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Query Workgroup Meeting Minutes

December 1, 2014: 2:00 – 4:00 pm EST

Meeting Participants

Committee Members
✓ Hans Buitendijk, Siemens (Co-Chair) ✓ Seth Selkow, Kaiser Permanente (Co-Chair) ✓ Marty Prahl, SSA ✓ David Tao, ICSA Labs ✓ John Donnelly, Interoperability Domain Expert ✓ Tara Dragert, Surescripts ✓ Joe Lamy, AEGIS ✓ Adam Rabinowitz, ManTech ✓ David Schramm, Mirth ✓ Justin Stauffer, Epic
Invited Subject Matter Experts and Carequality Support Team
✓ Mariann Yeager, Healtheway Chief Executive Officer ✓ Neil Webb, Care Connectivity Consortium ✓ Darren Mann, Intermountain Healthcare ✓ Anita Samarth, Clinovations Government Solutions ✓ Paul Clip, RelayHealth ✓ Peter Bernhardt, RelayHealth

Meeting Summary

Call to order

Discussion Summary: Roll call was facilitated to identify the Query Workgroup members and invited SMEs and Support Team. See list of participants noted above.

Action/Follow up: None

Review of Agenda

Discussion Summary: The agenda was reviewed with Workgroup members to conduct a follow-up on CommonWell and introduction to IWG during today's meeting.

Action/Follow up: None

Meeting Minutes

Discussion Summary: Members were asked to voice any questions or concerns regarding the meeting minutes from the 10/27 meeting. No members raised any questions or concerns regarding the meeting minutes.

Action/Follow up: Staff will ensure that all meeting minutes are posted on the Wiki page.

CommonWell Follow-up

Discussion Summary: A recap was provided of the requirements to be CommonWell-Enabled. There "general members" – who are supporting CommonWell, but not necessarily implementing the CommonWell specifications, and there are "contributing members" who have implemented the specifications.

CommonWell is using the IHE protocols listed below. The edge system is using its own identifier when querying CommonWell – the edge system does not need to know the CommonWell identifier.

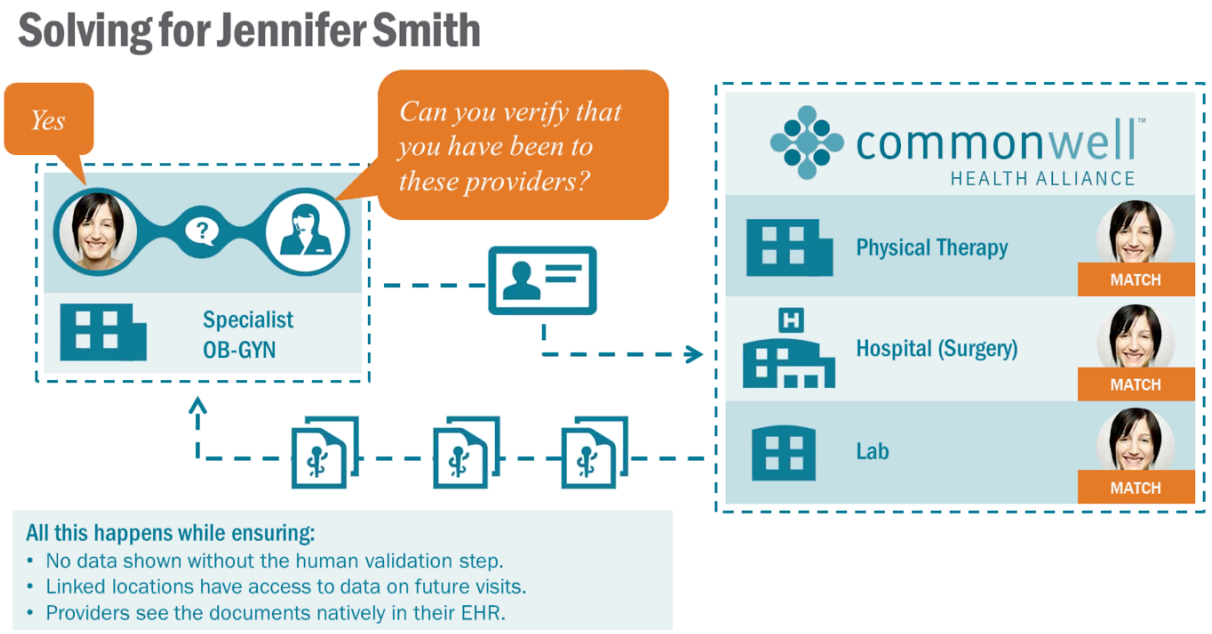
Is there any place where the CommonWell identifier is needed to be known, or used to get the correct match? For query/retrieve, do not need the CommonWell identifier. If you are making updates at the CommonWell level, which is linked to local records, you would need to first acquire the CHA identifier. If a patient has been to one facility that is part of CommonWell, will the patient know his/her identifier – if going to another location? Today, the patient will not have that number – the links are transitive – once they are established, then when a patient (e.g. Jennifer Smith example below), when a new person is created, a demographic match is performed internally; if the patient provides a drivers license or any identifying information, it will assist in generating a patient match.

