and vaccine funding source
- Impartial administrations
- Vaccine refusals
- Vaccine contraindications and patient conditions affecting forecast

Future Topics

What topics would you like to hear about in the coming months?

Special Focus Areas continued...

- Vaccine CVX codes
- Vaccine NDC
- Lot numbers and manufacturers MVX codes
- Administered vs historical
- VIS information
- Observation segments
- Identifying facilities/organizations/clinics in message

Future Topics

What topics would you like to hear about in the coming months?

General Areas

- History of HL7 v2
- How to properly handle coded values received
- How to deal with non-standard messages
- Strategies for providing effective backwards compatibility
- How to prepare for future versions of HL7
- How to document local requirements in guide
- Authenticating HL7 submitters

Other Areas

- Admission/Discharge/Transfer (ADT) messages

Future Topics

What topics would you like to hear about in the coming months?

Transport

- General transport introduction
- CDC SOAP transport standard introduction
- CDC SOAP transition strategy

Testing Tools

- NIST message testing tools
- NIST CDC WSDL testing tool
- 2015 ONC Health IT Certification
- Aggregate Analysis Reporting Tool (AART)
- 2017 AIRA Assessment for IIS

Next Meeting

THURSDAY, MARCH 9TH

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

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Thank you!