

EHR | HIE Interoperability WORKGROUP

ONC Exemplar Governance Grantee
Provider Directory Pilot Kick-off Meeting

June 28, 2013

Agenda

- Welcome and introductions
- Goals of project
- Introduce potential partnerships for pilots
- Roundtable discussion of possible pilot models
- Agreements/MOUs
- Confirm project timeline
- Next steps

Welcome and Introductions
Organization Roll Call

Exemplar HIE Governance Entities Grant Project

- ONC awarded the Exemplar HIE Governance Entities Program Grant to NYeC on behalf of the EHR|HIE Interoperability Workgroup (IWG)
- The cooperative agreement will allow the IWG to continue its efforts in developing robust implementation specifications for 'plug and play' interoperability
- The IWG will address the implementation challenges facing the exchange of health information specific to querying provider directories and will collaborate with ONC to identify and improve patient matching across communities of care

Goals of Project

Goals of Project

- Pilots
- Link with Testing
- Implementation Guide
- Metrics

Goals of Provider Directory Pilots

- ❖ Recruit participants for pilots to test various models for querying provider directories to support EHR-HISP and HISP-to-HISP exchange of Direct messages
 - Approximately 5-7 pilot participants (states and vendors)
 - Pilots to test the HPD+ directory standards and data model developed by the S&I framework and incorporated into the IWG Direct Exchange specifications
 - Work in collaboration with other provider directory federation efforts occurring around the country
 - Test the ONC Modular Specifications (ModSpec) Implementation Guide
 - Results of pilots will be incorporated into IWG's Direct Implementation Guide by February 2014

Link with Testing

- Inform test case creation process for IWG conformance testing for Provider Directory (PD) transactions
- Pilot and validate ONC PD ModSpec testing artifacts with regards to PD federation
- Be informed by and collaborate with overall IWG conformance testing program and tools for DIRECT functionality
- Preferred system status for pilot participation in IWG conformance testing program for DIRECT

Link to HIE Certified Program

HIE Certified is a program that tests and certifies electronic health records (EHRs), other health IT and health information exchange (HIE) participants to enable reliable transfer of data within and across organizational and state boundaries.

HIE Certified Network

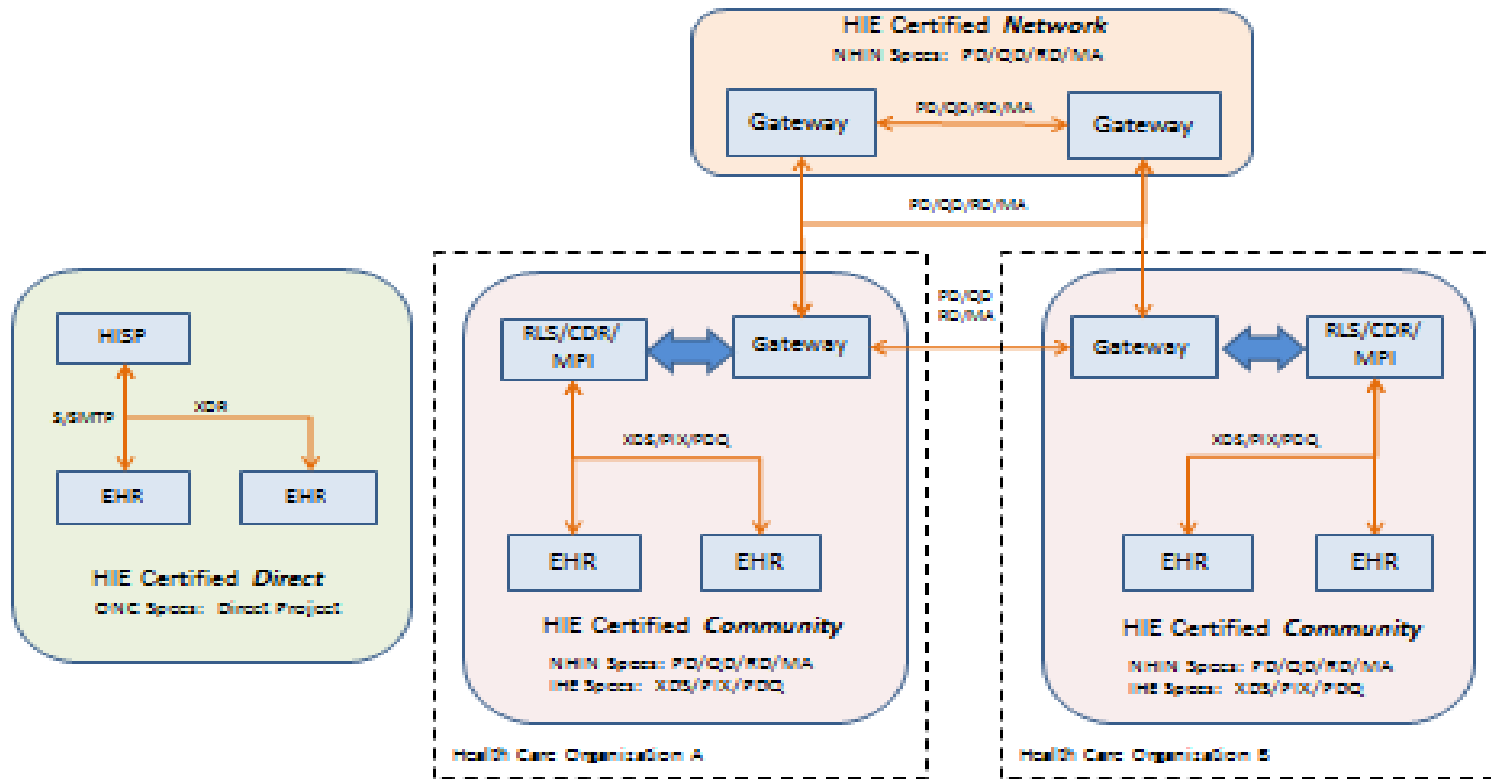
HIE Certified Community

HIE Certified Direct *



*** Pilot projects aligned with this focus**

Link to HIE Certified Program



Pilot Partnerships

Potential Pilot Partnerships

- California– multiple HISPs connected by a federated directory, coordinated through the Institute of Population Health Improvement at UC Davis
- Kansas Health Information Network / Missouri Health Connection
- Oregon / California– continue to expand the current federated directory implementation as more HISPs are added to the California trust community and connected with CareAccord in Oregon
- New York– NYeC / Western New York HEALTHeLINK / perhaps other NY RHIOS as well
- Georgia Health Information Network / North Carolina Health Information Network / South Carolina Health Information Exchange
- Nebraska Health Information Initiative / Utah Health Information Network / Wyoming eHealth Partnership / Iowa eHealth

Additional Possibilities

- Other organizations are also looking at potential pilots; we hope to include other models of directories and EHR implementations
 - Minnesota Community Health Information Collaborative
 - Michigan Health Information Network Shared Services
 - NextGen
 - Others?

Opportunities and Activities

- Pilots will have opportunity to be recognized as national leader and highlighted by ONC in blogs, etc.
- Project will provide some consulting and infrastructure support for work many of the pilot states are already planning to do
- Goal to minimize additional meetings on your calendars
 - one additional one hour meeting per month of the whole group
 - each pilot team will determine schedule for meeting to meet its needs

Metrics

- As a requirement of the grant, we will be reporting to ONC on certain data related to the pilots
- We will seek your input on those reporting requirements and provide that feedback to ONC.
 - Some ideas on the data to include for ONC reports are:
 - ✓ Number of Direct addresses in each participating HISP's provider directory
 - ✓ Number of Direct messages being exchanged between HISPs in each pilot
 - ✓ Number of provider directory queries that take place between HISPs

Roundtable Discussion of Possible Pilot Models

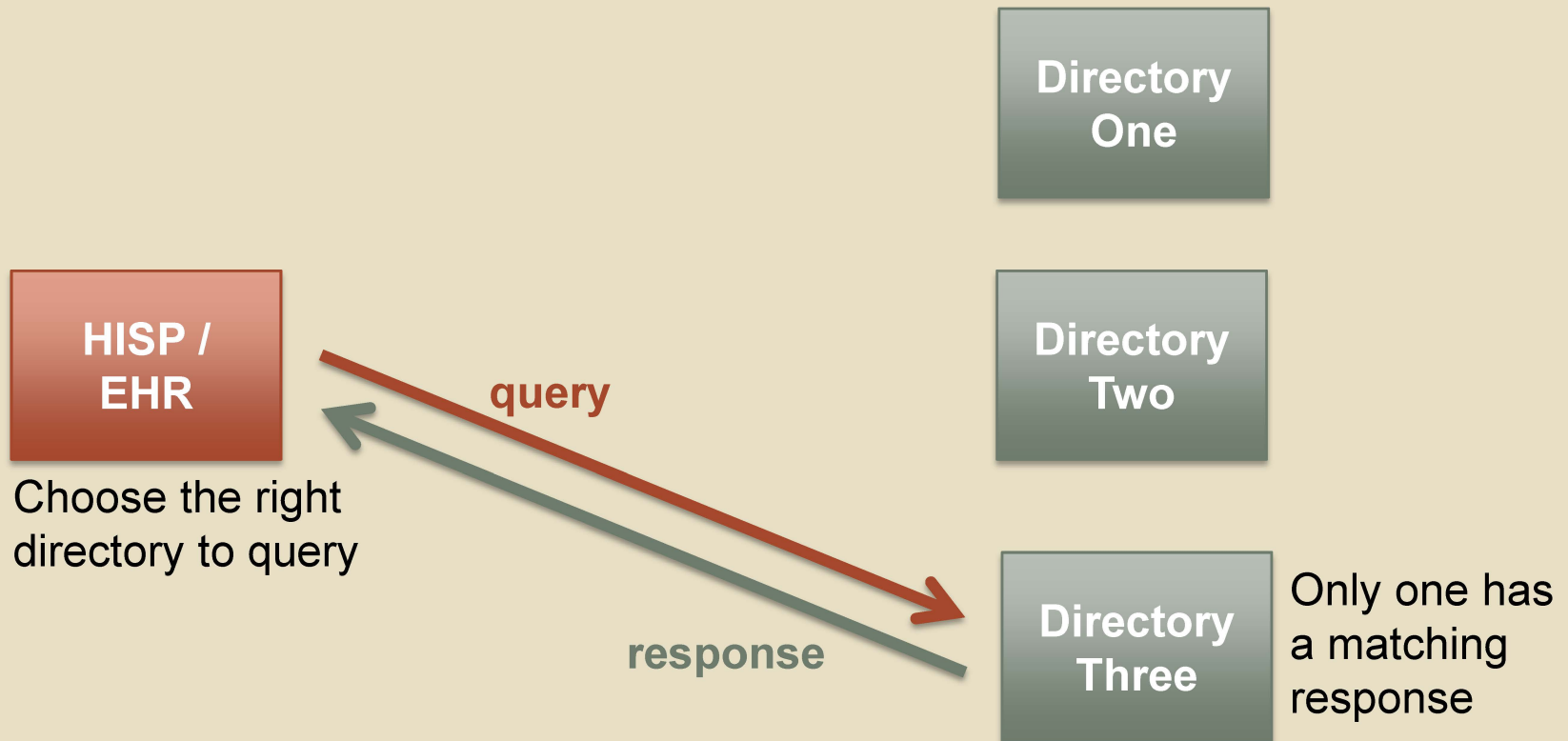
Goals of Provider Directory Pilots (a reminder)

- Test various models for querying provider directories to support EHR-HISP and HISP-to-HISP exchange of Direct messages.
- Test HPD+ directory standards and data model developed by the S&I Framework.

Example Query (Federation) Models

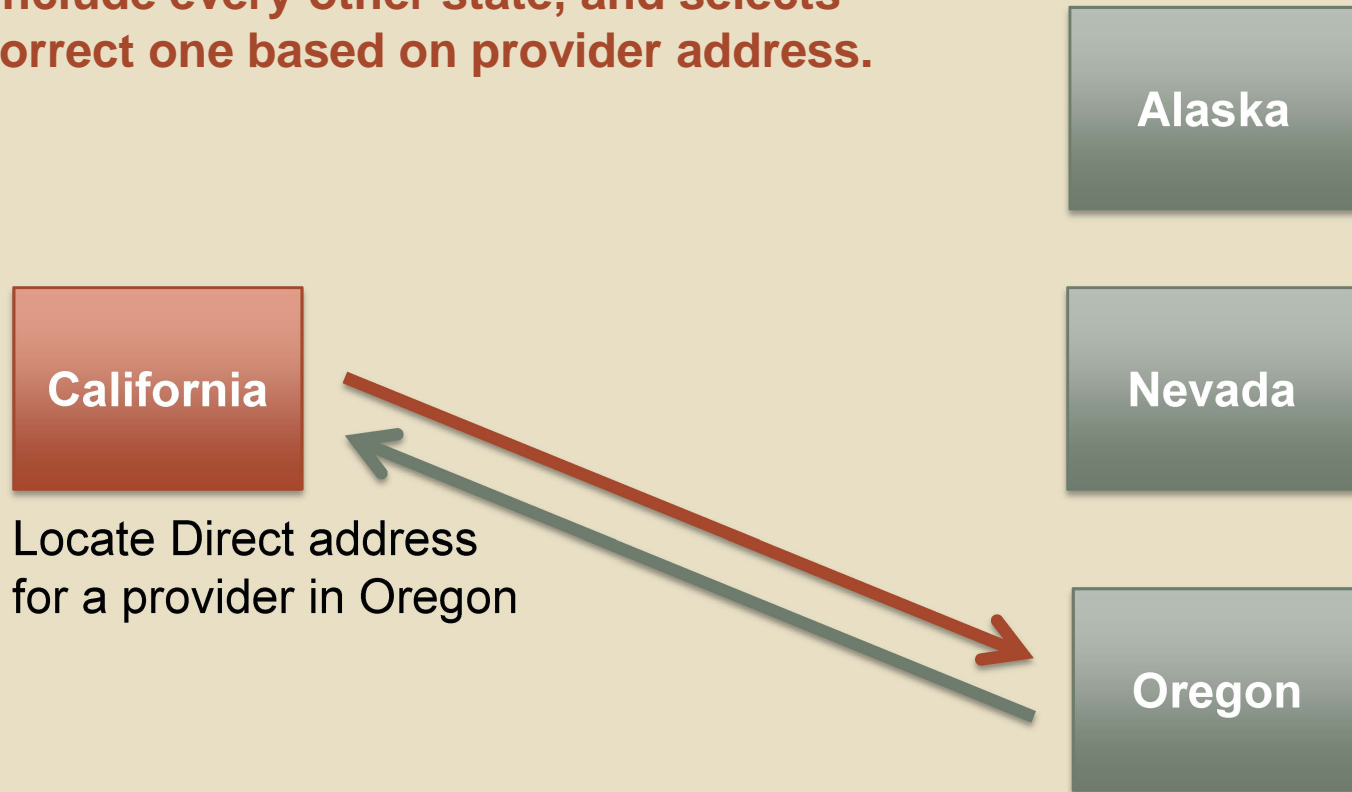
1. Determine which directory to query for a specific endpoint.
2. Use a gateway to identify the appropriate directory or directories and collate / accumulate results.
3. Query a list of directories and determine which can provide a response.
4. Replicate directory information to ensure each directory can answer the query for all participants.