Once an organization is participating – and the link is confirmed – using the use case for treatment purposes, other providers can fetch data on the patient. An organization may not opt to provide all the information on a patient – but all the information that has been provided is available to the other providers within the network. Until a patient opts in, there is no information sent to the network.

Requirements to Becoming CommonWell-Enabled

Component	Patient Registration	Document Query & Retrieve	Enrollment	Gateway
What?	HIT system sends ids & demographics to CommonWell	HIT system queries & retrieves documents via CommonWell	Organization enrolls patient into CommonWell	HIT system makes clinical data accessible to other CommonWell members
Flow?	HIT → CHA	HIT → CHA	HIT → CHA	CHA → HIT
How?	PIX/MLLP PIX/SOAP FHIR	XDS.b XCA	FHIR	XCA

Today, the following scenario is implemented through FHIR – which has been extended slightly to leverage core resources from the edge system to the core services:



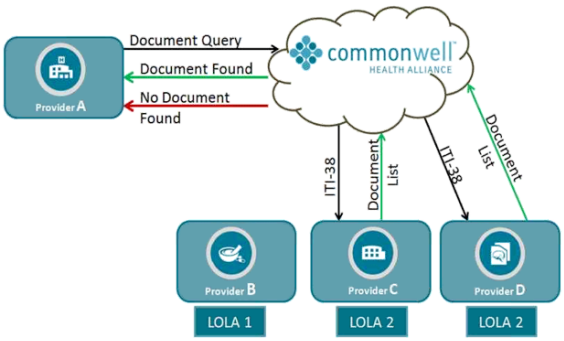
When an organization comes on board, it typically backloads patient information for last 6 months or year. This enables the linkages to form, but the enrollment would happen when the patient next presents to the facility.

Scenario for using XDS.b vs. XCA – most of the members are currently using XCA. Support for XDS.b has been built in if members want to use it. CommonWell does the brokering between the XCA participants.
In the example below, there is a network with 4 organizations – LOLA = Level of Link Assurance LOLA 2: there is a demographic match, but no patient confirmation. LOLA 2 includes a human validated link – and can return information.

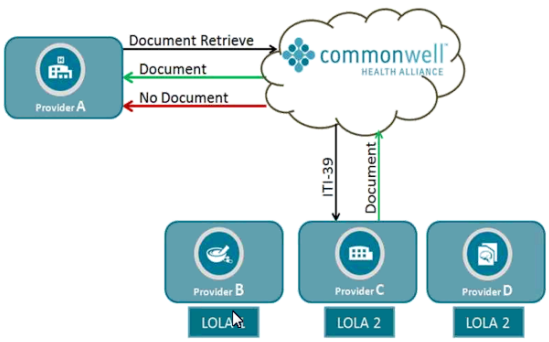
On the retrieve side, Provider A indicates which documents are desired for retrieval and then it is provided by the requisite organization.

More Details on Query & Retrieve

Query



Retrieve



For the Jennifer Smith example, if 4 matches are found for her – they are all LOLA 1 – they are all demographic matches, some may be exact – others may be close. When the front desk reviews this information with Jennifer and confirms her match or no match - - where there is a match, that is a LOLA 2 and no match is a LOLA 0. Until Jennifer confirms the match – even if it is an exact match, CommonWell will not fetch the data.

If it has been several months since Jennifer enrolled, can she then indicate she has had a visit at another provider – when she presents for a visit at another CommonWell organization, the matches are re-run.

How is the Enrollment workflow made available to CommonWell members? Given that there are multiple EHR platforms in use – what is the user-interface to enroll a patient? There are typically 2 ways this is done:

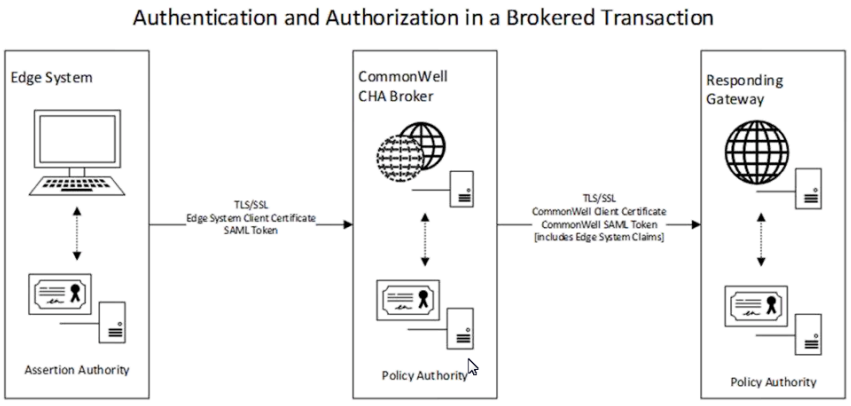
- The main way this is done (and for the pilot) is via a portal. This was faster for the pilot. Single sign-in to the web portal for enrollment, matching, etc.
- The long-term way – which has been implemented by one of the members in production – is to build it into the product, using FHIR APIs.

