

HL7 Immunization User Group

MONTHLY MEETING

NOVEMBER 10, 2016

2:00 PM ET

Agenda

- Welcome
- Updates
 - Balloting in the HL7 Implementation Guide (Craig Newman)
- Discussion Topic: Forecast and Evaluation in Query Response (RSP) messages
 - AIRA Interoperability Testing and Discovery Project (Nathan Bunker)
 - Functional Guide Project – What it is working on (Eric Larson)
 - Review of FAQ's relating to Forecast and Evaluation in RSPs
- Questions and Answers

Updates

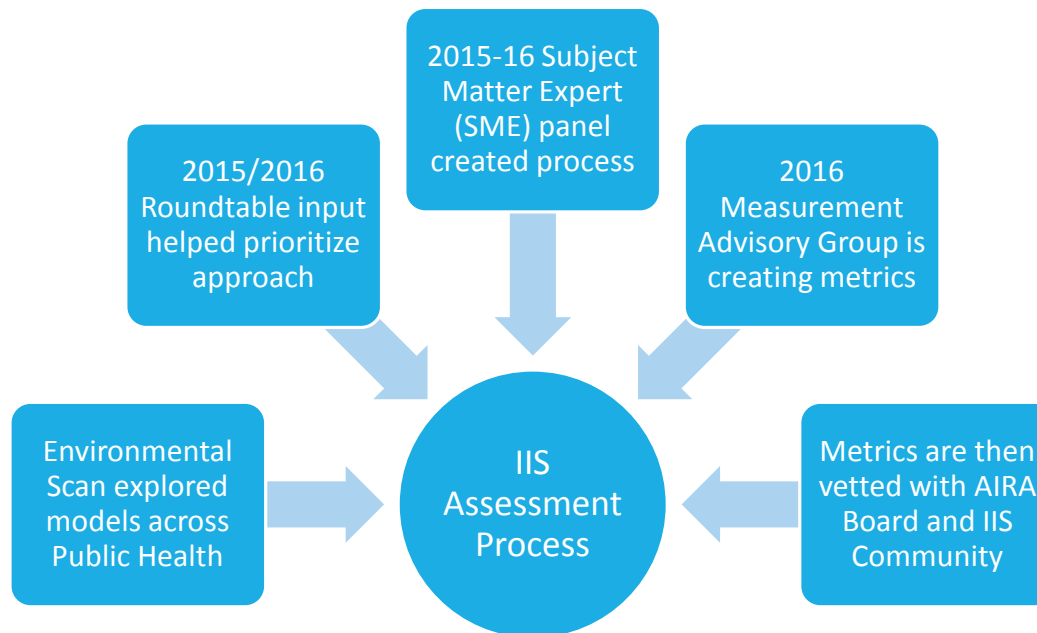
BALLOTING IN THE HL7 IMPLEMENTATION GUIDE
(CRAIG NEWMAN)