Determine which directory to query

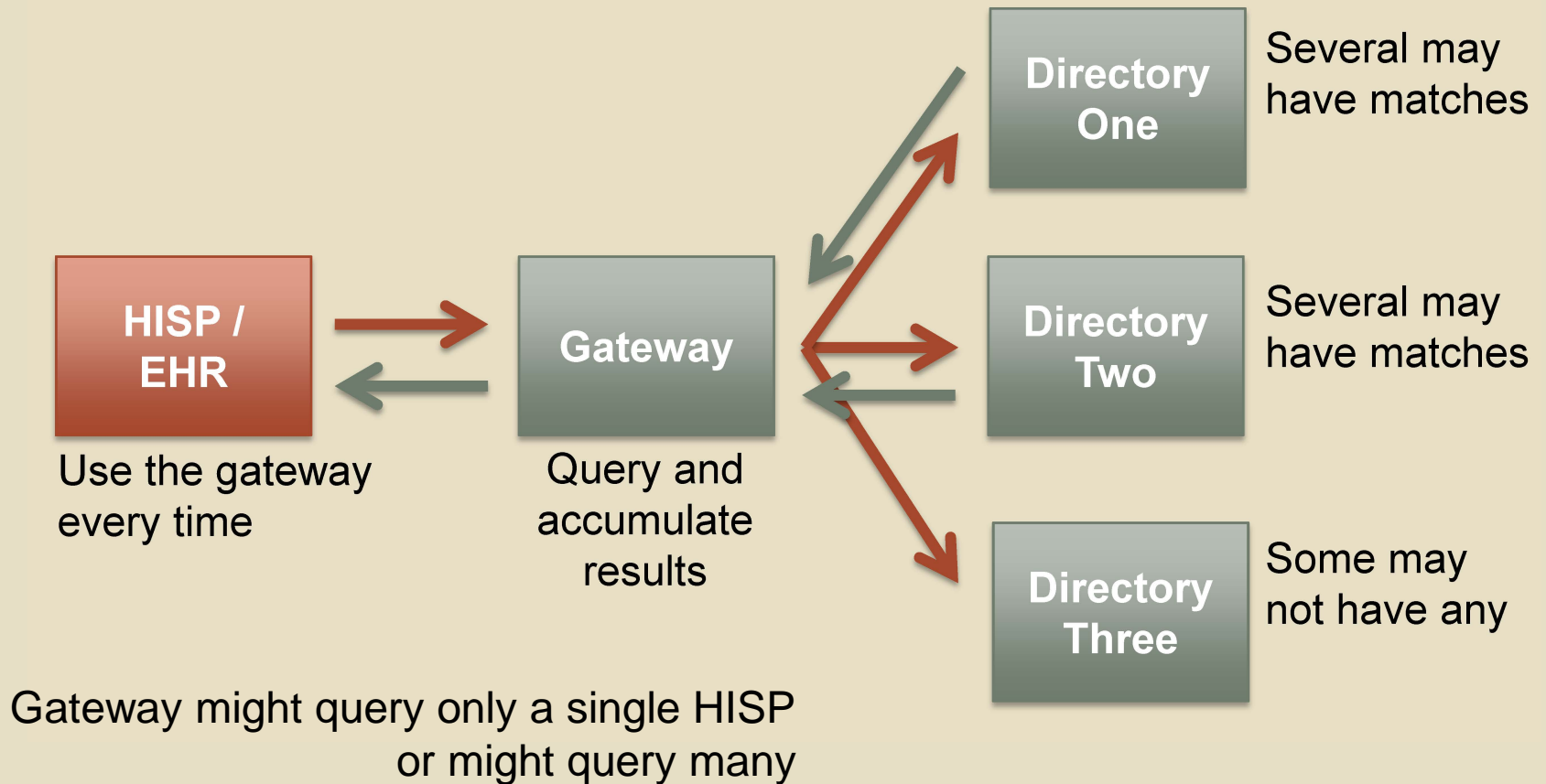


1. The NATE model

Each state maintains a list of directories that include every other state, and selects the correct one based on provider address.

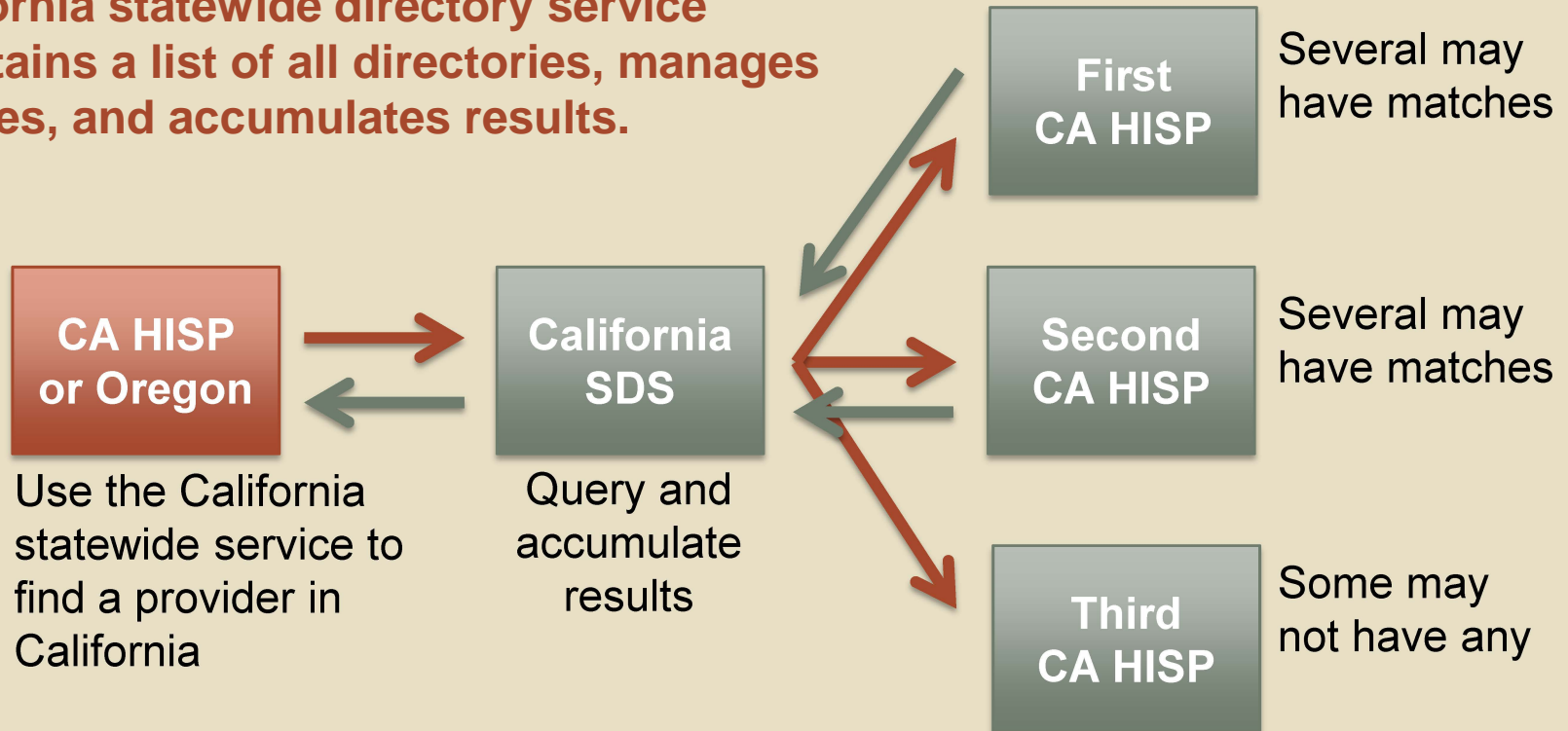


2. Use a gateway and accumulate results

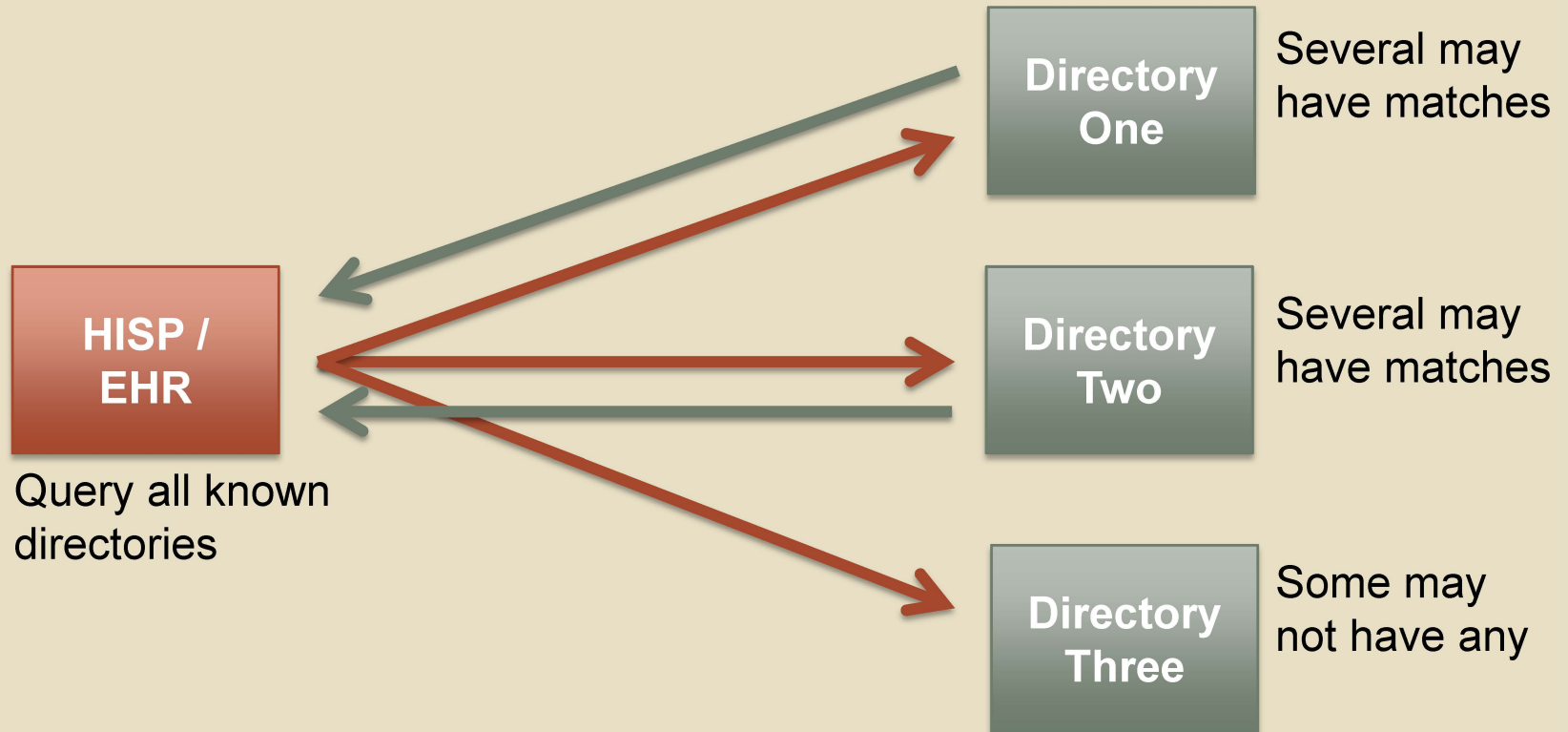


2. The California model

California statewide directory service maintains a list of all directories, manages queries, and accumulates results.

