

# HL7 Immunization User Group

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MONTHLY MEETING

MARCH 9, 2017

2:00 PM ET

# Agenda

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- Welcome
- Updates
  - SISC Update
  - AIRA 2017 National Meeting
  - MACAW Update
- Discussion
  - Results from meeting survey last month
  - Handling CVX with a focus on unspecified and non-routine vaccines

# SISC Update

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STANDARDS AND INTEROPERABILITY STEERING  
COMMITTEE (CRAIG NEWMAN)

AIRA 2017

National Meeting

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# MACAW

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MEASUREMENT AND ASSESSMENT AND  
CERTIFICATION ADVISORY WORKGROUP

# Discussion Ideas

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RESULTS FROM SURVEY LAST MONTH

# Top Results from Survey

Area	Topic	Score	Yes	No
Other - User Entered	CVX codes for unspecified formulations	20		
Other - User Entered	standards for security/certificate management	20		
Testing Tools	2017 AIRA Assessment for IIS	19	19	0
Testing Tools	NIST CDC WSDL testing tool	18	18	0
General Areas	How to prepare for future versions of HL7	17	17	0
VXU/ACK Messages	Proper acknowledgement of message by IIS	16	17	1
Special Topics	Vaccine NDC	16	16	0
Testing Tools	NIST message testing tools	16	17	1
Testing Tools	Aggregate Analysis Reporting Tool (AART)	16	16	0
QBP/RSP Messages:	Proper acknowledgement of message by IIS	15	16	1
Special Topics	Updating and deleting vaccinations	15	16	1
QBP/RSP Messages:	Appropriate triggers for when message should be sent	14	15	1
HL7 Processing Support	Integration of patient matching with VXU and QBP	14	15	1

## Gave top priority to user entered ideas

- Covering first one, CVX codes for unspecified formulations today
- AIRA will soon be releasing security document, will be discussed in future meetings

# CVX Codes

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FOCUS ON UNSPECIFIED AND NON-ROUTINE  
VACCINES (NATHAN BUNKER)



# Introduction to CVX

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Maintained by CDC – NCIRD

- <https://www2a.cdc.gov/vaccines/iis/iisstandards/vaccines.asp?rpt=vg>
- Regularly updated
- Signup for email updates is available

IIS and EHR systems should support new codes

- Current r1.5 guides states:

## **HL7-defined Table 0292 - Codes for Vaccines administered (code=CVX)**

Use in RXA-5

The table below represents the March 2014 version of the CVX code set. New codes are added as needed; therefore, see the most current version of this code set at the website Web site:

<http://www2a.cdc.gov/vaccines/IIS/IISStandards/vaccines.asp?rpt=cvx> <sup>43</sup>

The CDC's National Center for Immunization and Respiratory Diseases (NCIRD) maintains the HL7 external code set CVX.

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# Vocabulary Binding

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Defining vocabulary constraints in implementation guides is called:

- Vocabulary Binding

Current release of guide (CDC Guide r.15) does not systematically define how code sets should be used

- Some most IIS never expect to use: RR – Railroad Retirement Number
- Many IIS require to use: MR: Medical Record Number

It is a common problem with messaging standards to sweep complexity away from the model and into the vocabulary

Next guide will provide much more granular guidance

# New Vocabulary Terms

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## Distinction between “Coding System” and “Value Sets”

- Coding System: An extensive list of values
  - Identifier Type, and LOINC are good examples
  - The coding system is identified in CE.3
- Value Set: Refined set of values for a specific field
  - LOINC sent in OBX that are included in an VXU
  - Identifier Type used for Patient Ids
  - Identifier Type used for Provider Ids

Current guide does not make this distinction clear and only identifies the Coding System but does not delineate the Value Set to be used

# New Vocabulary Attributes

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## Extensibility

- **Open:** Value set can be extended by local agreement
- **Closed:** Value set may NOT be extended
  - However, doesn't prevent guide from adding new values in future versions of guide

## Stability

- **Static:** Value set defined by guide or underlying coding system
- **Dynamic:** New values can be assigned independent of guide (think CVX)

## Content Definition

- **Extensional:** Value set defines exactly what the codes are
- **Intensional:** Value set defined by rules that when executed define the values in the value setvalue set can be extended by local agreement

# New Vocabulary Usage

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Similar to field usage (R/RE/O/X)

Three values possible:

- Required (R): Must be supported
- Excluded (E): Must NOT be supported
- Permitted (P): May be supported by local agreement