AIRA Interoperability Testing Discovery Project

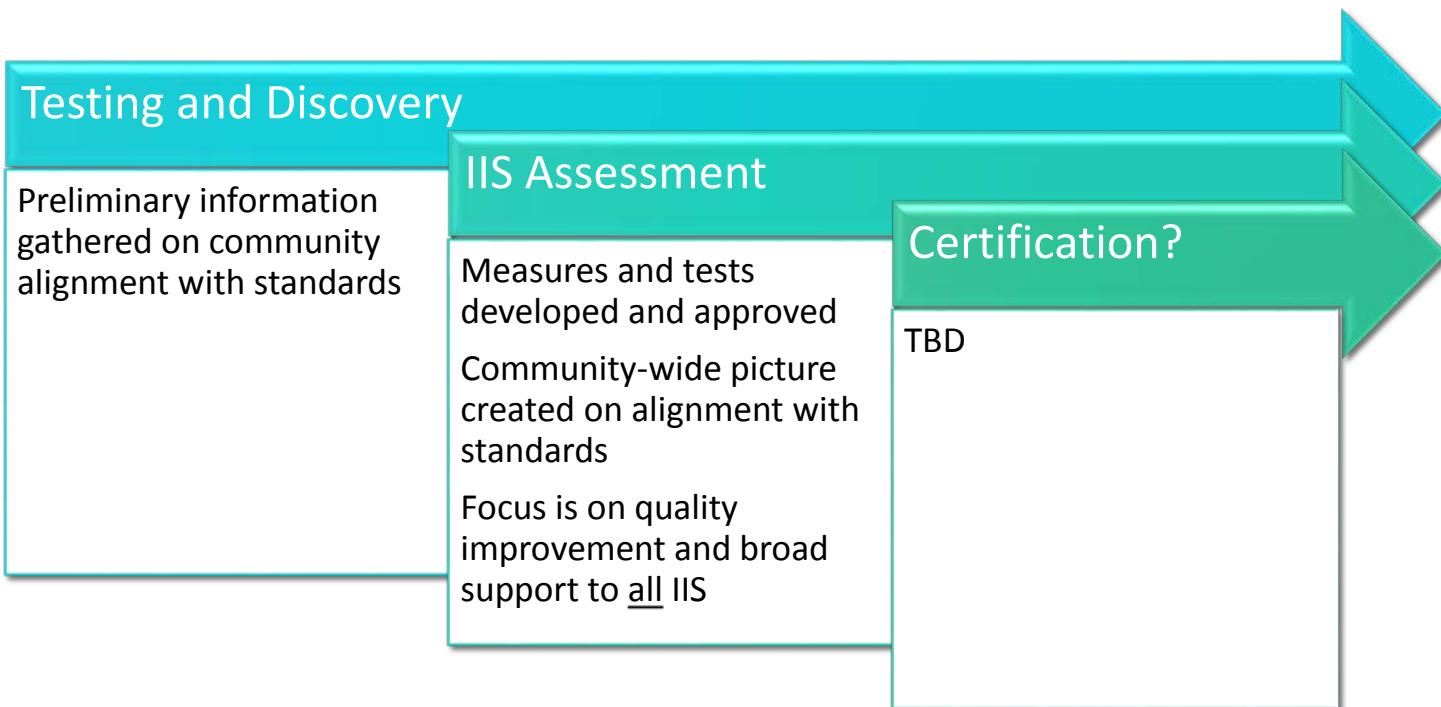
NATHAN BUNKER

AIRA Assessment Update

- AIRA is working to develop a community-driven, independent measurement process to assess and support IIS alignment with standards and best practices