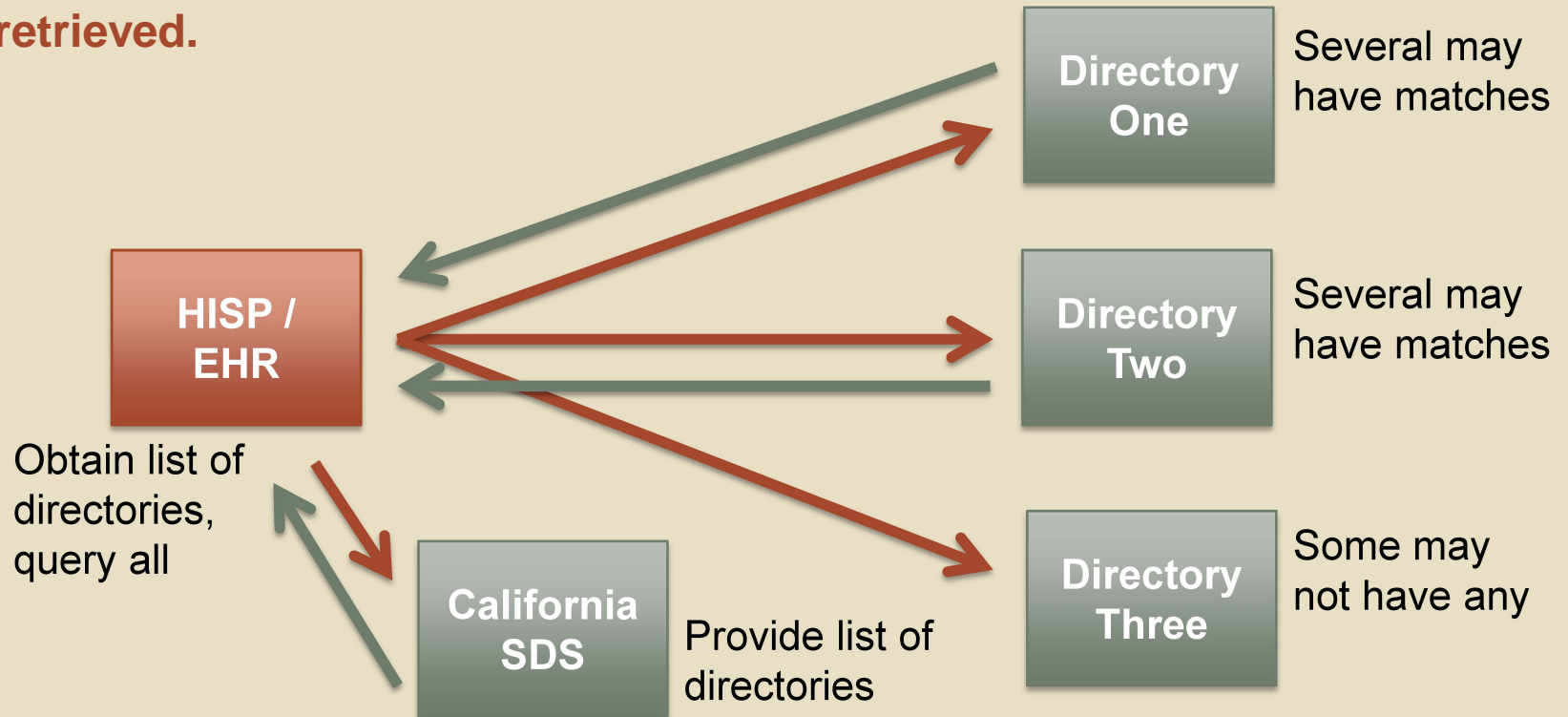


3. Maintain a list of directories to query

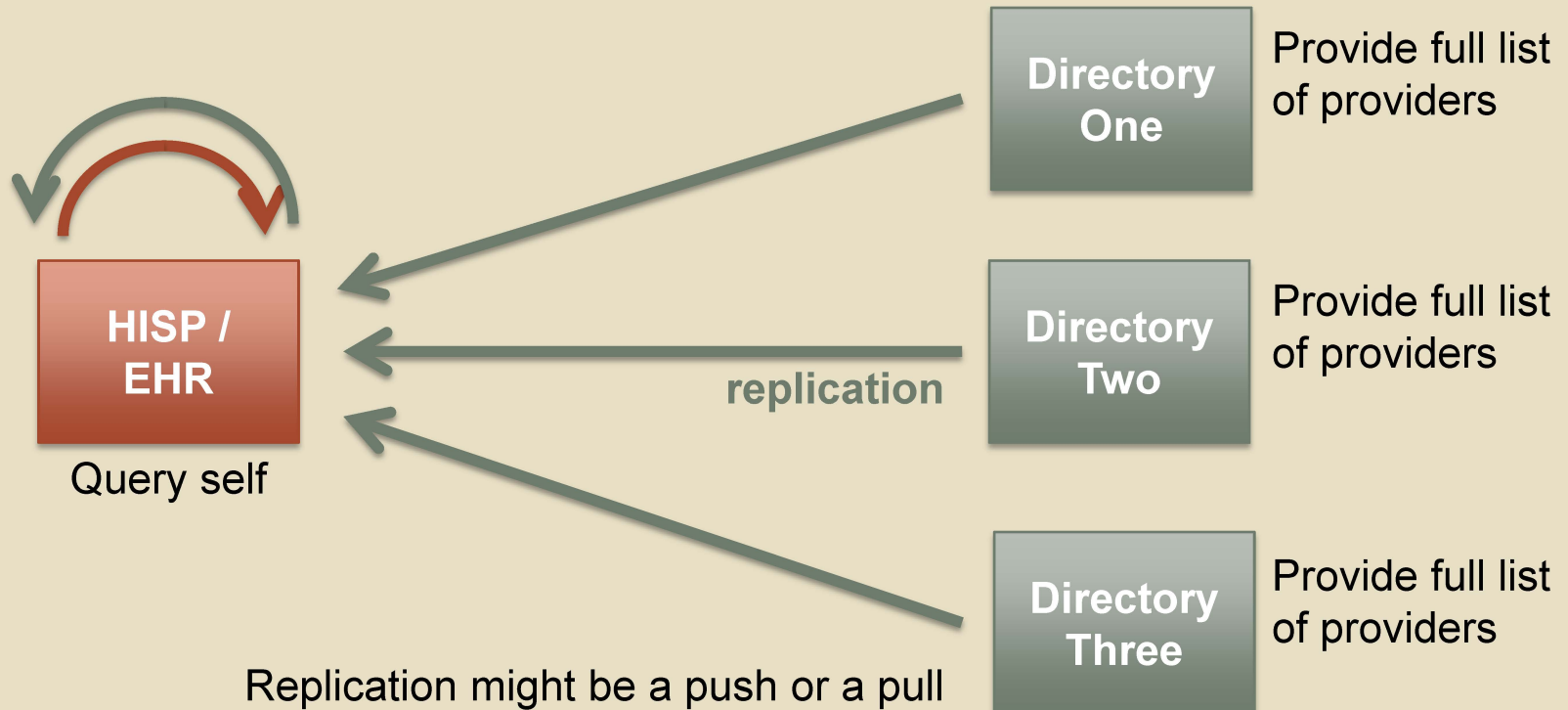


3. Alternative California model

California statewide directory service maintains a list of directories that can be retrieved.



4. Replicate data among all participants



Conversation about HISP-to-HISP Agreements

Agreements: Questions for Consideration

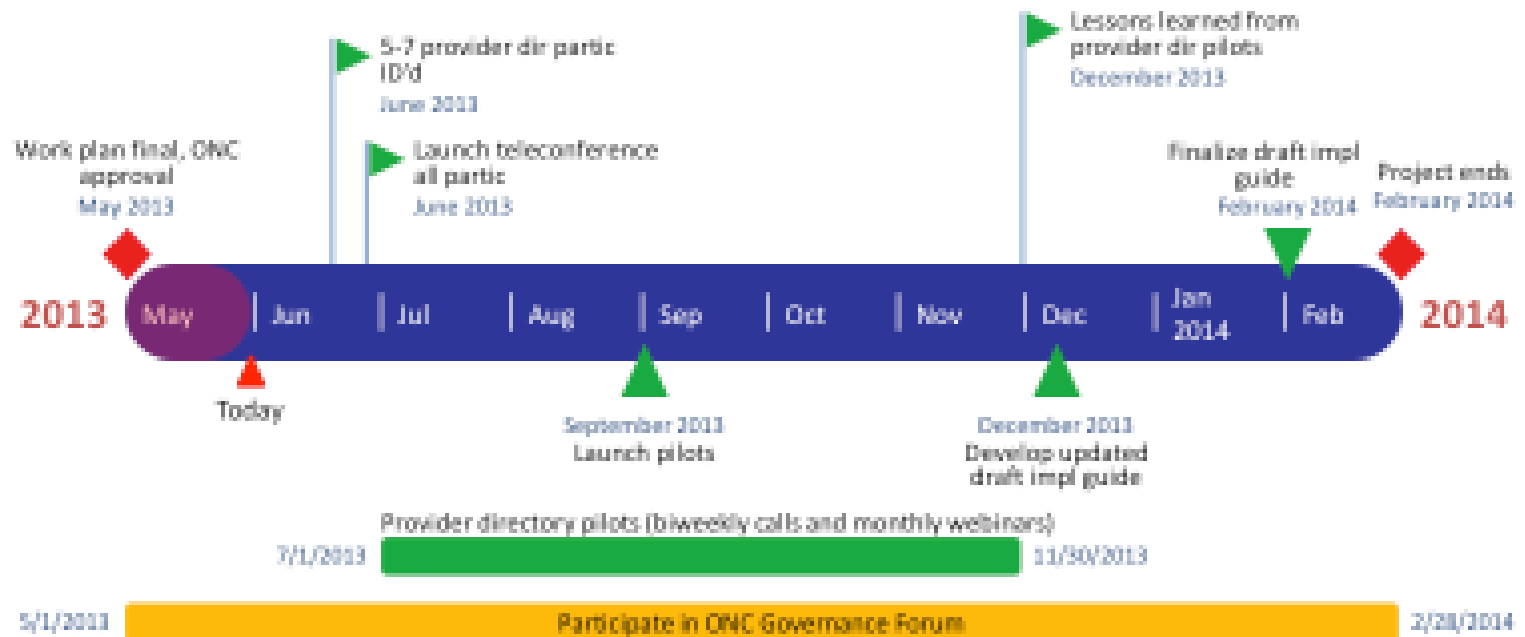
- Does your organization have a HISP-to-HISP agreement already in place?
- If not, is this something you will want to develop individually between the pilot partners, or would you like to consider a set of principles for HISP-to-HISP agreements as a group?
- Who needs to be included in conversations for each pilot?
- Are there foundational components we can all agree on?
- Can we leverage DirectTrust accreditation/EHNAC certification?
- Do you think that DirectTrust accreditation will be sufficient to allow exchange between HISPs?

Agreements: More Questions and Discussion

- What do you think your organization needs to have in place to move forward with a pilot?
- How can we help you with your next steps?

Project Timeline

Project Timeline



Project Milestones

- ❖ Recruitment of participants (May/June 2013)
- ❖ Kick-off (June 28, 2013)
- ❖ Monthly calls with the whole group (July-December 2013)
- ❖ Regular web meetings with pilot teams (July-December 2013)
- ❖ Develop work plan with each pilot team (July 2013)
- ❖ Incorporate results of pilots into IWG's Direct Implementation Guide (December 2013 - February 2014)

Monthly Group Calls

- The group spans the country so we need to juggle time zones
- Quick poll of group for the following regular days/times:

Times listed are Eastern

- Option 1: Monday 1- 2 pm
- Option 2: Monday 2 – 3 pm
- Option 3: Wednesday 3 – 4 pm

Next Steps

Next Steps

- Watch for invitation with schedule for monthly calls
- Pilot Teams will schedule phone check-ins to begin to develop project plans
- July call will follow-up on HISP-to-HISP agreements

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**ONC Exemplar Governance Grantee
Provider Directory Pilot Monthly Meeting**

July 29, 2013

Agenda

- Welcome and Introductions
- Organization Roll Call
- Update on Potential Pilot Meetings
- Focus for Pilots on HPD+ and ModSpec Standards
- Next Step for Pilots
- Q&A/Open Discussion

Welcome and Introductions
Organization Roll Call

Update on Potential Pilot Meetings

Update on Potential Pilot Meetings

- Six meetings covering almost every region of the county have been held
- Thank you to the many of you who have participated in these meetings
- Good discussions about current capabilities around provider directories
- Aggregation and Federation models emerged
- Ongoing discussions with vendors about timing of having HPD+ and/or ModSpec ready to pilot

Focus for Pilots on HPD+ and ModSpec Standards

Focus for Pilots on HPD+ and ModSpec Standards

- ONC Cooperative Agreement focuses on HPD+ and ModSpec
- Need to focus limited resources on the goals of the project to ensure that cooperative agreement terms can be met and the IWG Direct Implementation Guide for Provider Directories can be updated with lessons learned from the pilots
- Working to get additional information and clarity about timing and specifics of ModSpec standards
- Will update everyone when that information is available

Next Steps for Pilots

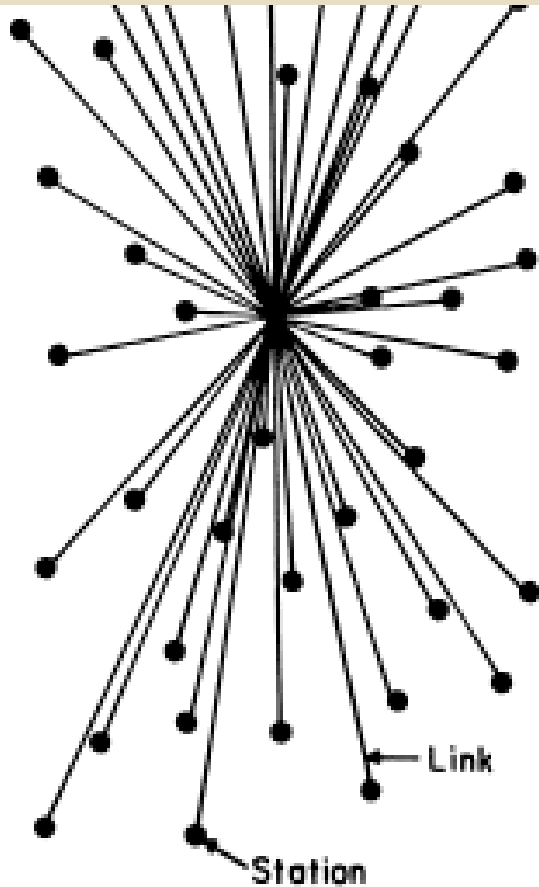
Next Steps for Pilots

- There are follow-up conversations happening with many potential participants and their vendors to determine if HPD+ and/or ModSpec will be in place in time for a pilot
- At this time there are three pilots moving forward to test either or both HPD+ and ModSpec before the end of 2013
 - New York – with NYeC and Western New York HEALTHeLINK
 - California – multiple HISPs connected by a federated directory, coordinated through the Institute of Population Health Improvement at UC Davis
 - Snowbird Pilot with Florida Health Information Exchange (FL-HIE), the Michigan Health Information Network Shared Services (MiHIN), and Surescripts
- Additional pilots are being evaluated and may be added. The above are confirmed.

