

Meaningful Use, Public Health & Transport Standards: Strategies and Tactics

Meaningful Use Public Health Forum & CDC Nationwide Call
March 21, 2013

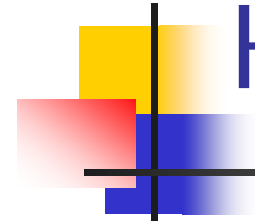
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Abstract

While the Stage 2 Meaningful Use Final Rule does not prescribe specific transport methods, the rule states that eligible professionals and eligible hospitals will be expected to use the transport means stipulated by the public health agency (PHA) to which they report. This presentation will focus on transport alternatives and strategies public health agencies are using - and should consider - to meet ongoing and emerging data transport requirements.

Meaningful Use-Public Health Summary



Stage 1:

Measure	EPs	EHS
Immunization Submission	Menu	Menu
ELR Submission		Menu
Syndrome Surveillance	Menu	Menu

Stage 2:

Measure	EPs	EHS
Immunization Submission	Core	Core
ELR Submission		Core
Syndrome Surveillance	Menu	Core
Cancer Registry	Menu	
Other Registries	Menu	



Stage 2 MU

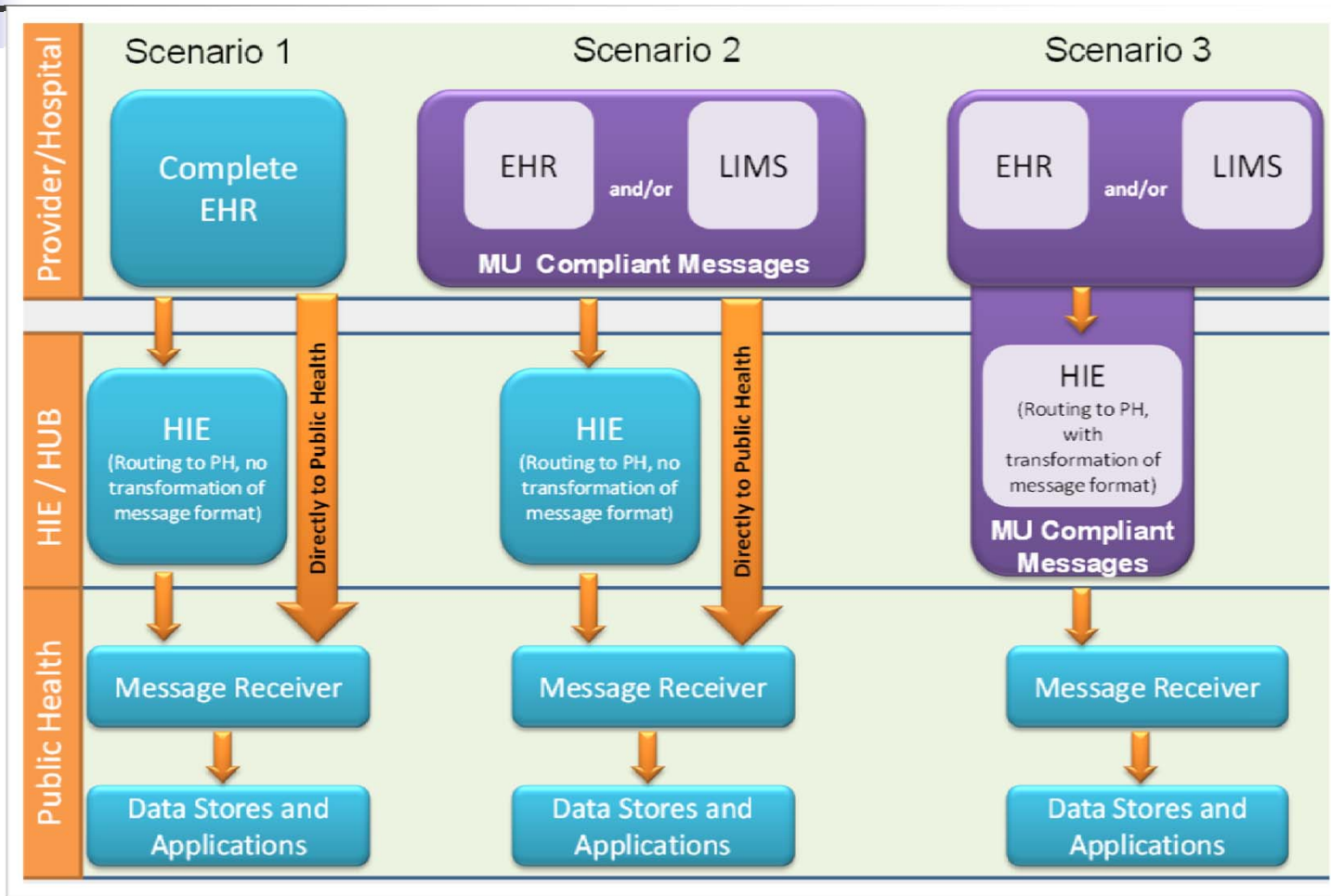
- No specific transport prescribed for PH
- EPs and EHs expected to use transport stipulated by PH
- Direct and SOAP-based Web Services identified elsewhere in the Final Rule