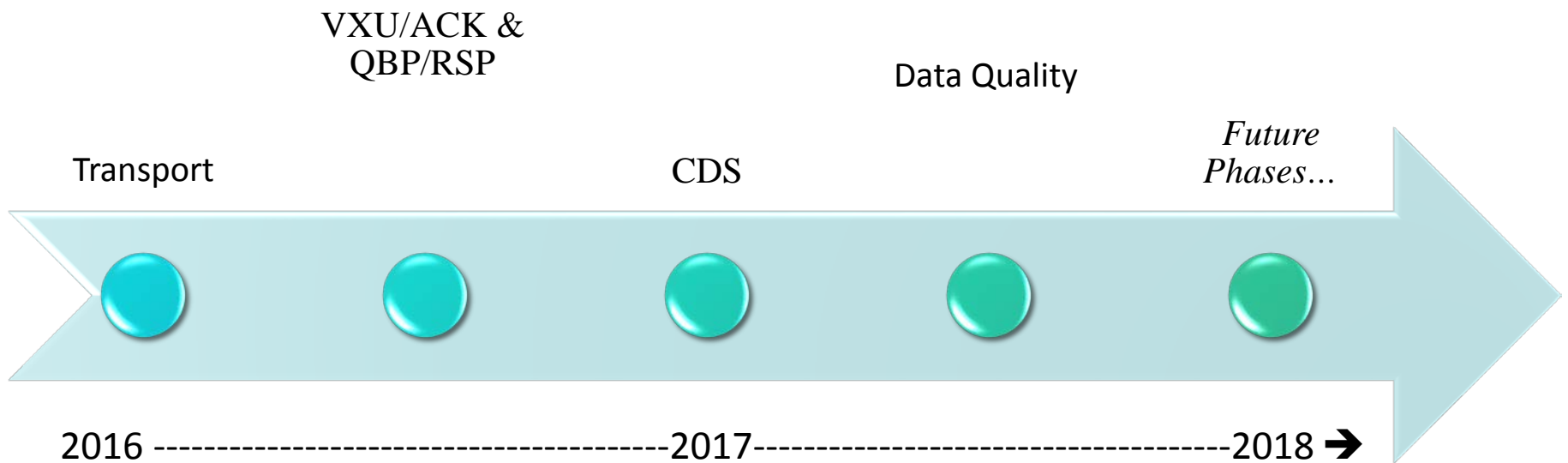
AIRA Assessment Update



AIRA Assessment Update

- AIRA Interoperability Testing
 - Most IIS engaged at some level in testing process
 - Obtained credentials and access to majority of IIS HL7 interfaces
 - Every month a set of 2,000 test messages are submitted
 - Over one million messages have been sent!
 - Responses are analyzed and a report created for IIS to review
- Aggregate Analysis Reporting Tool (AART)
 - Holds and organizes reports from AIRA testing and assessment
- Measurement for Assessment and Certification Advisory Workgroup (MACAW)
 - Reviewing results of AIRA Interoperability Testing
 - Recommending measures for a more formal assessment process

AIRA Assessment Update



CDS Assessment

- Discovery work is starting but is not yet completed
- Sources for Clinical Decision Support (CDS)
 - **HL7**: Many IIS return Clinical Decision Support (CDS) in response to query
 - **Direct**: Some CDS engines have a web service that can be directly tested
- National Institute of Standards and Technology (NIST)
 - Currently creating tools to support CDS testing
 - AIRA is collaborating with NIST to create process for testing CDS

CDS Discovery

- AART includes preliminary CDS information
 - Many IIS return CDS on every query (so over 1000 CDS results every time we test an IIS)
 - There are a set of test cases specifically see if the CDS engine is working (Forecaster Engaged)
- For today, looked at 19 IIS who:
 - We are able to connect to now
 - Have tested sometime in the last four months
 - Supported query and response
 - Return a forecast

CDS Discovery – Grouping Under OBX/RXA

Description	Count
Single OBX/RXA, multiple forecasts underneath	15
Multiple OBX/RXA, one for each forecast	4

CDS Discovery – Grouping Under OBX/RXA

```
ORC|RE||9999|
RXA|0|999|20161031213122|20161031213122|998^no vaccine
administered^CVX|0|||||||NA||20161031213146|
OBX|1|CE|30956-7^vaccine type^LN|1|45^HepB^CVX||||F|
OBX|1|CE|59779-9^Immunization Schedule used^LN|1|VXC16^ACIP^CDCPHINVS||||F|
OBX|1|NM|30973-2^Dose number in series^LN|1|1||||F|
OBX|1|TS|30980-7^Date vaccination due^LN|1|20121105||||F|
OBX|1|TS|30981-5^Earliest date to give^LN|1|20121105||||F|
OBX|1|TS|59777-3^Latest date next dose should be given^LN|1|21321105||||F|
OBX|1|TS|59778-1^Date dose is overdue^LN|1|20130205||||F|
OBX|1|CE|59783-1^Status in immunization series^LN|1|P^Past Due^STC0002||||F|
ORC|RE||9999|
RXA|0|999|20161031213122|20161031213122|998^no vaccine
administered^CVX|0|||||||NA||20161031213146|
OBX|1|CE|30956-7^vaccine type^LN|1|107^DTAP^CVX||||F|
OBX|1|CE|59779-9^Immunization Schedule used^LN|1|VXC16^ACIP^CDCPHINVS||||F|
OBX|1|NM|30973-2^Dose number in series^LN|1|1||||F|
OBX|1|TS|30980-7^Date vaccination due^LN|1|20130105||||F|
OBX|1|TS|30981-5^Earliest date to give^LN|1|20121217||||F|
OBX|1|TS|59777-3^Latest date next dose should be given^LN|1|21321105||||F|
OBX|1|TS|59778-1^Date dose is overdue^LN|1|20130205||||F|
OBX|1|CE|59783-1^Status in immunization series^LN|1|P^Past Due^STC0002||||F|
ORC|RE||9999|
```