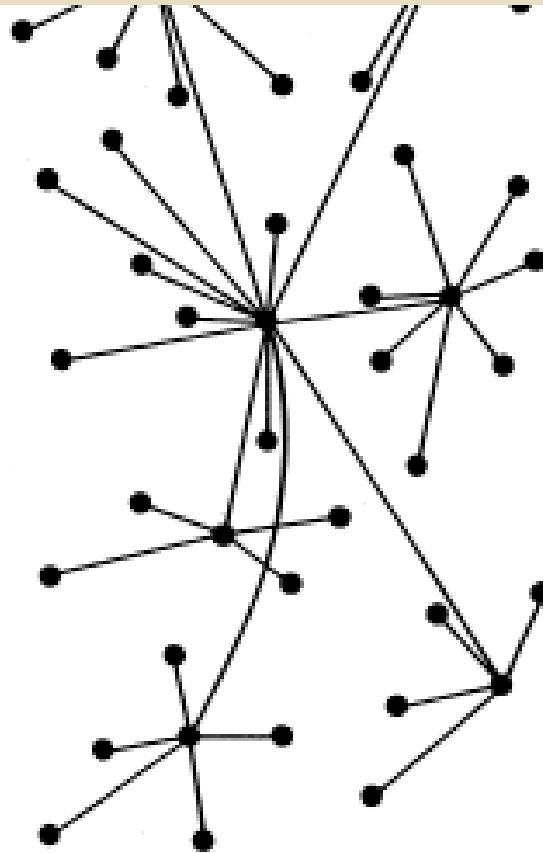
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- ❖ Incorporate results of pilots into IWG's Direct Implementation Guide (December 2013 - February 2014)

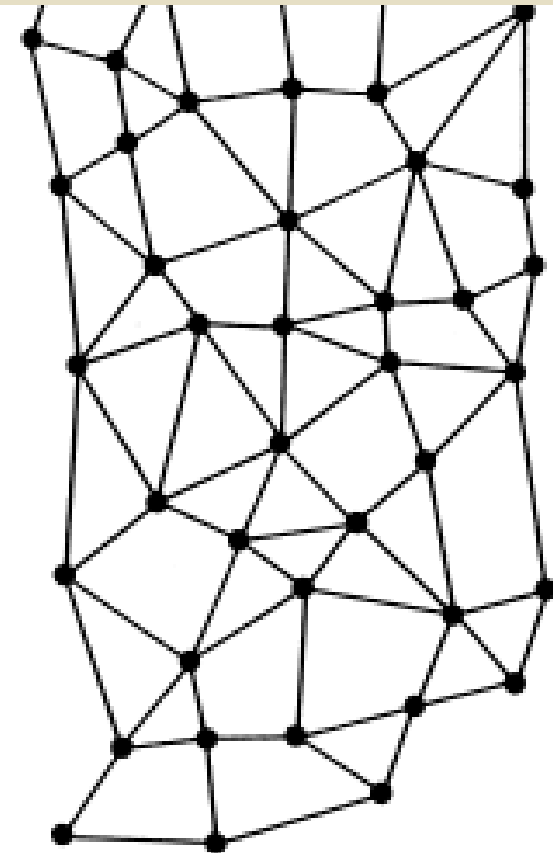
Network Models



Centralized



De-Centralized



Distributed

Monthly Group Calls

All calls are scheduled for 2:00-3:00 Eastern Time

July 29

August 26

September 30

October 29

November 25

Contact carol@raaconsult.com to be added to the calls/web meetings

Q&A/Discussion

Contact Information

Carol Robinson, Principal

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**ONC Exemplar Governance Grantee
Provider Directory Pilot Monthly Meeting**

August 26, 2013

Agenda

- Welcome and Organization Roll Call
- Update on ModSpec and IWG Testing
- Review List of Pilots
- Pilot Updates:
 - NYeC/HEALTHeLINK
 - NATE
 - California
 - Snowbird
- Q&A/Discussion
- Metrics
- Next Steps

**Welcome
Organization Roll Call**

Update for Pilots Testing and ModSpec Standards

Update for **Pilots Testing** and ModSpec Standards

- ONC Cooperative Agreement focuses on existing IWG spec (based on HPD+) and ModSpec
- IWG Conformance Testing Program (CTP) for DIRECT being finalized for pilots through Q4 2013
- PD Testing Tool (integral to IWG DIRECT CTP) offers greatest challenge...not available in time for PD Pilots
- Test Cases for PD-EHR interactions drafted and available for PD Pilots to reference/use as part of their own onboarding processes

Update for Pilots Testing and **ModSpec Standards**

- Provider Directory ModSpec standards published in the form of an RTM and an Installation Guide for a Test Implementation instance
- HPD+ (and IHE HPD) scope is silent on cross-PD federation / collaboration...contributes to a backward compatibility issue
- ModSpec team preparing a formal profile submission for expanded PD scope to IHE for 2013-2014 cycle (deadline 9/29)
- Special consideration at NA Connectathon 2014 under discussion
- ModSpec team interested in vendors/PD deployments to pilot its standards recommendations for empirical feedback as soon as possible

Review List of Pilots

Initial Pilots Identified...Others May Form

State/HIE	Vendor Partners
University of California, Davis Health System Santa Cruz Health Information Exchange Orange County Partnership RHIO RAIN Live Oak HIE / Telemedicine Network North Coast Health Information Exchange Sujansky & Associates LLC	Mirth Epic (will demonstrate EHR integration) RAIN's developed solution GSI CHeQ
New York eHealth Collaborative, Western New York RHIO (HEALTHeLINK)	MedAllies, Mirth
Michigan Health Information Network, Florida Health Information Exchange, Surescripts	MIHIN directory platform, Harris, Surescripts
National Association of Trusted Exchange (NATE) States: Utah Health Information Network, California HISPs	Mirth, Secure Exchange Solutions

Exemplar HIE Provider Directory Pilots



Pilot Updates

Technical Approach

For the IWG Pilot

- On-boarding HIOs to a CA Trust Community and Trust Bundle.
- On-boarding HIOs to a federated Provider Directory.
 - Establishing policies and practices for authentication, minimum data requirements, responding to queries, auditing, etc.
- Creating a statewide orchestration service that federates queries without retaining data.
- Following HPD as amended by change proposal CP-ITI-601 to align with HPD+.

Related Activities

- Part of a larger pilot for California Trust Framework.
- Also implementing inter-HIO exchange using Exchange specifications for query/response.
- Exploring use of HPD for service discovery.
- Some participants also participate in NATE.

Participation

HIOs and Service Providers

- North Coast Health Information Network (NCHIN)
- Orange County Partners Regional Health Information Organization (OCPRHIO)
- RAIN Telehealth Network
- Santa Cruz Health Information Exchange (SCHIE)
- Sujansky & Associates (supported by the California Healthcare Foundation)
- UC Davis Health System

Timeline

- On-boarding to Trust Community now.
 - Policies and practices established through consensus process.
- Finalizing policies for Provider Directories.
 - Policies and practices established through consensus process.
- Anticipate on-boarding to provider directories throughout pilot.
 - NATE participants already on-boarded.

IWG Provider Directory Pilot

The “Snowbird” Pilot

Florida – Michigan – Surescripts
Status Update – August 28, 2013

Agenda

- Introduction to pilot participants
- The snowbird scenario
- Review pilot phases and status
- Findings so far



Introduction to pilot participants

- Florida Health Information Exchange (FLHIE)
 - Chris Phillips, Harris Technical Manager
cphill02@harris.com
- Michigan Health Information Network (MiHIN)
 - Jeff Livesay, Associate Director – 248-802-8844
livesay@mihin.org
- Surescripts (SS)
 - Dean Rutherford, Director of Operations,
Clinical Interoperability – 612-276-5462
dean.rutherford@surescripts.com



“Snowbird” scenario

- Northern and southern states share residents who receive care in each state for part of year
- Today data sharing between providers in separate states is typically burden of patient
- Infrastructure for coordinating care across states will provide higher quality care
- *Special instance of more general mobile society case:*
 - *people travelling can require treatment anywhere*
 - *healthcare knows no boundaries*



Pilot implementation phases

- Phase 1 demonstrates internal replication of provider information across all participating Provider Directories
- Phase 2 involves queries from originating HISP retrieving ESI (e.g. Direct address) from target PD
 - queries compliant with Modular Specification
- Pilot incorporates full DSML 2.0 query support across multiple participant PDs via DSML Gateway Service



Pilot phase 1 user stories

MiHIN Direct HISP user wants to search MiHIN PD for:

1. Surescripts Direct address
2. Florida Direct address (*implemented now*)

Surescripts user wants to search Surescripts PD for:

1. Florida Direct address
2. MiHIN Direct address

FLHIE Direct HISP user wants to search Florida PD for:

1. Surescripts Direct address
2. MiHIN Direct address



'Florida' search in MI PD



Logout

- Home
- Search
- Organizations
- Providers
- Electronic Services
- Affiliations
- Specialties
- Support Tickets

Provider

First Last

NPI

Organization

Name

Location

Street

City State Zip

Specialties

Name ▲	NPI	Organization	Street	City	State	Zip Code	Specialties
Aaron Pittman		State of Florida Agency for Persons with Disabilities					
Abigail Garton		State of Florida Agency for Persons with Disabilities					
Abraham Schwarzberg	1811967243	Cancer Centers of South Florida					
Adam Chambliss		State of Florida Agency for Persons with Disabilities					
Addie Holt		State of Florida Agency for Persons with Disabilities					



Electronic services information

Logout



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Recent Items

- CTC LLP
- CareBridge
- CTC
- Andrew A Fogel
- Andrea Granados
- Alyssa M Peyton
- Amanda Alvelo Malina
- Brian Smith
- Jackson Community Medical Record
- Henry Ford Hospital

Electronic Service CTC LLP

[Printable View](#)

[« Back to List: Electronic Services](#)

Electronic Service Detail

[Edit](#) [Delete](#) [Clone](#)

Name	CTC LLP	Owner	Jeff Eastman [Change]
Type	EHR Repository		
Protocol	LLP		
Payload	HL-7		
Address	\${ctc.llp.destination.url}		
Certificate			
TOC Destination?	<input checked="" type="checkbox"/>		
Preferred Types	A01; A02; A03; A04; A06; A07; A13; A14; A21; A22; A23; A25; A26; A27; A28; A29; A31; A32		

[Edit](#) [Delete](#) [Clone](#)

Affiliation Services

[New Affiliation Service](#)

Action	Affiliation Service: Name	Provider	Organization
Del	AS-0004	Nancy Spates	Child Health Partners, PC
Del	AS-0005	Ryan Klansack	Clinton County Medical Center, PC
Del	AS-0006	Bryanna Ruth Weber	Clinton County Medical Center, PC
Del	AS-0007	Louis W. Leonard	Melrose Greater Lansing, Holt Family Practice



Pilot phase 2 user stories

MiHIN Direct user searches for FL provider Direct address:

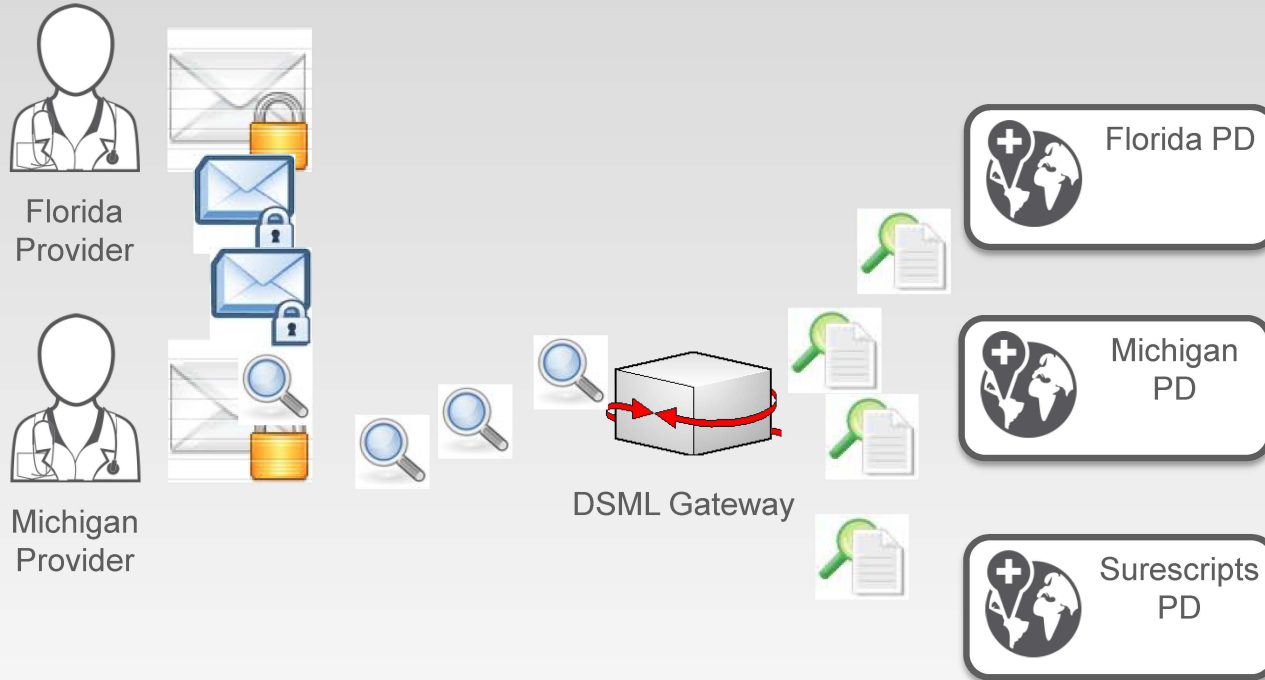
1. Florida PD
2. Surescripts PD

Florida Direct user searches for MI provider Direct address:

1. MiHIN HPD
2. Surescripts PD



Pilot phase 2: data flow overview



1. Michigan HISP user searches for a Florida provider
2. DSML 2.0 gateway negotiates queries to relevant PDs
3. PDs return search results via DSML gateway to originating HISP
4. Michigan HISP user sends Direct message to Florida provider

Pilot phase 1 next steps

WBS	Task/Activities	Status	Responsibility
7.3	FL-MI-SS pilot phase 1	in-process	FL – MI – SS
7.3.1	Issue phase 1 user stories	done	MI
7.3.2	Review and execute legal agreement to share provider data	in-process	FL – MI – SS
7.3.3	FL provides standard data format to MI	done	FL
7.3.4	MI develops ability to consume FL data format	done	MI
7.3.5	MI provides standard data format to FL	done	MI
7.3.6	FL develops capability to consume MI data file	not started	FL
7.3.7	SS provides standard data format to MI and FL	in-process	SS
7.3.8	MI develops ability to export data into SS format	not started	MI
7.3.9	MI develops ability to consume file in SS format	not started	MI
7.3.10	FL develops ability to export data into SS format	not started	FL
7.3.11	FL develops ability to consume file in SS format	not started	FL

Pilot phase 1 next steps, cont.