After the enrollment, how does a patient "un-enroll" from a particular provider – this is currently left up to the provider. There is work continuing to review this model – to respect patient privacy – to ensure that data can flow. If you're in CommonWell – then will need to contact one of my providers and have the un-enroll. The only mechanism to stop sharing of a particular provider's information is to set it at LOLA 0.

The Security Architecture is depicted below. The Responding Gateway makes the decision on whether to respond. The Broker determines that the right authentication, signed trusted, and determines that the transaction is valid. The Responding Gateway can determine that the use is not something that it chooses to accept, and can deny the request/refuse to respond.

Security Architecture

- X.509 certificates for authentication and signing
- SAML/JWT (JSON Web Token) for authorization
- Claims include:
  - Subject ID
  - Subject Org
  - Subject Role
  - Purpose of Use



If a list of retrievals is obtain for various organizations – does the edge system have to wait until all nodes respond? For a query, there is a "fan out" as depicted in the figure below. CommonWell has been running within the boundaries listed below and is working with members with slower gateways to optimize their particular gateways so that they can respond faster. There are MemberTargets that must be met – and the

CommonWell Services must receive the information and aggregate it within the Service Provider targets listed below. Currently, targets are set high – prefer a slower transaction returning data rather than a faster transaction.

In a query, you'll have the response time of the slowest responder + the time it takes to aggregate the information (up until the Responding Gateway timeout). There are TotalTimeouts listed below for the total Document Query vs. a Retrieve Timeout.

Most members are meeting the Member Targets listed below.

Performance Targets & Timeouts

Performance Targets

Pilot Performance Targets	RelayHealth (CommonWell Service Provider) Targets	CommonWell Member Targets
Non bulk-load PIX and CommonWell REST transactions	99% within 1 second	N/A
CHA Broker document query	99% within 6 seconds	99% within 3 seconds
CHA Broker document retrieve	90% within 10 seconds	90% within 5 seconds

CHA Broker Timeout Settings

Document Query Responding Gateway Individual Request Timeout	Document Query Total Timeout	Document Retrieve Timeout
20 seconds	25 seconds	30 seconds
20 seconds	25 seconds	30 seconds

Challenges encountered prompted the development of Appendix E. When newer members are certified, CommonWell validates that the metadata that is sent is aligned with Appendix E.

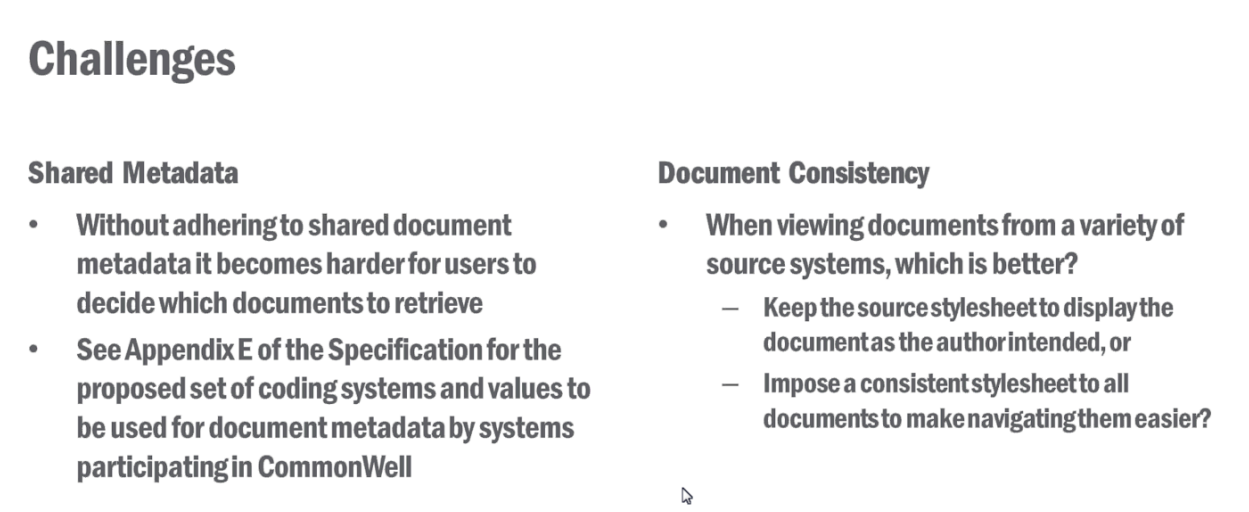
The other challenge is the stylesheet – the consensus of most member is to impose a consistent stylesheet. If an organization receives documents from 3 organizations with 3 different stylesheets, it can be challenging to the receiver to use. CommonWell is still soliciting feedback from members and from the Query WorkGroup related to how this challenge has been solved.