CDS Discovery – Grouping Under OBX/RXA

```
ORC|RE||7476
RXA|0|1|20160818|20160818|94^MMRV^CVX|1.0|||00||^IR
Physicians|||V7737HT|MSD||CP
RXR|SC|RA
OBX|1|CE|38890-0^COMPONENT VACCINE TYPE^LN|1|03^MMR^CVX^90707^MMR^CPT|||||F
OBX|2|NM|30973-2^Dose number in series^LN|1|1|||||F
OBX|3|CE|38890-0^COMPONENT VACCINE
TYPE^LN|2|21^Varicella^CVX^90716^Varicella^CPT|||||F
OBX|4|NM|30973-2^Dose number in series^LN|2|1|||||F
ORC|RE||0
RXA|0|1|20160818|20160818|998^No Vaccine Administered^CVX|999
OBX|5|CE|30979-9^Vaccines Due Next^LN|0|107^DTP/aP^CVX^90700^DTP/aP^CPT|||||F
OBX|6|TS|30980-7^Date Vaccine Due^LN|0|20121010|||||F
OBX|7|NM|30973-2^Vaccine due next dose number^LN|0|1|||||F
OBX|8|TS|30981-5^Earliest date to give^LN|0|20120921|||||F
OBX|9|CE|30982-3^Reason applied by forecast logic to project this vaccine^LN|0|ACIP
schedule|||||F
OBX|10|CE|30979-9^Vaccines Due Next^LN|1|85^HepA^CVX^90730^HepA^CPT|||||F
OBX|11|TS|30980-7^Date Vaccine Due^LN|1|20130810|||||F
OBX|12|NM|30973-2^Vaccine due next dose number^LN|1|1|||||F
OBX|13|TS|30981-5^Earliest date to give^LN|1|20130810|||||F
OBX|14|CE|30982-3^Reason applied by forecast logic to project this vaccine^LN|1|ACIP
schedule|||||F
```

CDS Discovery – Identify Vaccine

LOINC	Description	Count
30979-9	Vaccine due next	13
30956-7	Vaccine Type (Vaccine group or family)	6
59780-7	Immunization Series name	1

30979-9	30956-7	59780-7
Vaccine due next	Vaccine Type	Series Name
45^HEPB, unspecified formulation^CVX		
45^HepB, unspecified formulation^CVX		
45^HepB^CVX^90731^HepB^CPT		
45^HepB^CVX^90731^HepB^CPT		
45^HepB^CVX^90731^HepB^CPT		
45^HepB^CVX^90731^HepB^CPT		
45^HepB^CVX^90731^HepB^CPT		
45^HepB^CVX^90731^HepB^CPT		
45^HepB^CVX^90731^HepB^CPT		
45^HepB-Unspecified^CVX		
03^MMR^CVX		
08^Hep B, adolescent or pediatric^CVX		
45^HEP B, UNSPECIFIED FORMULATION^CVX		
	08^Hep B, ped/adol^CVX	
	08^Hep B, ped/adol^CVX	
	08^HepB, ped/adol^CVX	
	08^Hep B, ped/adol^CVX	
	45^HepB^CVX	
	45^HepB^CVX	
		HEP B^HEPATITIS B

CDS Discovery – Useful Details

LOINC	Description	Count
30980-7	Date vaccine due	19
30973-2	Dose number in series	14
30981-5	Earliest date to give	13
59778-1	Date dose is overdue	2
59777-3	Latest date next dose may be given	2
59783-1	Status in immunization series	5
59782-3	Number of doses in primary series	1

30980-7	30973-2	30981-5	59778-1	59777-3	59782-3	59783-1
Date vaccination due	Dose number in series	Earliest date to give	Date dose is overdue	Latest date next dose should be given	Number of Doses in Primary Series	Status in immunization series
20120701	2	20120701				
20121030	1	20121030				
20120810	2	20120810				
20121009	1	20121009				
20120926	1	20120926				
20121029	0	20121029				
20121024	1	20121024				
20120812	1	20120812				
20120713	1	20120713				
20121021	3	20121021				
20161205	2	20161102			0	2^Up-To-Date^eval_result_id
20121116						
20121207	NA^NA^HL70353					LA13423-1^Overdue^LN
20161101						
20160608						
20161101						
20161102						
20121105	1	20121105	20130205	21321105		P^Past Due^STC0002
20120922	1	20120922	20121222	21320922		P^Past Due^STC0002
20120923	2	20120923				Over Due^Over Due