WBS	Task/Activities	Status	Responsibility
7.3.12	MI receives and loads SS data	not started	SS – MI
7.3.13	MI receives and loads FL data	done	FL – MI
7.3.14	FL receives and loads SS data	not started	FL – SS
7.3.15	FL receives and loads MI data	not started	FL – MI
7.3.16	SS receives and loads FL data	not started	FL – SS
7.3.17	SS receives and loads MI data	not started	MI – SS
7.3.18	Demonstrate user stories	in-process	FL – MI – SS



Pilot phase 2 next steps

WBS	Task/Activities	Status	Responsibility
8.3	FL-MI-SS pilot phase 2	in-process	FL – MI - SS
8.3.1	Issue Phase 2 user stories	in-process	MI
8.3.2	Agreement on authentication mechanism(s)	in-process	FL – MI - SS
8.3.3	Agreement on DSML architecture/originating query mechanisms	in-process	FL – MI - SS
8.3.4	Conduct DSML query working session	in-process	FL – MI - SS
8.3.5	MI provide sample DSML queries to SS and FL	in-process	MI
8.3.6	Conduct technical connectivity working session	in-process	FL – MI - SS
8.3.7	MI and SS establish technical connectivity	not started	MI - SS
8.3.8	MI and FL establish technical connectivity	not started	FL – MI
8.3.9	FL and SS establish technical connectivity	not started	FL – SS
8.3.10	MI refactors HISP web client for DSML query	in-process	MI
8.3.11	Establish next steps/refine plan	in-process	FL – MI - SS
8.3.12	Demonstrate phase 2 user stories	not started	FL – MI - SS

Findings so far

Issue

- Gap between Mod Spec and LDAP (DSML 2.0)
 - Mod Spec queries cannot be implemented as described in the *S&I Framework ESI Query and Response* specification using the standard LDAP (DSML 2.0) query and response pattern. In particular:
 - Find organization for unique individual
 - Find individual for unique organization
 - Find individuals and organizations

Solution

Near term: break into multi-step simple queries and responses

Long term: harmonize standards, future implementation guides



Q&A/Discussion

Metrics

Proposed Metrics to be Gathered

- Participating HISPs, RHIOS, States or SDEs
- # of Organizations in Provider Directory
- # of Individuals in Provider Directory
- # of Queries of another HISP's Directory
- # of Successful Returns of a Direct Address from another Directory
- # of Error Returns that a Directory could not be accessed
- Messages Exchanged between HISPs

Next Steps

Project Milestones

- ✓ Recruitment of participants (May/June 2013)
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September 30, 2013

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- Welcome and Organization Roll Call
- Pilot Updates:
 - NATE
 - California
 - Snowbird
 - NYeC/HEALTHeLINK
- Emerging Questions and Concepts
- Update on HPD Standards
- Q&A/Discussion
- Metrics and Pilot Deliverables
- Next Steps

**Welcome
Organization Roll Call**

Pilot Updates

California Update

- Finalizing the policies and processes governing California's pilot implementation of federated provider directories this week.
 - Includes policies, on-boarding forms and procedures, and testing processes.
 - Will be published at <http://cheq.wikispaces.com/Trust+Framework> when complete.
- Determined what standards each organization is implementing for the pilot:
 - NCHIN, SCHIE, and OCPRHIO: IWG's HPD+ v1.1
 - RAIN, Sujansky, and CHeQ: IHE's HPD with CP-ITI-601
 - UCDHS: uncertain (vendor delays)
- Completed baseline metrics for August and initial metrics for September.

NATE Update

- On-boarding UHIN to NATE Trust Profile (provider-to-provider for treatment purposes).
 - Also investigating what other California HISPs can on-board to NATE and participate in the NATE pilot.
- Beginning testing for UHIN.
 - CareAccord, NCHIN, and CHeQ already part of NATE federated provider directory.
- Determined what standards each organization is implementing for the pilot:
 - UHIN, CHeQ (California orchestrator): IHE's HPD with CP-ITI-601
 - NCHIN (California HISP): IWG's HPD+ v1.1

CareAccord, while not part of pilot, will need to update to HPD+ v1.1 to remain aligned with other organizations.

IWG Provider Directory Pilot

The “Snowbird” Pilot

Florida – Michigan – Surescripts
Status Update – September 30, 2013



IWG Provider Directory Pilot

New York eHealth Collaborative/Mirth/MedAllies/HEALTHeLINK

Status update- September 30, 2013

Agenda

- Review participants
- Define technical approach
- Provide status update
- Questions

Pilot Participants

- New York eHealth Collaborative (NYeC)
 - Irina Vinokur, Training and Implementation Manager
ivinokur@nyehealth.org 646-619-6424
- Mirth
 - Sean Gibson, CSM Senior Project Manager
sean@mirthcorp.com 714-389-1305
- MedAllies
 - James L. Fisher, PhD CISSP Principal Architect
jfisher@medallies.com 845-896-0191
- HEALTHeLINK
 - Drew McNichol, Technology Director
DMcNichol@wnyhealthelink.com

Objective and Query Framework

- Set-up queries for Mirth and MedAllies directories:
 - Use MirthMail Test Environment and MedAllies Test Portal
 - Both Mirth and MedAllies are able to query multiple Provider Directories
- Directory query capability should support following “Search By” scenarios:
 - Name
 - City
 - Specialty

Technical Approach

- Mirth is able to query MedAllies and get a return. Example search “Llanes”:
- MedAllies and Mirth, through web interface, are able to query multiple HPD+ directories

Dr. Llanes, Chris X.

ENT

DIRECTORY

MedAllies

CONTACT

Practice Phone (845) 896-0191 *(primary)*
Practice Fax *(no primary practice fax on file)*
DIRECT Address chris@direct.medalliesdirect.org *(primary)*

PERSONAL INFORMATION

No Personal Information Available

LOCATIONS

Mailing Address 123 Main Street
Fishkill, NY 12570
[Map](#)

OTHER INFORMATION

Primary License ENT
Type
License No. UNK
Name Unknown

HPD Directory source: MirthMail

success

Provider Name	Gibson, Sean Sean Gibson
description	Allopathic & Osteopathic Physicians
gender	M
hcIdentifier	NPI:1013
hcProfession	Allopathic & Osteopathic Physicians
hcSpecialization	Family Medicine
Languages Spoken	Spanish
Practice Address	primary: 2538 Bart Blvd. San Andreas, CA 93452
mail	seang@mirthcorp.com
telephoneNumber	+1 858 555-5737

HPD Directory source: MA National

(successful query)

Looking Forward To Federated Searches

- To enable federated searches, HPD+ Directories would need to be
 - Discoverable
 - Accessible
- Current implementations of federated searches require pre-knowledge of:
 - Directory URL
 - Bind DN (i.e., a user identity with search capabilities)
 - Bind password
- Current implementations of HPD+ Directories do not exercise “referrals” (i.e. “also, search HPD#2”) or “chaining” (i.e. “this HPD will search also search HPD#2 and return results”)
- More work needs to be done on making HPD+ Directories discoverable and accessible

QUESTIONS?

Emerging Questions and Concepts

Key Questions are Emerging

- Efforts to aggregate provider directories between disparate organizations are occurring in many instances
 - Unless shared policies for certificate exchange are adopted by users of the aggregated directories, the broad availability of Direct addresses may cause an **adverse effect** and create frustrations for users of Direct, as many messages will fail to be delivered due to a lack of trust between HISPs
 - Ensuring that the end point recipient of a Direct message is the right person is critical to protecting PHI; broad aggregation of Direct addresses, without adequate detail on provider organization, location, specialty, etc. may create inadvertent security issues, even within the required Direct encryption

Key Concepts are Emerging

- An orchestration service that federates queries between Direct directories may simplify the environment and increase use of Direct
 - Can work with HIOs, HISPs, IDNs, hospitals, State Agencies, and other Direct user organizations to establish policies and practices for authentication, minimum data requirements, responding to queries, auditing, etc.
 - Through policies and technical standards, a Trust Community can be established, and a Trust Bundle of trusted certificates can be managed
 - Business rules can be established to increase the reliability of the end point receiver in a directory search

Update on Standards

Summary

- IWG HPD+ 1.0 was developed before IHE HPD CP 601.
- CP 601 included most extensions from IWG HPD+ 1.0, with some slight differences.
- IWG HPD+ 1.1 is aligned with IHE HPD (with CP601).
 - Content:
 - Same directory schema.
 - IWG HPD+ 1.1 have place holders for attributes defined in S&I Framework, did not specify constraints on supporting those.
 - Interface: same WSDL
- Provider Directory Mod Spec:
 - Content: same as IWG HPD+ 1.1.
 - Interface: modified WSDL (aimed at error handling and federation support).
- Several issues need further clarification (work with IHE)

HPD Schema Structure Changes

HPD Object	Object Class	LDAP Organization Unit (OU)				Comments
		IHE HPD	IWG HPD+ 1.0	IHE HPD CP601	IWG HPD+ 1.1	
Individual Provider	HCPProfessional	HCPProfessional	Providers	-	Same as HPD	-
Organizational Provider	HCTRegulatedOrganization	HCTRegulatedOrganization	Organizations	-	Same as HPD	-
Relationships	groupOfNames	Relationship	-	-	-	Work with IHE on appropriate use of Relationship vs. HPDProviderMembership
Credentials	HPDCredential	HPDCredential	Credentials	-	Same as HPD	-
Individual-Organization	<i>HPDProviderMembership</i> (defined in CP601)	N/A	Memberships	<i>(HPDProviderMembership)</i>	Same as CP 601	IHE HPD CP 601 defined the object class but not the standardized OU. The standard OU used here is consistent with IHE HPD naming convention..
Electronic Services	<i>HPDElectronicService</i> (defined in CP601)	-	Services	<i>(HPDElectronicService)</i>	Same as CP 601	-

HPD Object Attributes Changes

Object	Concept	LDAP Attribute				Comments
		IHE HPD	HPD+ 1.0	IHE HPD CR601	HPD+ 1.1	
Individual	Provider business phone	telephoneNumber	telephone	-	Same as HPD	-
	Credential	hpdCredential	credentialName	-	Same as HPD	-
	Specialty	hcSpecialisation	hcSpecialization	-	Same as HPD	-
	Legal Address	-	-	hpdProviderLegalAddress	Same as CP 601	-
	Date of Birth	-	-	-	dateOfBirth	In S&I. Place holder in HPD+
	Digital cert ID	-	-	-	digitalCertificateID	Same as above
	Digital cert DN	-	-	-	digitalCertificateDN	Same as above
Organization	Org Type Description	description	orgTypeDesc	-	Same as HPD	-
	Credential	hpdCredential	credentialName	-	Same as HPD	-
	Legal Address	-	-	hpdProviderLegalAddress	Same as CP 601	-
	Email	-	email	-	Same as HPD+ 1.0	In S&I. Place holder in HPD+
	Policy Information	-	policyInformation	-	Same as HPD+ 1.0	Same as above
	Digital cert ID	-	-	-	digitalCertificateID	Same as above
	Digital cert DN	-	-	-	digitalCertificateDN	Same as above

HPD Object Attributes Changes

Object	LDAP Attribute					Comments
	Concept	IHE HPD	HPD+ 1.0	IHE HPD CP601	HPD+ 1.1	
Individual-Organization	-	-	hpdMemberName	-	removed	Not in S&I
	-	-	hpdMemberStatus	-	Removed	Not in S&I
	-	-	hpdMemberType	-	Removed	Not in S&I
	-	-	hpdMemberTelephone	telephoneNumber	Same as CP 601	-
	-	-	-	fascimileTelephoneNumber	Same as CP601	-
	-	-	-	mobile	Same as CP601	-
	-	-	-	Pager	Same as CP601	-
	-	-	hpdMemberEmail	Mail	Same as CP601	-
	Digital cert	-	-	-	digitalCertificate	In S&I. Place holder in HPD+
	Digital cert ID	-	-	-	digitalCertificateID	Same as above
	Digital cert DN	-	-	-	digitalCertificateDN	Same as above