Group participants provided feedback that the application / user wants to define the consistent format, and not be dependent upon another stylesheet. There are organizations that want to render the information in the stylesheet how it has been modeled to fit foreign data in a way the user is accustomed to seeing within an application. CommonWell has noted that some organizations have also resisted a consistent stylesheet – and want to control how the information will be viewed. This is

an area of continued monitoring to understand how providers want to view this information. This discussion is underway within HL7 as well – is the document viewing controlled by the sender or receiver? By the provider or the consumer of the document? In Australia for example, there is one stylesheet for the entire country.

It's possible that liability may play a role – consuming vs. using information vs. displaying information.

Is there guidance from CommonWell on content – related to what to put into certain types of document (e.g. place as much as information as possible in the Summary Care Record vs. use the Summary Care Record as a table of contents)? Currently, there is not yet guidance on this, but it is being reviewed.



Action/Follow Up: None

EHR | HIE Interoperability Work Group (IWG)

Discussion Summary:

The IWG is similar to CommonWell in terms of guidance, but there is not a specific implementation and is similar to Healtheway, but there is not onboarding event (like Healtheway).

Want to ensure that there is a role of the State to ensure that there is a compliance process within the state; on the vendor side, vendors had to commit to development working collaboratively, embrace the specifications, and meet the specifications within 1 or 2 product releases.

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Terms of Participation

State Responsibilities

- Actively participate and obtain buy-in with state policy groups
- Agree to develop compliance process for interfaces within state
- Ensure that specifications developed are utilized in their state.
- Market to the healthcare provider community the value of using EHRs and HIEs that pass the "plug and play" compliance testing

Vendor Responsibilities

- Actively participate in workgroup
- Work collaboratively with potential competitors
- Utilize off the shelf standards
- Commit that upon final approval of the specifications to develop product that meets such specifications within 1-2 major product releases

From a membership standpoint, have the states and then from a vendor perspective, have EHR vendors and those vendors that are trying to facilitate exchange. Some of the vendors are in both groups.

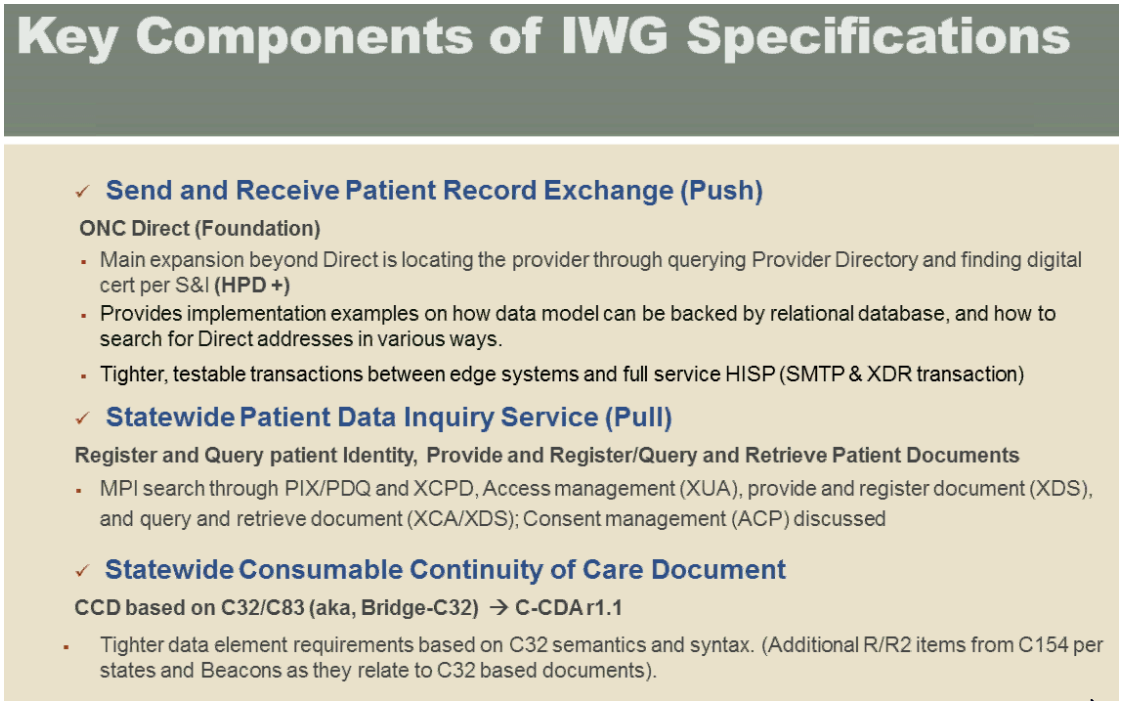
STATES	
Arkansas	Nebraska
California	New Jersey
Florida	New York
Georgia	Oregon
Illinois	Rhode Island
Kansas	Utah
Kentucky	Vermont
Maryland	Virginia
Michigan	West Virginia
Missouri	