CDS Discovery – Other Details

LOINC	Description	Count
30982-3	Reason applied by forecast logic to project this vaccine	10
59779-9	Immunization Schedule used	8

59779-9	30982-3
Immunization Schedule Used	Reason applied by forecast logic to project this vaccine
	ACIP schedule
	ACIP schedule
	ACIP schedule
	ACIP schedule
	ACIP schedule
	ACIP schedule
	ACIP schedule
	ACIP schedule
	ACIP schedule
	ACIP schedule
CDCPHINVS	
VXC16^ACIP Schedule^CDCPHINVS	
VXC16^ACIP^CDCPHINVS	
VXC16^ACIP^CDCPHINVS	
VXC16^ACIP^CDCPHINVS	
VXC16^ACIP^CDCPHINVS	
VXC16^ACIP^CDCPHINVS	
VXC16^ACIP^CDCPHINVS	

Practical Recommendations for CDS Consumers Today

- Don't place any significance on ORC/RXA, be able to handle if multiple are sent or just one for a CDS recommendation
- Use OBX-4: Observation Sub-Id to determine transition to a new set of vaccination recommendations
- Be ready to key off of either 30956-7 or 30979-9 to indicate vaccine type being forecasted
- Be ready to receive different CVX codes depending, even for the same item being forecasted