HPD Object Attributes Changes

Object		LDAP Attribute				Comments
	Concept	IHE HPD	HPD+ 1.0	IHE HPD CP601	HPD+ 1.1	
Electronic Service	-	-	hpdServicePayload	hpdContentProfile	Same as CP601	-
	-	-	hpdServiceProtocol	hpdIntegrationProfile	Same as CP601	-
	-	-	hpdServiceType	-	Removed	Not in S&I
	-	-	-	hpdCertificate	Same as CP601	-
	-	-	-	-	hpdSecurityProfile	In S&I. Place holder in HPD+
	-	-	-	-	hpdIntegrationProfileVersion	Same as above
	-	-	-	-	hpdIntegrationProfileOption	Same as above
	-	-	-	-	hpdIntegrationProfilePreferredMethod	Same as above

IWG HPD+ 1.1 Guideline

- **Direct Email:**

- HPDElectronicService.hpdserviceAddress
 - Where integration profile is 'DirectProjectSMTP'

* CA guideline: also check hpdserviceAddress

- **Individual Organization Relationship**

- Determined by hpdserviceAddress objects
- provider.memberOf & Relationship not used

Issues to work with IHE

- Proper usage of Relationship and HPDProviderMembership.
- Proper usage of labeledURI (previous HPD attribute for electronic service URI) and HPDElectronicService.
- Proper usage of different certificate attributes
 - userSMIMECertificate
 - userCertificate
 - hcSigningCertificate
 - hcOrganizationCertificate
 - hpdElectronicService.hpdCertificate

Provider Directory ModSpec Standards

- Directory Content: Same as HPD+ 1.1
- Interface:
 - New WSDL
 - Different message types: HPDPlusRequest and HPDPlusResponse
 - new elements and types: HPDPlusMetadata, HPDPlusRequestID,
- Initiating IHE new work item process

Q&A/Discussion

Metrics and Pilot Deliverables

Metrics to be Gathered

- Participating HISPs, RHIOS, States or SDEs
- # of Entities in Provider Directory
- # of Individuals in Provider Directory
- # of Queries of another HISP's Directory
- # of Successful Hits
- # of Errors
- Messages Exchanged

Pilot Deliverables

- Share lessons learned during bi-weekly check-ins and monthly calls
- Provide monthly metrics
- If applicable, share barriers to moving pilots to production environment
- Review and provide feedback to documentation of pilot findings (to be written up by Robinson & Associates)
- Review and provide feedback to any updates to IWG Direct Implementation Guide based on pilot experiences

Next Steps

Project Milestones

- √ Recruitment of participants (May/June 2013)
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All calls are scheduled for 2:00-3:00 Eastern Time

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Contact carol@raaconsult.com to be added to the calls/web meetings

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EHR | HIE Interoperability
WORKGROUP

**ONC Exemplar Governance Grantee
Provider Directory Pilot Monthly Meeting**

October 28, 2013

Agenda

- Welcome and Organization Roll Call
- Pilot Updates:
 - Snowbird
 - NYeC/HEALTHeLINK
 - California
 - NATE
- Lessons Learned So Far – Discussion/Q&A
- Update on HPD Standards
- Metrics and Pilot Deliverables
- Next Steps

**Welcome
Organization Roll Call**

Pilot Updates

IWG Provider Directory Pilot

The “Snowbird” Pilot

Florida – Michigan – Surescripts
Status Update – October 28, 2013

HEALTHeLINK / NYeC

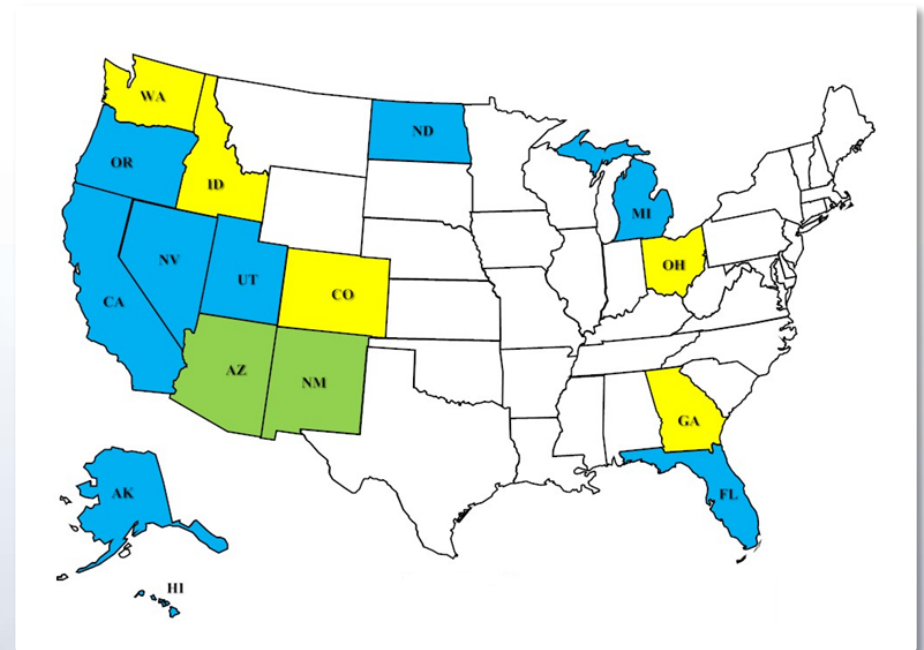
Pilot Update, October 28, 2013

California Pilot Update

National Association for Trusted Exchange

Vision:

A scalable, sustainable trust and policy framework that supports and advances intra-state and interstate HIE.



NATE Members

Member States

- Alaska
- Arkansas
- California
- Florida
- Hawai'i
- Michigan
- Nevada
- North Dakota
- Oregon
- Utah

Participate in joint development of policies and procedures for:

1. Exchange using Direct
2. Federated provider directories

NATE Trust Community

Member States

- Alaska
- Arkansas
- California
- Florida
- Hawai'i
- Michigan
- Nevada
- North Dakota
- Oregon
- Utah

NATE-Qualified Entities

- AeHN
- NCHIN, RAIN, SCHIE, SDRHIE
- CareAccord
- UHIN

Members of the Trust Community

Participants in the provider-to-provider Trust Profile

Pilot Participants

Member States

NATE-Qualified Entities

Alaska

AeHN

Arkansas

➔ California

➔ NCHIN, RAIN,
SCHIE, SDRHIE

⇨ Florida

Hawai'i

⇨ Michigan

Nevada

North Dakota

Oregon

CareAccord

➔ Utah

➔ UHIN

Members of the Trust Community

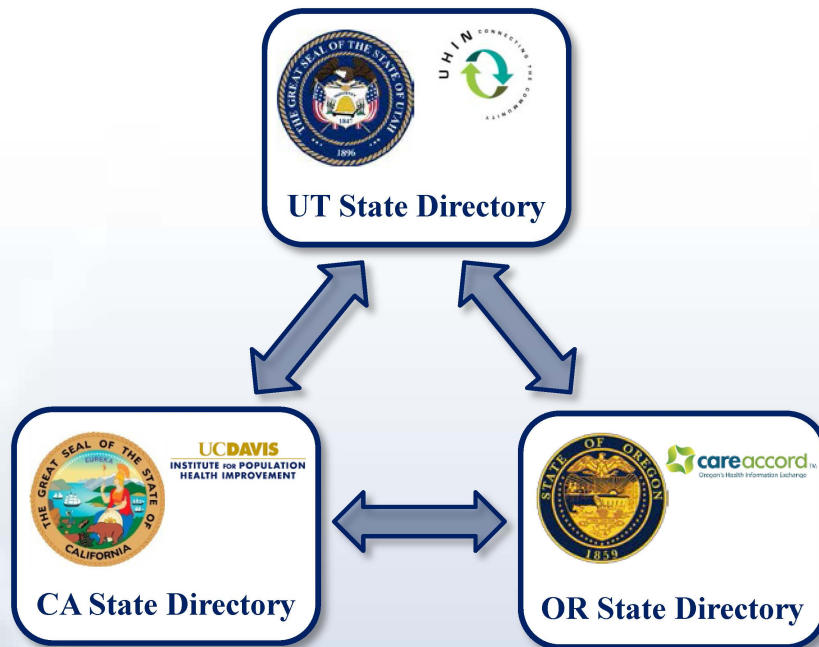
Participants in the provider-to-provider Trust Profile

Participants in the PD pilot

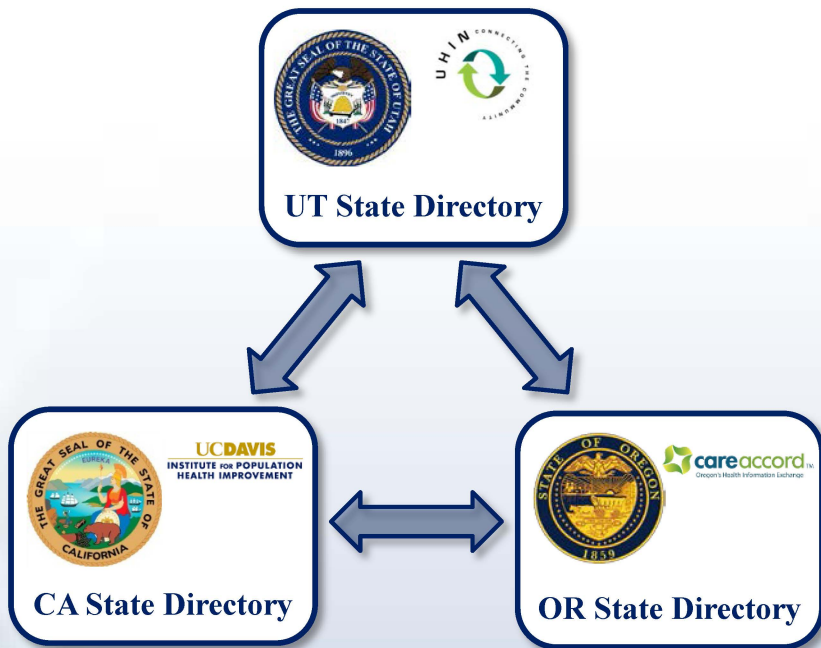
Federated Provider Directories

Architecture

- Each state exposes one and only one statewide PD service.
 - May be a statewide HISP.
 - May be a national HISP providing statewide services.
 - May be a state PD service independent of a HISP.
 - May be a further federation hidden from other states.



Federated Provider Directories



Rationale

- Small number of peers (~50).
- State services will change infrequently.
- Providers will likely know the state in which to query.
 - *Can move to a national hierarchy if needed.*
 - *State services can be made discoverable if needed.*

Approach to Establishing Trust

1. Establish Trusted Exchange

- Define eligibility criteria for membership in Trust Community as policies and practices for a Trust Profile.
- Define procedures for on-boarding a new member.
- Member States qualify Direct services providers.
 - Each state manages their own process, aligned with NATE policies and procedures.
- New qualified service providers conduct readiness testing.
- Trust anchors are added to a NATE Trust Bundle.

Approach to Establishing Trust

1. Establish Trusted Exchange

2. Establish Trusted, Authoritative Directories

- Define an architecture for federation.
- Define policies and practices for managing and querying provider directories.
- Define procedures for adding a new state directory service.
- Member States determine an architectural strategy.
- Conduct readiness testing.
- Exchange trust anchors.

Approach to Establishing Trust

1. Establish Trusted Exchange

2. Establish Trusted, Authoritative Directories

- Define an architecture for federation.
- Define policies and practices for managing and querying provider directories.

Responsibility for accuracy, no cached responses, no minimum dataset, autonomy to constrain responses, mutual TLS, meaningful errors, logs, standards adherence

- Define procedures for adding a new state directory service.
- Member States determine an architectural strategy.
- Conduct readiness testing.
- Exchange trust anchors.

Current Status

Establish Trusted Exchange

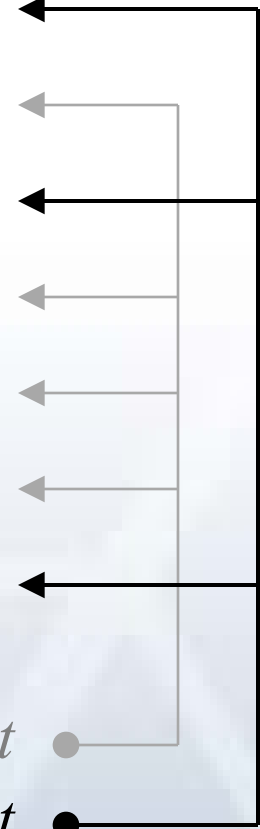
1. Formalized Trust Profile policies and procedures.
2. On-boarded AeHN, CareAccord, NCHIN.
3. On-boarding UHIN, RAIN, SCHIE, and SDRHIE.

Establish Trusted, Authoritative Directories

1. Reached consensus on policies and procedures.
2. On-boarded CareAccord, CA statewide service, NCHIN.
3. Testing UHIN, RAIN.
4. On-boarding SCHIE, SDRHIE.

Things to Explore

1. Are there (interstate) issues with the policies?
2. Do the on-boarding procedures work?
3. Is the architecture responsive to user needs?
4. Do HPD+ v1.1 and HPD CP-601 interoperate?
5. Do we need a provider directory Trust Bundle?
6. Should statewide directories be discoverable?
7. What about consumer access and PHRs?