For open sets:

- All values not explicitly listed are Permitted (P)

For closed sets

- All values not explicitly listed are Excluded (E)

# Additional Complexities of CVX

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## Vaccine Status:

- **Active:** A currently available administrable vaccine
- **Inactive:**
  - An administrable vaccine formulation that is no longer available for patient administration, but can be found in historical patient records.
  - A historical record of a vaccine administered where the exact formulation is unknown
- **Pending:** A vaccine that is expected to become active in the future
- **Non-US:** A vaccine that available outside the US only
- **Never Active:** A vaccine that was never available and is not in the pipeline of new vaccines

## Be Careful:

- IIS must be able to accept Inactive CVX codes!

# Unspecified Codes

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## Unspecified Codes

- Some vaccine codes are not specific enough
  - Will impact CDSi
  - Many IIS discourage or don't allow these codes for administered vaccinations
- Still useful for messaging
  - Historical paper records may not have enough detail
  - Older administered records may not have enough detail
- Common for IIS to not allow unspecified codes for administered vaccines

## Be Careful:

- Senders might not have more specific codes for historical or even older administered vaccines



# Unspecified Code Recommendations

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IIS should accept historical reports

IIS should accept older administered reports

IIS should acknowledge problem in newer administered reports

- If the IIS accepts the data it should send ERR-4 = W indicating the problem needs to be fixed but the IIS is not requiring a resubmission
- If the IIS will NOT accept the data it should send ERR-4 = E indicating the problem needs to be fixed and the IIS is asking for this record to be resubmitted

# Non Vaccines and Travel

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## Immune Globulin

- Are they routinely sent?
- Does your IIS accept these?
- Have they been integrated into CDSi?

## Travel Vaccines

- Are they routinely sent?
- Does your IIS accept these?
- Have you integrated Yellow Fever into CDSi?

# Foreign Vaccines

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Given in other countries:

- Which codes do you routinely accept?
- Are there any codes not accepted?

Oral Polio

- New codes were added Jan 2017
- An problems with Oral Polio reported since Apr 2016?
- Are there issues with misreporting OPV?

# Acknowledging Bad CVX

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What should an IIS do if they do not recognize a CVX?

- Ideally IIS should be updating and supporting all new CVX as soon as possible

But if the IIS does not recognize the CVX code then the ACK guidance must be followed:

- The data needs to be corrected with a recognized CVX code indicated
- Record should be resubmitted
- This means the IIS should respond with an ERR segment with ERR-4 = E

But what if an IIS recognizes the code but is not able to take it?

- The data does not need to be corrected
- Records should not be resubmitted
- This means the IIS should respond with an ERR segment with ERR-4 = I

# Administered vs Historical

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Many IIS use the Information Source (RXA-9) to trigger additional constraints on CVX codes and the requirements for other fields

- This is a good practice supported mostly by the current guide

But current messaging standards do not differentiate between these two scenarios:

- A recently administered vaccination (e.g. given today)
- An older administered vaccination being reported during system upgrade

Practical recommendation:

- Consider only applying higher data quality standards to vaccinations administered recently
- During processing treat older administered vaccinations more like historical

# Accepting Inactive Vaccines

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IIS must be ready to accept inactive vaccines

- There is no time limit for reporting older vaccination events
- If a CVX code properly represents a real administration at some point in the past the IIS must be ready to properly record it
- Example: Rotavirus, live, tetravalent vaccine (Rotashield) CVX 74

Data Quality project

- For each CVX code defined a range of when the vaccine was licensed for use
  - For example: Rotashield might be defined as valid from August 1998 to November 1999
- Project tried to assign valid start/end dates for all vaccines
  - Project failed because of the complexity of the use of vaccines prior to 2000
- Now looking to establish a universal cut-off date before which vaccine codes will be accepted as reported without analysis

# Next Meeting

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THURSDAY, MAY 11<sup>TH</sup>

2:00 PM ET / 11:00 AM PT

# More Information

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## 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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If you have any questions or comments:

- Kim Salisbury-Keith [Kim.SalisburyKeith@health.ri.gov](mailto:Kim.SalisburyKeith@health.ri.gov)
- Nathan Bunker [nbunker@immregistries.org](mailto:nbunker@immregistries.org)
- Kevin Snow [ksnow@envisiontechnology.com](mailto:ksnow@envisiontechnology.com)

Thank you!