EHR VENDORS	
Alere Wellogic	Epic
Allscripts	GE
CareVoyant	Greenway
Cerner	McKesson
CureMD	MDClick
Data Strategies	MTBC
DeFran Systems	NextGen
Dr. First	Nortec Software
eClinical Works	Prosocial Applications
eMDs	Siemens
EMR Direct	TenEleven Group
	Vitera Health

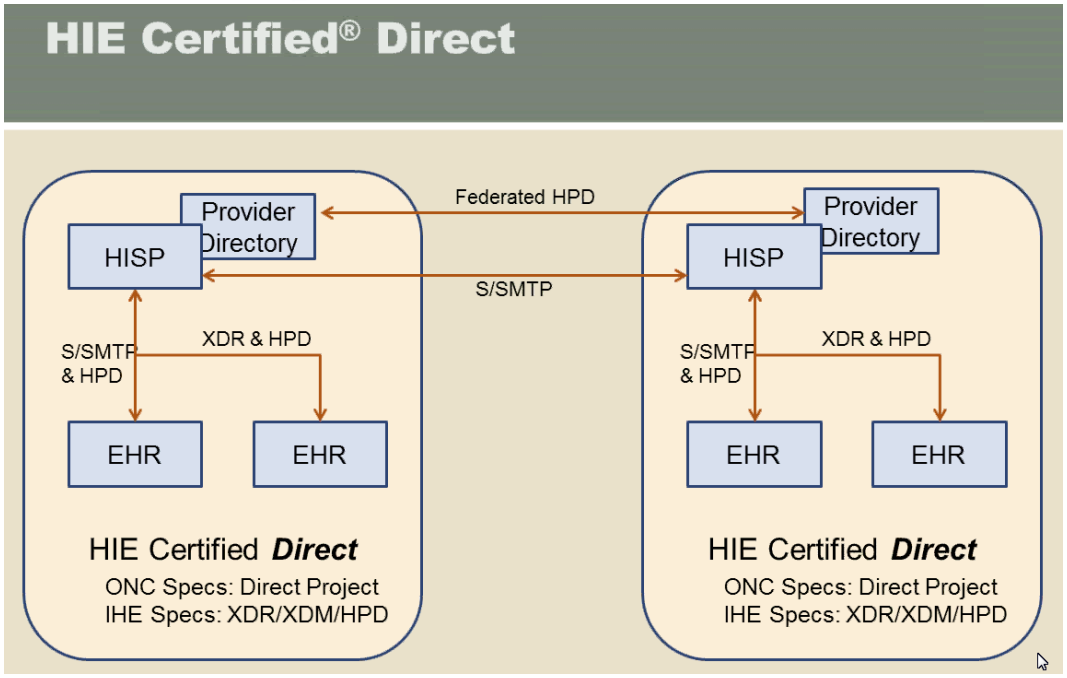
HIE/HISP VENDORS	
1MEDiX	Med3000
Alere Wellogic	MedAllies
ApeniMED	MedFx
dbMotion	Medicity
Data Motion	Mirth
GE	Misys OS Solutions
GSI Health	NextGate
Harris	OmniMD
HealthUnity	OmniXchange
iPhysicianHub	Optum
ICA	Orion Health
InterSystems	RelayHealth

When NY looked at the ecosystem of interoperability, it started looking inside the ecosystem of HIE – and then looked outside, and leveraged the work that the NwHIN had done, now eHealth Exchange.