Functional Guide Update

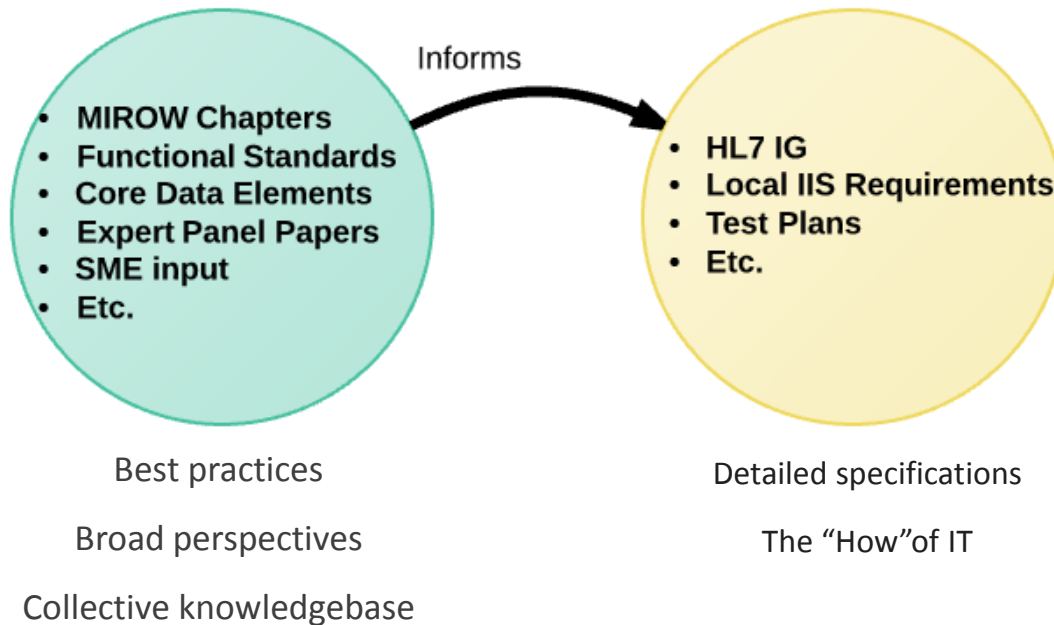
ERIC LARSON

Functional Guide Workgroup

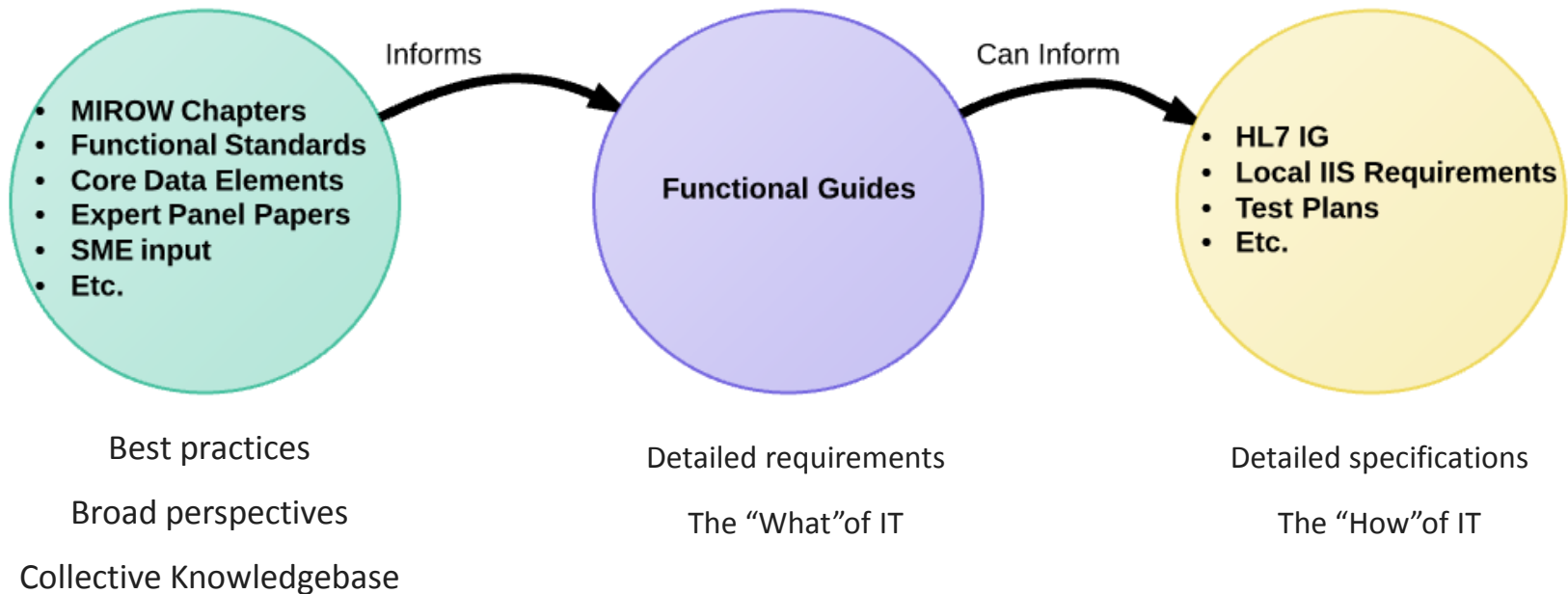
Created a small workgroup under SISC

- Charged with two major tasks
 - Define what a Functional Guide is and isn't
 - Develop a first pass at a Query and Response Functional Guide