Current Status

- ELR and ESS primarily conducted by hospitals with fairly robust infrastructures and IT capabilities
 - Usually connected via VPN using various protocols
- IZ and Cancer reporting more characteristic of smaller sites with less developed infrastructures and fewer IT capabilities

Models of Data Transport



HIE: Data Exchange Strategies

Less Sophisticated

More Sophisticated

“Push” Transactions
“Uni-directional”
(e.g., Direct, XDR)

“Coupled Push” Transactions;
Publish/Subscribe

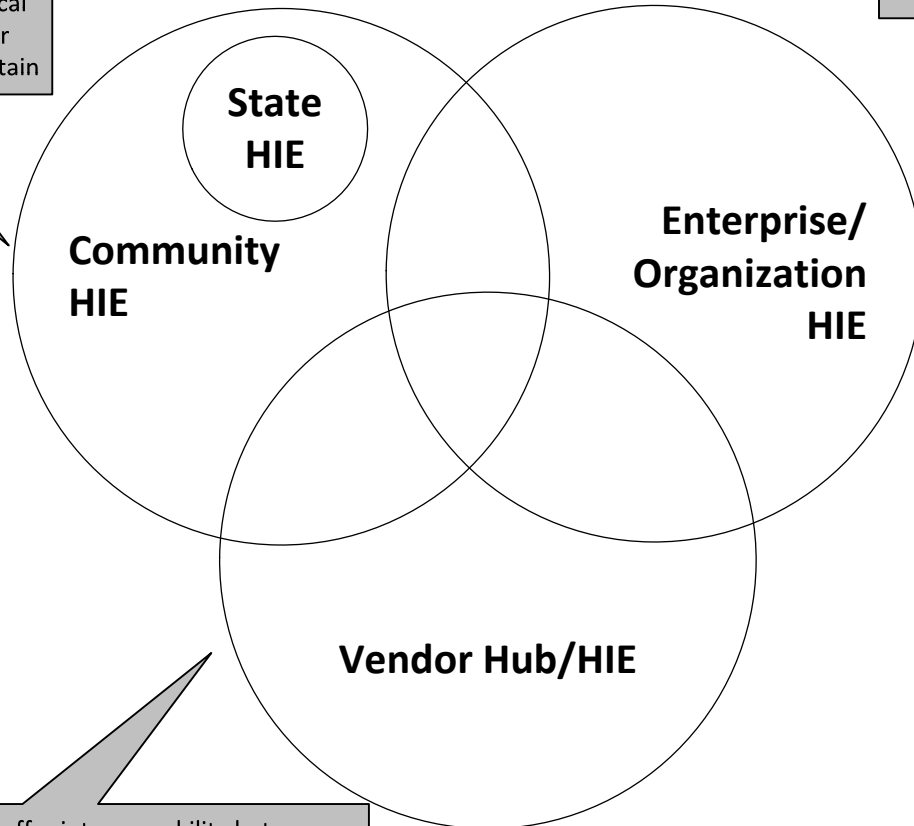
“Pull” Transactions
“Bi-directional”
(e.g., IHE XCA, Distributed Query)

- Sender and receiver known before transaction begins
- Patient identity agreed to by sender and receiver
- One-way “push” – no provision for response
- Any content can be sent
- Direct uses e-mail paradigm
- Secured with digital certificates and accepted “trust” domain/community
- Exchange relationships can be established “on the fly” rather easily (within trust domain)

- Receiver queries HIE for records - if data found, HIE returns multiple records or consolidates response
- Patient identity established by HIE
- Often uses web services
- Specific data sets must be pre-defined for query and response
- Business relationships and technical infrastructure needs to be established before any exchange takes place

Types of HIEs

HIE supported within a medical trading area, community, or state; most challenging to sustain



HIE supported within a single organization or IDN; may or may not interoperate beyond organizational boundaries