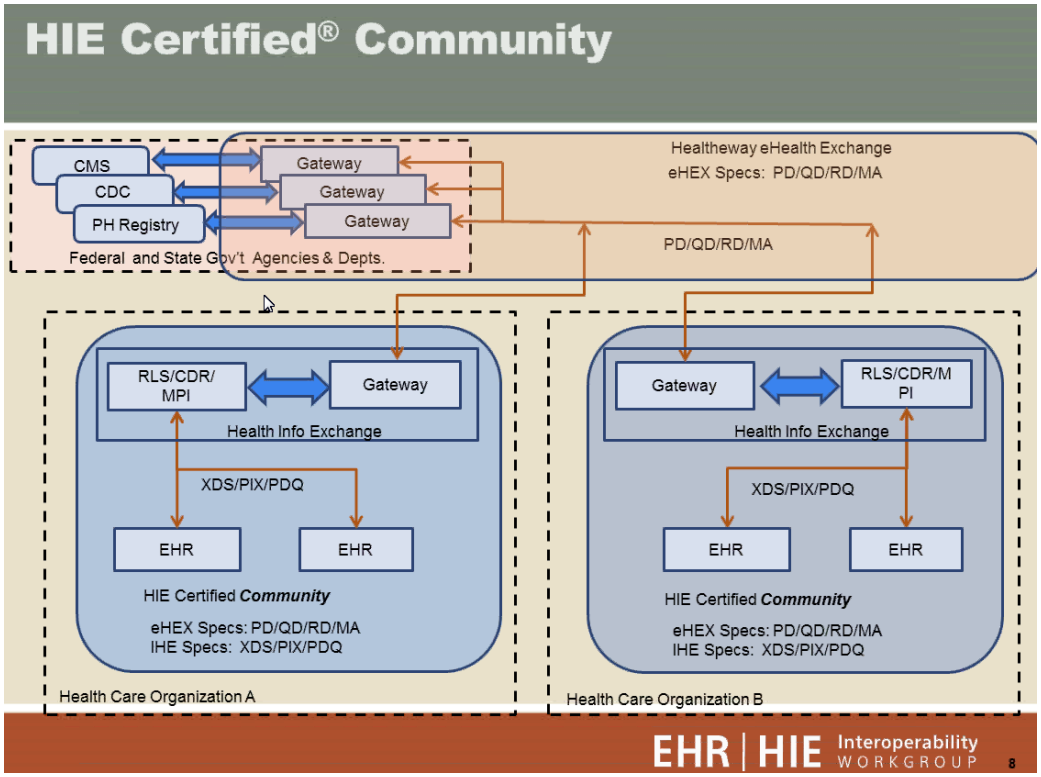
The key components of IWG specifications are depicted below. When the IWG was started in 2011, wanted to take advantage of the templating of the C-CDA, but not require vendors to change – but since then, have stayed out of the data space. IWG will not address data guidance at this point.



For HIE Certified® Direct, the requirement is that the EHR is able to play in the HPD space. Have landed on the Federated HPD Query specification – which will be tested in this quarter and in 2015. It is a variation on the simple query.



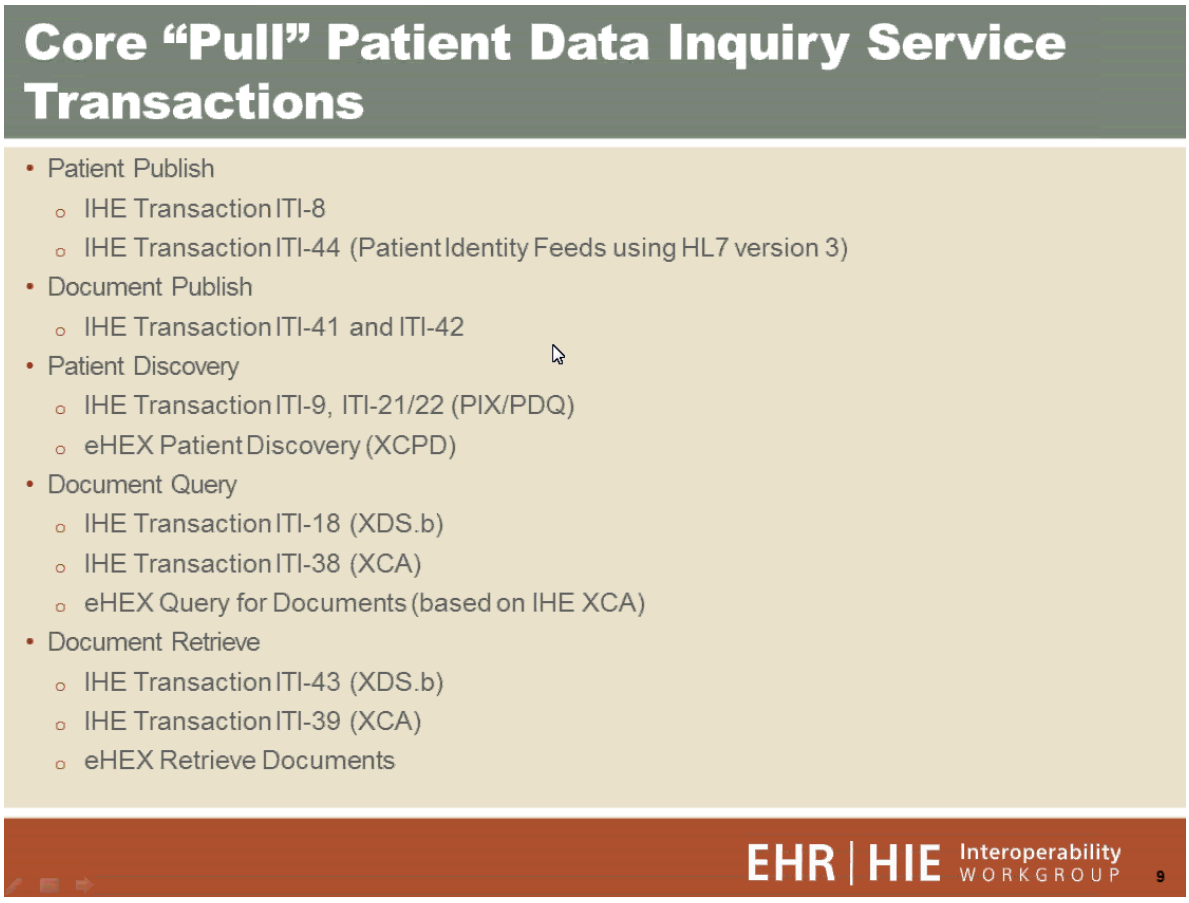
HIE Certified® Community – more along the lines of Simple Query is depicted in the picture below. The solution needs to cover intra and inter-community HIE. Cross-community guidance for IWG is identical to Healtheway eHealth Exchange – PD/QD/RD/MA.