Common with CA pilot ●
Greater focus of NATE pilot ●

Update on Standards

Provider Directory ModSpec Standards

- IHE new work item proposal re-directed to USA National Deployment Committee for acceptance and execution
- IHE USA and ModSpec team have agreed to work towards updated IHE HPD profile publication as quickly as possible
- Opportunity for re-visiting/validating ModSpec technical approach
 - *ihe-hpd-implementors* Google group
- Special focus and testing support opportunity targeted for North America Connectathon in January 2014
 - Part of special ONC-sponsored activities at Connectathon

Lessons Learned So Far – Discussion/Q&A

Discussion Ideas

- From NATE presentation:

Define policies and practices for managing and querying provider directories:

- accuracy
- no cached responses
- no minimum dataset
- autonomy to constrain responses
- mutual TLS
- meaningful errors
- logs
- standards adherence

Other ideas welcome!

Metrics and Pilot Deliverables

Metrics

Collection Dates:

- Now
- End of December 2013 and March 2014

Metrics:

- Participating HISPs, RHIOS, States or SDEs
- # of Entities in Provider Directory
- # of Individuals in Provider Directory
- # of Queries of another HISP's Directory
- # of Successful Hits
- # of Errors
- Messages Exchanged

Pilot Deliverables

- Share lessons learned during bi-weekly check-ins and monthly calls
- Provide metrics
- If applicable, share barriers to moving pilots to production environment
- Review and provide feedback to documentation of pilot findings (to be written up by Robinson & Associates)
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Next Steps

Monthly Group Calls

All calls are scheduled for 2:00-3:00 Eastern Time

July 29

August 26

September 30

October 28

November 25

Contact carol@raaconsult.com to be added to the calls/web meetings

Project Milestones

- √ Recruitment of participants (May/June 2013)
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- √ Launch pilots (timing will vary by pilot)
- ❖ Pilots provide feedback to IWG's Direct Implementation Guide (October – November 2013)
- ❖ Incorporate results of pilots into IWG's Direct Implementation Guide (December 2013 - February 2014)

Contact Information

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EHR | HIE Interoperability
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**ONC Exemplar Governance Grantee
Provider Directory Pilot Monthly Meeting**

November 25, 2013

Agenda

- Welcome and Organization Roll Call
- Update on HPD Standards and Testing (John)
- Pilot Deliverables
 - Pilot Feedback form
 - Metrics
- Pilot Updates:
 - Snowbird
 - NYeC/HEALTHeLINK
 - California
 - NATE
- Next Steps
 - Full IWG meetings
 - Following standards work
 - Completing project milestones

**Welcome
Organization Roll Call**

Update on HPD Standards

Pilot Deliverables

Pilot Participant Deliverables

- Share lessons learned during bi-weekly check-ins and monthly calls
- Provide metrics
- Provide written policies, procedures and legal agreements, if possible
- If applicable, share barriers to moving pilots to production environment
- Respond to pilot feedback form to gather information on pilot experiences and findings
- Review and provide feedback to documentation of pilot findings

Metrics

Collection Dates:

- End of December 2013 and March 2014

Metrics:

- Participating HISPs, RHIOS, States or SDEs
- # of Entities in Provider Directory
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- # of Queries of another HISP's Directory
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- # of Errors
- Messages Exchanged

ONC Exemplar HIE Entities Grant Deliverables

- IWG HPD+ 1.1 Implementation Guide Appendix with technical findings from pilots
- Final Grant Report for ONC
- Metrics for 2013 Q4 and 2014 Q1

Pilot Updates

IWG Provider Directory Pilot

The “Snowbird” Pilot

Florida – Michigan – Surescripts
Status Update – November 2013

IWG Provider Directory Pilot

New York eHealth Collaborative/Mirth/MedAllies/HEALTHeLINK

Status update- November 2013



California Pilot Update November 2013

NATE Pilot Update

November 2013

Next Steps

Full IWG Meetings

Common Goal: Define “plug and play” connections that eliminate the barrier of interface development between EHRs and HIEs

Win/Win/Win Strategy for members

State and Regional HIE

- Ability to rapidly deploy interconnection of systems by having standard interfaces and interface approaches
- Minimize costs associated with connection fees by individual EHRs each time a new connection is made

Vendors

- Differentiate product in highly fragmented market by developing a product that offers “plug and play” to HIE across multiple states (superior interoperability)
- Build interface once, use for many different HIEs and EHRs
- Better utilize limited resources to focus on product functionality improvements and customer adoption

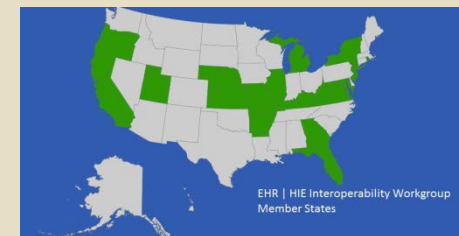
Providers

- Increase value proposition of individual EHRs
- Eliminate HIE connection cost as prohibitive barrier for adoption

Workgroup Membership

States	EHRs		HIEs	
Arkansas	Alere Wellogic	Nortec Software	1MEDiX	OmniMD
California	Allscripts	Siemens	Alere Wellogic	OmniXchange
Florida	CareVoyant	TenEleven	ApeniMED	Optum
Georgia	Cerner	Vitera Health	DataMotion	Orion Health
Illinois	CureMD		dbMotion	RelayHealth
Kansas	Data Strategies		GE	
Kentucky	DeFran Systems		GSI Health	
Maryland	Dr. First		Harris	
Michigan	eClinicalWorks		HealthUnity	
Missouri	eMDs		iPhysicianHub	
Nebraska	EMR Direct		ICA	
New Jersey	Epic		InterSystems	
New York	GE		Med3000	
Oregon	Greenway		MedAllies	
Rhode Island	McKesson		MedFx	
Utah	MDClick		Medicity	
Vermont	MTBC		Mirth	
Virginia	NextGen		Misys Open Source	
West Virginia	Prosocial Applications		NextGate	

19 States
representing **52% of the population**



47 Leading Vendors
23 EHR Vendors
24 HIE Vendors

HIE Certified Testing Program

- HIE Certified is a program that tests and certifies electronic health records (EHRs) and health information exchange (HIE) products to enable reliable transfer of data within and across organizational and state boundaries
- Seals signify compliance and proof of "plug and play" interoperability
- These seals make it very easy for providers and other purchasers to know which products meet the interoperability standards thereby supporting care coordination and other efforts and reducing cost
- Testing tools are in development now and program will launch early 2014



HIE Certified Community™
for EHR and HIE systems,
enables clinicians to
share patient informa-
tion within and
across care delivery
communities.



HIE Certified Network™
for HIT systems that
enable HIE-to-HIE
connectivity and for
connection to the
eHealth Exchange.

www.interopwg.org/certification.html

IWG Membership

For more information or to become a member, contact:

Elizabeth Amato

New York eHealth Collaborative

646-535-1116

eamato@nyehealth.org

www.interopwg.org

Other Standards Work to Track

- HIT Policy Committee recommendations
 - http://www.healthit.gov/facas/sites/faca/files/IEWG_RecommendationTransmittal.pdf

Opportunities for Further Collaborations

- Build on connections within pilots— onboarding new participants
- Establish connections between pilots
- Share policy documents

Project Milestones

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- √ Develop work plan with each pilot team (July/August 2013)
- √ Launch pilots (timing will vary by pilot)
- ❖ Pilots provide feedback on pilot experiences and lessons learned (October – December 2013)
- ❖ Incorporate results of pilots into IWG's Direct Implementation Guide as an appendix (December 2013 - February 2014)
- ❖ Deliver Exemplar HIE grant report to ONC (January 2014)
- ❖ Collection of Metrics (Baseline, October 2013, December 2013, March 2014)

Monthly Group Calls

All calls have been held

July 29

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September 30

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November 25

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**ONC Exemplar Governance Grantee
Provider Directory Pilot Wrap-up**

March 5, 2014

Agenda

Welcome and Organizational Roll Call

Recap of Federated Provider Directory Pilots

- Goals
- Identification of Participants
- Components of Project
- Structure and Pilot Details
- Accomplishments
- Technical Lessons
- Suggested Improvements
- Next Steps
- Questions and Discussion

**Welcome
Organization Roll Call**

Goals of Exemplar HIE Grant Project

- Recruit pilot participants (states and vendors) for pilots demonstrating query and response capability of a federated set of provider directories, using HPDPlus for Direct exchange
- Monitor and support pilots with facilitation and technical support
- Coordinate with the ONC Modular Specifications Initiative
- Establish measures and report data from pilots to ONC on quarterly intervals
- Bring lessons learned and suggested modifications to the IWG Direct Exchange specifications back to the IWG membership and the Standards and Interoperability Framework (S&I) community
- Update IWG draft implementation guide for the HPDPlus federated provider directory specifications

Identifying Pilot Participants

- Developed criteria for participation
- Conducted extensive outreach
- 4 pilots moved forward with 14 initial participants
- Barriers to participation:
 - Vendor development timelines
 - Differing technical approaches to provider directories
 - Capacity of HIE / HISP organizations

Components of Exemplar HIE Project

Component 1: Monitor and Support Pilots with Facilitation and Technical Support

- Project management support
- Relationship building, problem solving, collaboration

Component 2: Provide a Broad National “Community of Practice” Value by Sharing Pilot Progress Through Monthly Webinars

Component 3: Maintain Coordination with Other ONC-Sponsored HIE Governance Initiatives to Help Advance the ONC Governance Framework

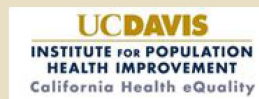
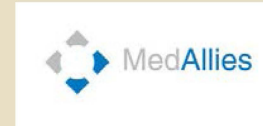
Component 4: Serve as an Information Conduit to Help Inform and Involve Vendors in the Next Iteration of Standards Development

Component 5: Provide Ongoing Feedback on Exemplar HIE grant to ONC

Basic Structure of Pilots

- Bi-weekly check-in calls with each of the pilot teams
- Individual project work plan was developed in collaboration with each pilot team
- A common Memorandum of Understanding (MOU) was discussed, but each pilot decided to handle legal agreements separately
- Monthly webinars with pilot participants presenting progress toward implementing federated directory query functionality, identifying challenges, potential solutions for those challenges, and best practices

Pilot Participants



New York Pilot

Pilot Participant	IT Solution/ Vendor	Provider Directory Standards Encountered during Pilot
New York eHealth Collaborative (NYeC)	MedAllies	IWG HPDPlus 1.0
Western New York RHIO, HEALTHeLINK	Mirth	

New York Pilot

- The NYeC/MedAllies Direct model is predicated on the using Direct through EHR implementations
- Due to the limited availability of Direct-enabled EHRs, the New York pilot remained in a test environment for the duration of the project
- MedAllies and Mirth, the vendors for NYeC and HEALTHeLINK, were able to successfully query the test environments of each other's provider directories, searching by physician name, city, and specialty

Snowbird Pilot

Pilot Participant	IT Solution/ Vendor	Provider Directory Standards Encountered during Pilot
Florida Health Information Exchange (FLHIE) (phase 1 only)	Harris	IWG HPDPlus 1.0 IWG HPDPlus 1.1 DSML 2.0 Gateway PD ModSpec via REST (explored)
Michigan Health Information Network (MiHIN)	MiHIN	
Surescripts	Surescripts	

Snowbird Pilot

- The Snowbird pilot was focused on northern and southern states that share residents who receive care in each state for part of year
- This pilot was set up to have two phases; only the second phase met the criteria of this Exemplar HIE grant project
- Phase one of the Snowbird pilot involved the sharing of provider directory information between FLHIE, MIHIN, and Surescripts through the exchange of spreadsheets with the provider data held by each organization
- Phase two continued with MIHIN and Surescripts and a successful query from MIHIN of the Surescripts provider directory was tested
- FLHIE chose not to continue into phase two because of a lack of time and financial resources to upgrade their provider directory to HPDPlus 1.1 standards

NATE Pilot

Pilot Participant	IT Solution/ Vendor	Provider Directory Standards Encountered during Pilot
Utah Health Information Network (UHIN)	Secure Exchange Solutions (SES)	IHE HPD w CP601 IWG HPDPlus 1.1
North Coast Health Information Network	Mirth	
Santa Cruz Health Information Exchange	Mirth	

NATE Pilot

- Focused on onboarding of Utah Health Information Network (UHIN) to the NATE trust bundle with the participation of UHIN's vendor Secure Exchange Solutions (SES)
- While much testing occurred between SES, Mirth and California Health eQuality (CHeQ), the NATE pilot was not able to move UHIN into the NATE directory production environment within the timeframe of the project, due to the variability of the standards being used by the three organizations. However, UHIN was added to the NATE Trust Bundle during this timeframe.