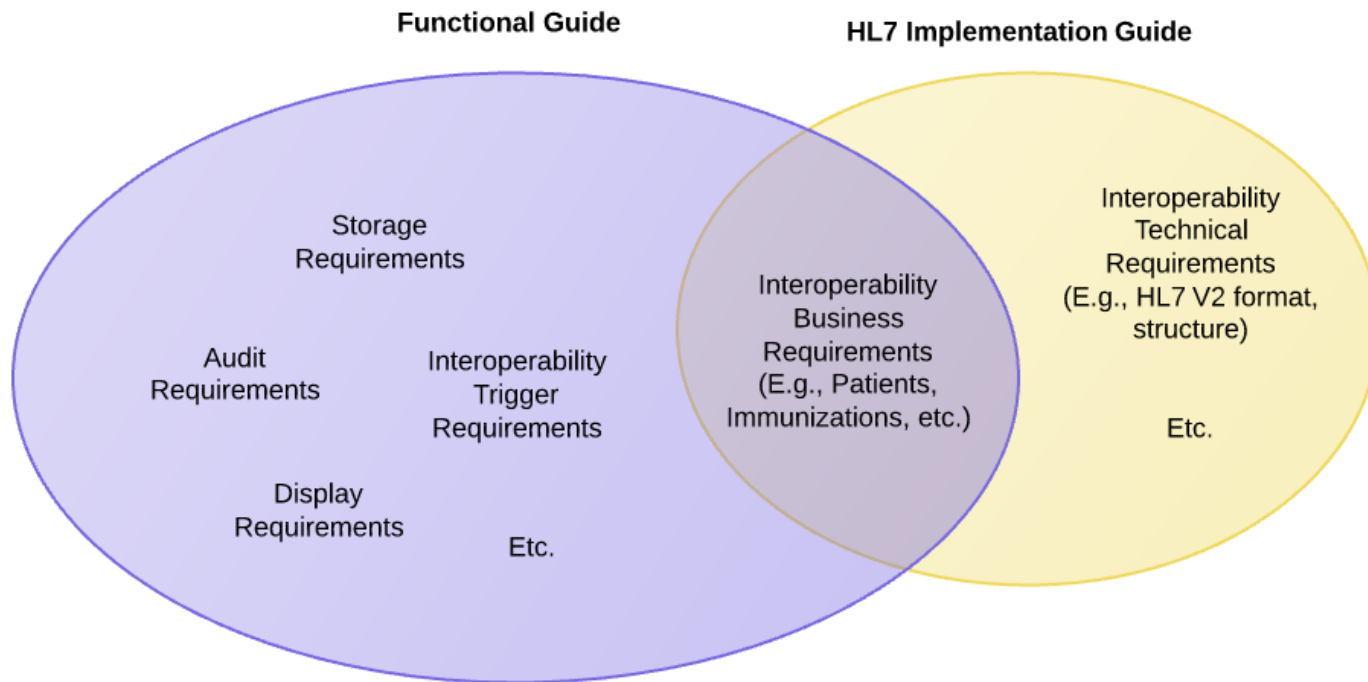
Current Landscape



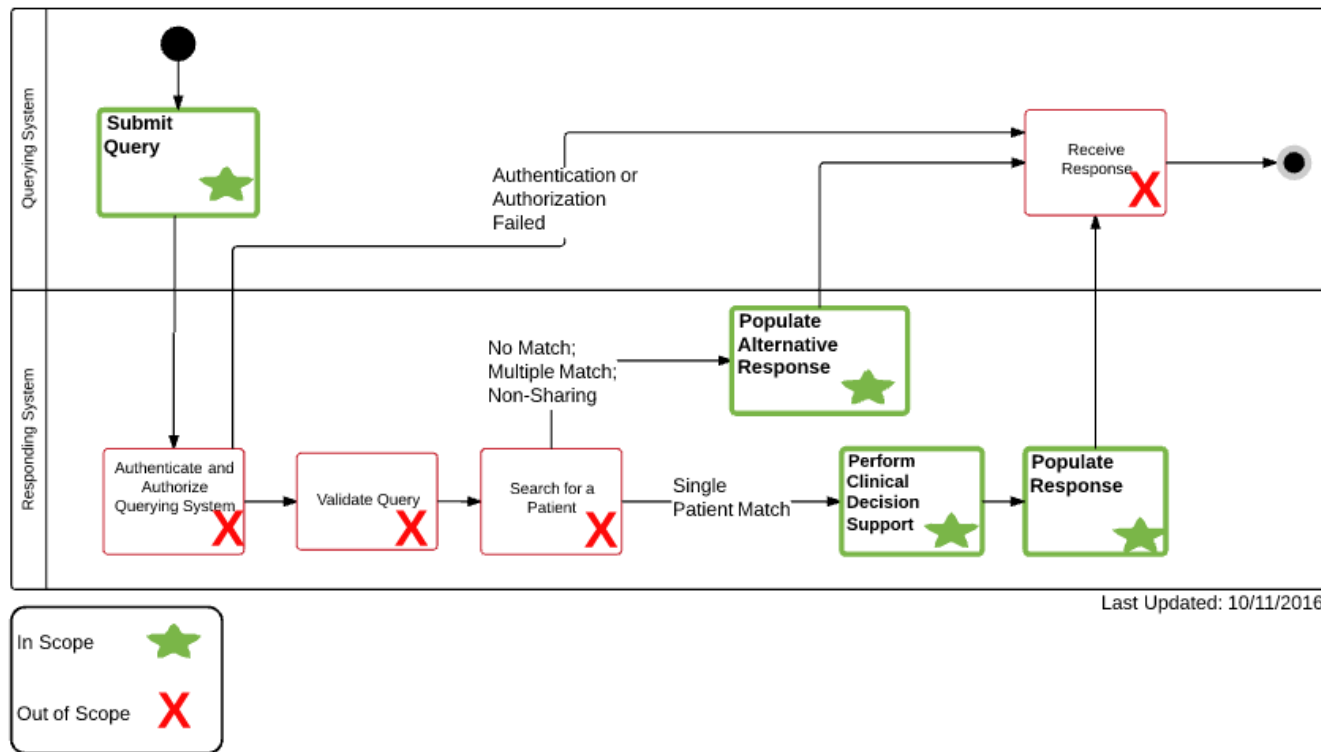
Functional Guide “Fit”