When there are multiple HIEs within a state, they are using the XCA specification. Are seeing some states implementing an MPI – using the PIX/PDQ for query, but are using XCA for clinical document exchange.

IWG does not constrain the approach – as long as using the profiles below.

Are there are some HIEs that are using XCA to cross states? If the eHEX standards are leveraged, the same gateway capabilities to go to another exchange in the state could be used to go via the eHealth Exchange to go outside of the state. In some cases, the state may serve as the broker – might do XCA inside, but in talking to eHealth Exchange, may stand up its own gateway to be the "single point to the outside world".



The messaging transactions for messaging and web security are depicted below.

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Technical Requirements for Message Authorization, Security and Consent

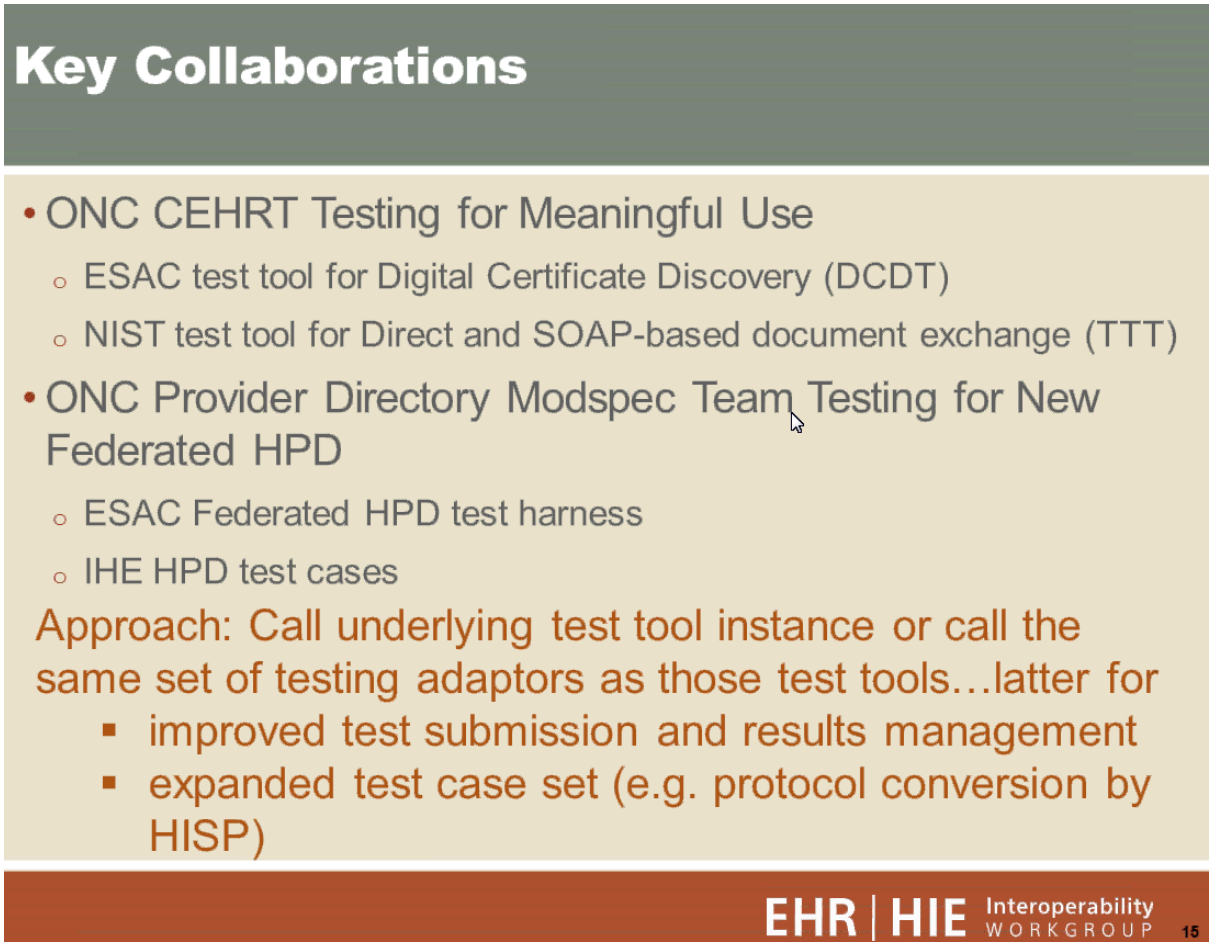
- Messaging
  - eHEX Messaging Platform
- Authorization
  - Authentication
    - IHE XUA
    - eHEX Authorization Framework
  - IHE ATNA Node Security
- Consent
  - Currently out of scope but references eHEX ACP