California Pilot

Pilot Participant	IT Solution/ Vendor	Provider Directory Standards Encountered during Pilot
California Health eQuality (CHeQ) program	Internally developed	IHE HPD w CP601 IWG HPDPlus 1.1
North Coast Health Information Network	Mirth	
Orange County Partnership RHIO	Mirth	
Regional Alliance for Information Networking (RAIN)	Internally developed	
San Diego Health Connect	Mirth	
Santa Cruz Health Information Exchange	Mirth	
Sujansky & Associates (California Health Care Foundation pilot)	Internally developed	
UC Davis Health System	Epic/ Surescripts	

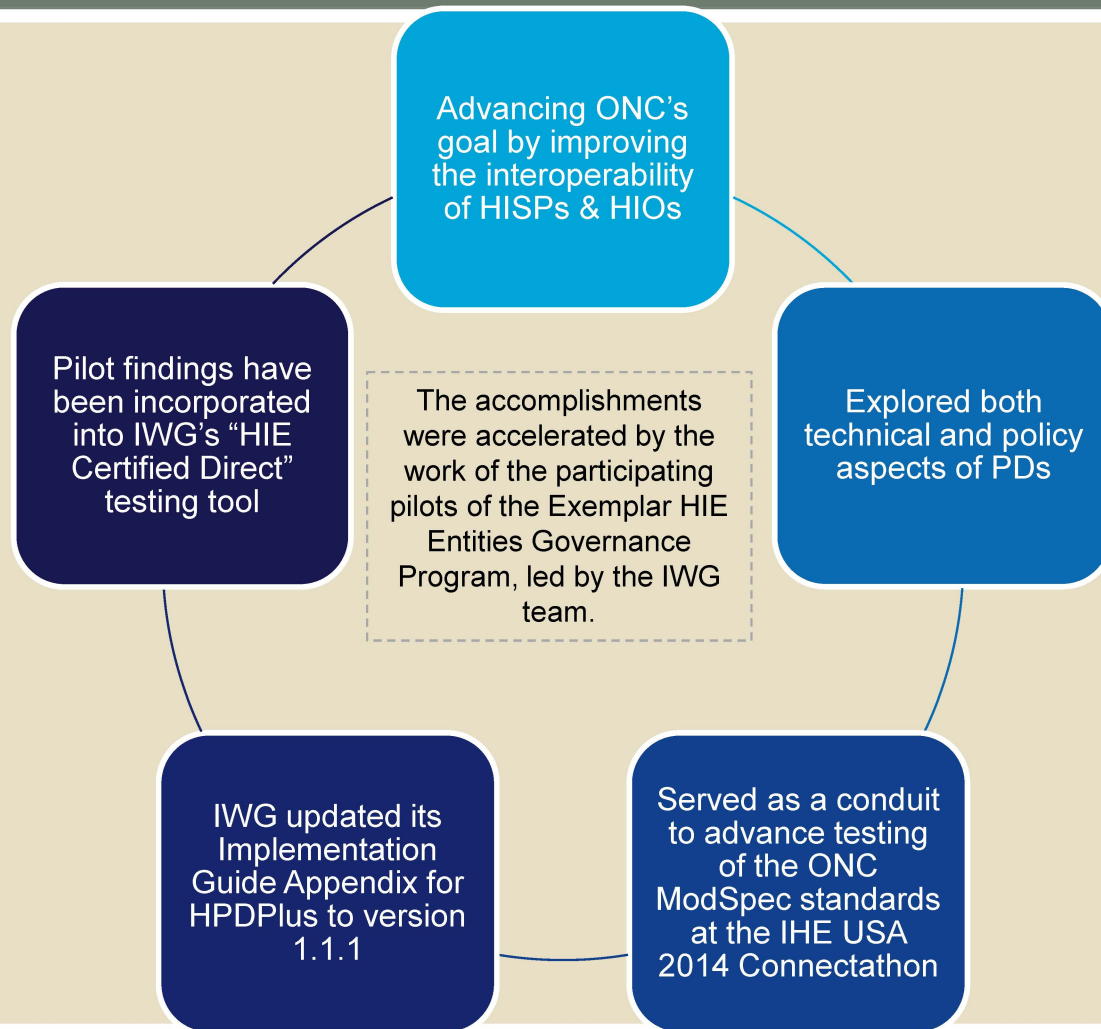
California Pilot

- Just prior to the launch of the IWG's Exemplar HIE project, the CHeQ program launched the **California Trust Framework (CTF)**, designed to facilitate exchange across organizational boundaries by establishing trust between organizations *without the need for point-to-point data-sharing agreements*.
- The CTF pilot had two phases;
 - Determining policies and practices necessary for on-boarding organizations to the Trust Framework
 - On-boarding and use of the Trust Framework to enable exchange among unaffiliated organizations

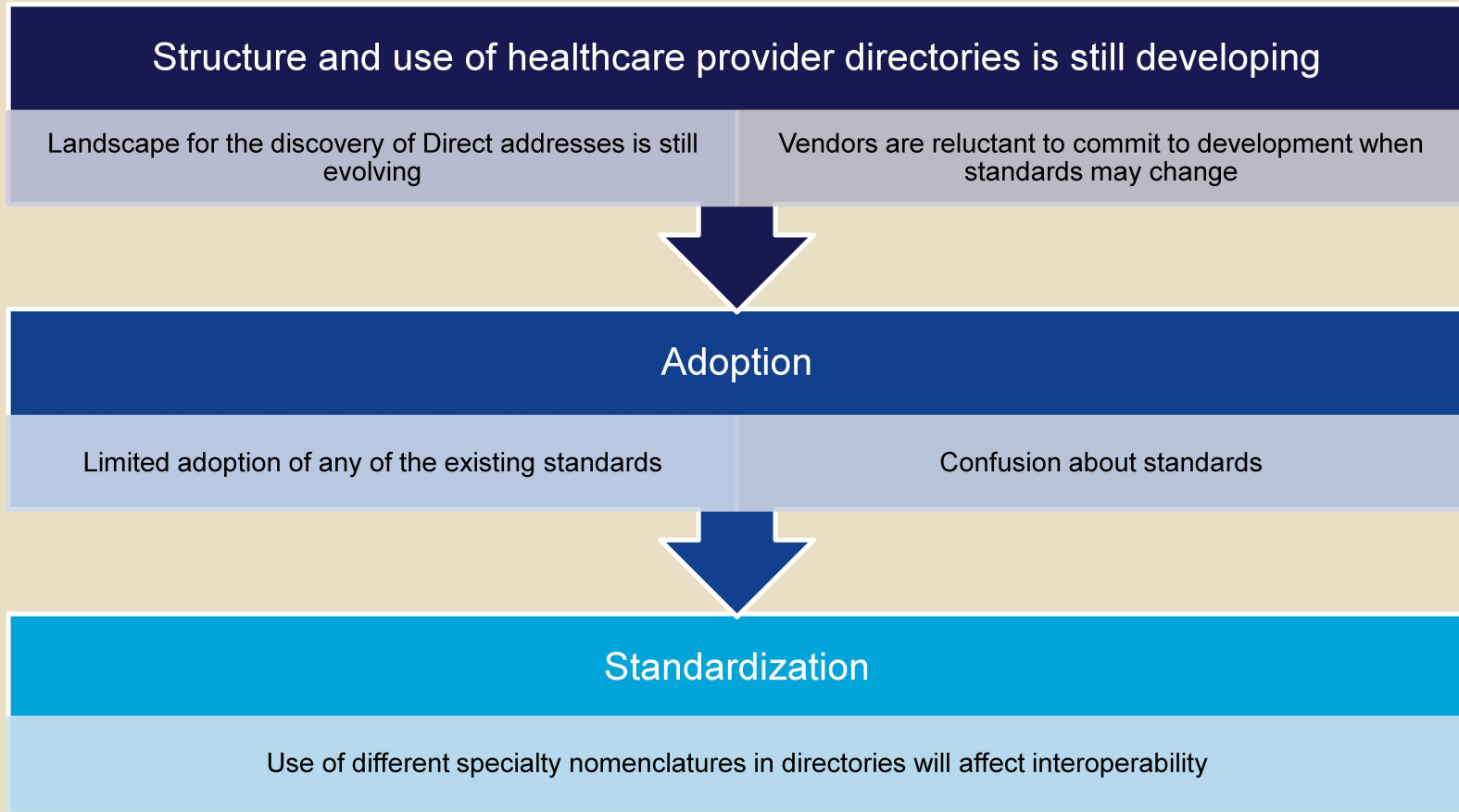
California Pilot

- The following organizations participating in the California pilot successfully on-boarded into the CHeQ- managed SDS trust bundle, and exchanged live data in production environments:
 - North Coast Health Information Exchange (NCHIN)
 - RAIN - Live Oak Health Information Exchange and Telemedicine Network
 - Orange County Partnership Regional Health Information Organization (OCPRHIO)
 - San Diego Health Connect
 - Santa Cruz Health Information Exchange
 - CHeQ program at UC Davis Health System

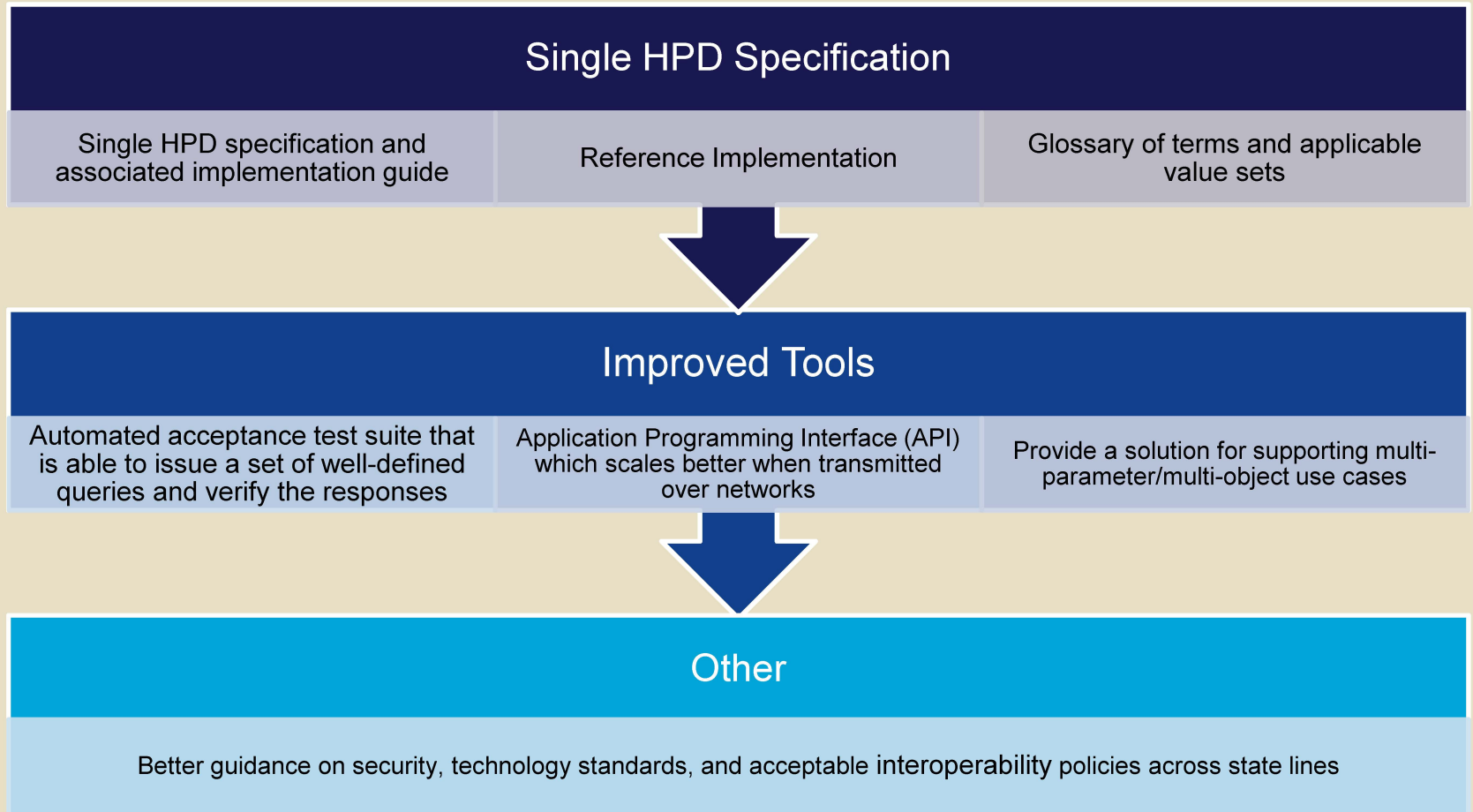
Accomplishments



Lessons Learned: Technical



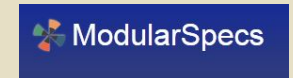
Lessons Learned: Suggested Improvements



ModSpec HPD Testing as “New Directions” in NA Connectathon

Participants

Vendor Name	System Name	HPD Actors Supported
CareEvolution	HIEBus	Provider Information Directory Provider Information Consumer for limited queries
Inpriva Inc	XDD HPD+ Consumer	Provider Information Consumer
NextGate	MatchMetrix	Provider Information Directory
Orion Health	Orion Health	Provider Information Directory
SureScripts	SureScripts Directory Search	Provider Information Directory



Coordination by joint team of ONC, Healtheway, IWG and IHE USA

Pilots Highlighted

- Recent speaking engagements at ONC Annual Meeting and NA Connectathon highlighted the work of the Provider Directory pilots, stakeholders, and outcomes
- Feedback has been very positive and confirms interest in this area

Exemplar HIE Governance Entities Grant Project

- Q3 2013 - ONC awarded an Exemplar HIE Governance Entities Program Grant to NYeC on behalf of the EHR|HIE Interoperability Workgroup (IWG)
- The cooperative agreement allowed the IWG to continue its efforts in developing robust implementation specifications for 'plug and play' interoperability
- The IWG to help illuminate the implementation challenges facing the exchange of health information requiring querying provider directories between Health Information Services Providers (HISPs)

ONC Meeting Jan 23-24, 2014

EHR | HIE Interoperability WORKGROUP



Four Pilots Undertaken/Monitored

- Snowbird Pilot- Michigan Health Information Network, Surescripts, Florida Health Information Exchange
- New York eHealth Collaborative and Western New York Regional Health Information Organization (HEALTHeLINK)
- National Association for Trusted Exchange: Utah Health Information Network, California Health eQuality
- State of California Pilot, managed by California Health eQuality: Santa Cruz HIE, North Coast Health Information Network, UC Davis Health System, RAIN Central Coast HIE, Orange County Partnership Regional Health Information Organization, Sujansky & Associates

Pilot Participants



EHR | HIE Interoperability WORKGROUP

Metrics

Collection Dates: August, October, December 2013 & March 2014

Metrics:

- Participating HISPs, RHIOS, States or SDEs
- # of Entities in Provider Directory
- # of Individuals in Provider Directory
- # of Queries of another HISP's Directory
- # of Successful Hits
- # of Errors
- Messages Exchanged

Next Steps, Questions, and Discussion

- Final metrics from pilot participants, due March 15
- Final report on Exemplar HIE Governance Grant Program to ONC
- IWG's HIE Certified® Direct test tool will launch late Q2



- Questions and Discussion

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