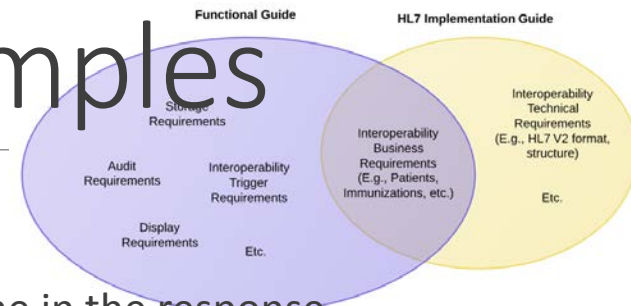
What a Functional Guide Is and Isn't



Query Response Chapter - Scope



Functional Guide Examples



Examples of Overlap with HL7 IG

- The Responding System SHALL include the Patient Name in the response
- The Responding System SHALL include IF KNOWN the Patient Address in the response

Examples of Requirements not in HL7 IG

- The Responding System SHALL include a forecast for each vaccine preventable disease within the scope of the Responding System.
- The Responding System SHOULD audit the results of a query.

Examples of divergence with HL7 IG

- Currently one query and response was preferred.
 - The current IG defines two very similar, but technically different Q/R

Next Steps

December SISC Meeting

- Continued Discussions from November
 - Would these be beneficial?
 - Other suggested topics?
 - Comments and improvements on Query and Response Chapter

Review of FAQ's relating to Forecast and Evaluation in RSPs

LOINC Codes (Vaccine Types)

What is the right LOINC code to use to indicate the vaccine type in an evaluation and forecast message?

- Release 1.5 documents the following LOINC codes:
 - 30956-7 (Vaccine Type)
 - 38890-0 (Component Vaccine Type)
 - 30979-9 (Vaccine Due Next)
- There is a note saying 30956-7 is preferred over 38890-0 (used in 2.3.1)
- Our recommendation is to use 30956-7
 - This is what is used in the EHR certification test cases
 - In the draft version of the IG circulating now, the other two codes have a usage of excluded
- Let us know if you have a use case for either of the other two codes that can't be satisfied by using 30956-7

Query/Response Questions

Why do response profiles – where a match is found - contain ERR segments?

- This is per the base standard and would be for minor items the IIS notices, but is still willing to respond with the requested data. These would likely be mild severity errors (i.e., Information, Warning)
- This should be discussed in future versions of the National IG to see if this should be moved from RE to O.

Should the Vaccine Group CVX (Usually the Unspecified) be sent for forecasts?

- In general, this works.
- In limited situations it may be necessary to provide a more specific CVX code given the ACIP recommendation and prior patient administration

Other

IIS should not be filtering the patient history

- Invalid doses should be returned (with an appropriate status if doing an evaluated history)
- Doses should not be limited to those submitted by the querying organization
- There may be an exception if a dose level data sharing flag is set

Additional Questions

ANY ADDITIONAL QUESTIONS?

Next Meeting

THURSDAY, DECEMBER 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](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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- Nathan Bunker nbunker@immregistries.org
- Kevin Snow ksnow@envisiontechnology.com

Thank you!