IWG felt the world needed a way to deliver conformity – and has been developing a testing tool – with an announcement within the last 10 days. It is from a collaboration between IWG and IHE USA and HIMSS – to take the specification guide to increase the uptake of standards – and provide a resource to states doing deployment so that vendors can be certified against them. Tool name: IWG Testing Tool (ITT).

Key Components

- Web UI for self-servicing interaction with certification test tool
  - User management
  - System-Under-Test (SUT) management
  - Test case association and management
  - Test execution
  - Test results management
- API layer to access data & test engine
- Data layer to hold testing related objects
- Test execution with adaptors to drive different underlying testing modules or engines

The Direct Testing Tools are similar to Meaningful Use – developed by NIST/ONC. The items that are not part of MU, are the HPD testing. The ITT uses the ONC-funded Direct Certificate Discovery Tool (DCDT) and the NIST Transport Testing Tool for Direct and SOAP-based exchange (TTT). Will be using the ONC Provider Directory Modspec Team Testing for federated HPD – there is an ONC-funded HPD Test Harness that will be used to execute the IHE HPD test cases.



References

• Messaging Platform • Authorization Framework • Access Consent Policies • Health Information Event Messaging • Patient Discovery • Query for Documents • Retrieve Documents		(ONC)
CCD References: HITSP c83, c80, c32 • CDA Content Modules Component, V2.0.1 (C83) • HITSP Summary Documents Using HL7 CCD Component, V2.5 (C32) • Clinical Document and Message Terminology Component, V2.0.1(C80) • HITSP Data Dictionary V1.0 (C154)		Health Information Technology Standards Panel (HITSP)
Statewide Health Information network of New York (SHIN-NY) • SHIN-NY Technical Architecture Overview • SHIN-NY Core Web Services Implementation Specifications V1.0 • SHIN-NY Information Security Architecture and Implementation Specifications V1.6		Statewide Health Information Network of New York (SHIN-NY); New York e-Health Collaborative (NYeC)

Looking for States to use this tool – there is a new

There are not very many changes or extensions to existing specifications, with the exception that IWG took an approach of bundling. Not necessarily constraining or expansion of the standard, but more of aggregated functionality.

- There is some additional constraints on the IHE
- Also required the testing of HPD

For Carequality – focusing more on the "inter-HIE" space. A good percentage of IWG specs are out of scope for the Carequality initial Query WG efforts.

Once you start standing up these environments, you get to the "last mile" conversations to try to get to connectivity. The state of NY and a number of HIE were missing a way to test and verify EHR connectivity – to present some uniformity.

For the Query WG, we are looking at a variety of ways to connect different ecosystems – but in looking at the different ways data is defined within an ecosystem. Has IWG found that within all of the XD* family – with all of the metadata that are available with different levels of granularity with the same information – the Direct project came up with a minimal metadata approach to provide a more constrained implementation without the 100s of metadata fields that could be used. IWG focused on a small set of metadata that it would focus on – the group wanted to stay less restrictive, but put some stake in the ground – related to C-CDA document types. Need to standardize on something so that the recipients know what they are receiving.

Action/Follow Up:

- None

Next Steps

Discussion Summary: In reviewing the state respondents, most of the state respondents were in line with existing exchanges and presentation approaches. The Alaska eHealth Network seemed to be one to consider for a future presentation. This network called for a simpler approach in its survey response – this organization could provide a perspective on a simplified set of specifications and their approach to adoption. Alaska eHealth Network is looking to join the eHealth Exchange as well as integrate information with DoD and VA – plan to follow-up to understand testing outside of their state.

The next meeting will be in-person on Monday, December 8. The group reviewed the set of in-person attendees.

Action/Follow Up:

- Reach out to the Alaska eHealth Network to present to the Query WG on Monday, December 15.
- Reply to Hans, Seth, Anita by Wednesday – if attending in person so that food and beverage logistics can be coordinated.

The meeting adjourned at 3:58 pm EST.