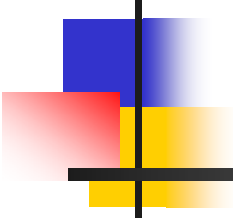


# Health Information Exchange and Directory Services: Public Health's Role



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# Presenter Disclosures

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**(1) The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:**

No relationships to disclose



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# What are directory services?

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- Directory services allow lookup of
  - Users or individuals (sometimes called "White Pages")
  - Organizations and organization locations (sometimes called "Yellow Pages")
  - Data services offered by organizations or service providers
  - Semantics or terminology, along with translation services if appropriate (we won't deal with this topic here)



# Where might directory data come from?



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- Licensure databases
- Medicaid directories
- Public Health Information Network (PHIN) or Health Alert Network (HAN)
- Public health registry users (*e.g.*, IIS)
- Regional Extension Center (REC)
- National Provider Identifier (NPI, from NPPES)
- CMS National Level Repository (NLR)
- Private sources (medical societies, CAQH<sup>®</sup>, payers)



# How do directories work?

## Provider Directory Continuum\*



### Facilitate Manual Look-up

- *A human readable directory to support point-to-point Health Information Exchange.*
- *A web-based directory of providers who wish to send & receive clinical messages*

### Facilitate Automated Look-up/ Routing

- *A machine readable directory to support point-to-point Health Information Exchange*
- *A HISP-based directory of Providers who wish to send & receive clinical messages utilizing the NwHIN Direct Project and other HISP supported protocols.*

### Facilitate Full Push/ Pull Exchange

- *Machine and Human readable Directories for future state vision of Networked exchange.*
- *The much discussed Entity Level Provider Directory (ELPD) / Individual Level Provider Directory (ILPD) Infrastructure*

\* Adapted from ONC Provider Directory Community of Practice, March 2010

# How do directories support “push” transactions?

- Used to identify intended recipient if you don't know who that is
- Used to locate digital certificate for encryption and identify validation
- May be manual or assisted (continuum)
- NwHIN Direct
  - Likely consumer of these services
  - Directory excluded from initial project scope
  - S&I Framework Project completing this



# How do directories support “pull” transactions?

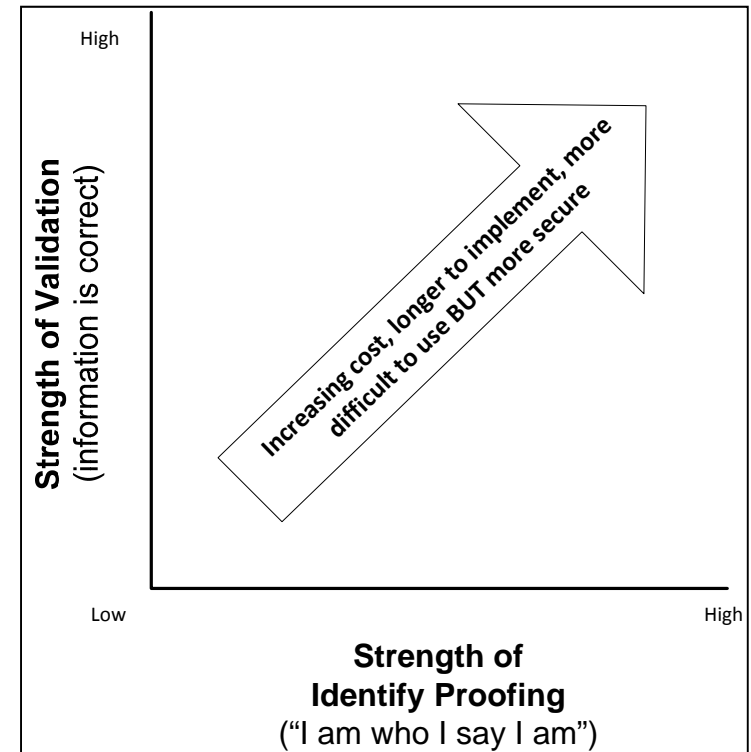
- Usually within the context of full HIE
- Used to identify source of data received from query
- HIE products usually have embedded directory within the product
- Less compelling need for external directories unless cross-HIE query is anticipated

# What technologies exist to provide these capabilities?

- Universal Discovery and Description Services (UDDI)
  - Used by IHE services and NwHIN CONNECT
  - Limited to SOAP-based web services
  - No general purpose person or organization directory
- Domain Name System (DNS)
  - Low-level service used by the Internet
  - Can store digital certificates for organizations and individuals
  - Used by NwHIN Direct
  - Tools not very well developed and may be difficult to use
- Lightweight Directory Access Protocol (LDAP)
  - Internet standard for multi-purpose directory query
  - Requires agreement about directory structure
  - Used by IHE Healthcare Provider Directory (HPD)

# What are some of the open issues?

- Lack of harmonized standards
- Lack of products
- Directory maintenance
  - Who maintains the information?
  - Who validates its accuracy?
  - What if “reliable sources” are contradictory?

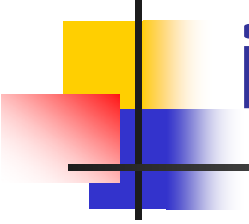


# So what does this mean to me in public health?



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- Public health increasingly drawn into HIE world (*e.g.*, MU reporting, shared connections/interfaces)
- Public health is a potential *source* of directory information
- Public health is a potential *user* of directory information



# Where can I find more information?

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- HLN HIE and Directory Services Page  
<http://www.hln.com/resources/hie-dir.php>
- ONC S&I Framework Provider Directory Project  
<http://wiki.siframework.org/Provider+Directories>
- The Direct Project  
<http://directproject.org/>



# Contact Information

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