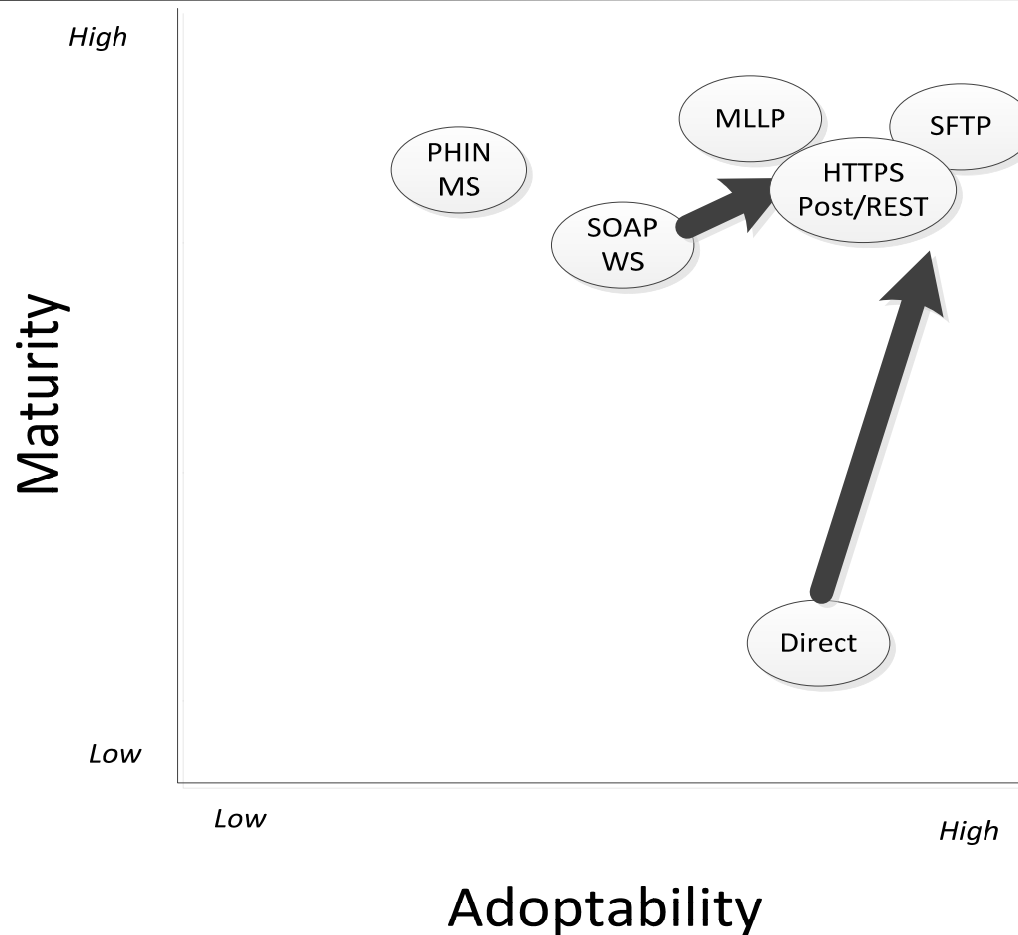
Many EHR vendors offer interoperability between installations of their products and often will provide less expensive external interfaces to/from these hubs



Common Transport Methods

Method	Description
Direct	Simple, secure, scalable, standards-based way for participants to “push” encrypted health information directly to known, trusted recipients over the Internet
HTTPS POST/REST	Common form of transport used by web browsers to send data to web services
MLLP	Relatively simple form of message transport over TCP/IP
PHINMS	CDC-created strategy for public health data exchange
SFTP	Internet standard for point-to-point interactive or “batched” secure file transfer
Web Services	SOA-based strategy for enabling two systems to interoperate securely

Maturity versus Adoptability





Case Study: IIS Transport

- Ever-changing clinical decision support best supported via query to IIS from EHR-S
- IIS usually unable (technically, financially) to support multiple transport strategies
- IIS desire to use Web Services for *query* (even in the future) encourages use of Web Services for *submission*
- State HIEs' focus on Direct not always compatible with IIS capabilities, investments, and strategies



Strategies for IIS Success

- Use web services to/from IIS where possible
- Supplement web services with Direct for *submission*, especially with HIE assistance (*e.g.*, transport protocol translation)
- Minimize use of other protocols over time as they are less supported by EHR-S, PH systems, and HIE
- Examine other integration issues carefully and plan strategies accordingly
- Leverage, leverage, leverage



Overall Recommendations

- Federal government should not mandate a specific protocol
- Limit the number of protocols in use
- Consider using the protocol that supports the most complex use
- Leverage HIEs and other activities, state and sub-state
- Consider a consolidated agency gateway
- Additional resources:

<http://www.hln.com/expertise/hit/hie/hie-standards.php>



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