Information Exchange Workgroup Preliminary Recommendations to HIT Policy Committee

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Agenda

Information Exchange WG Workplan

Query exchange recommendations

Provider directory recommendations

Background

IE WG had three issues in the HITPC Stage 3 Request for Comment

- Query for Patient Record (102 comments)

- Provider directory (EHR certification only) (62 comments)

- Data portability (EHR certification only) (56 comments)

Are there any market developments or lessons learned that would cause us to amend this list?

The market is VERY dynamic and the landscape looks different than it did even 7 months ago when the RFC was released

- The demand for cross-vendor query exchange appears to have grown with the rapid growth of ACOs

  - Though some channels of query exchange are emerging in the market, such capabilities have generally not kept pace with demand

- Directed exchange as required for Stage 2 is starting to take shape

  - The role and function of HISPs is still murky, and lack of standards for provider directories and security certificates appear to be an obstacle to more rapid progress

- Industry projections suggest that 25-30% of physicians may change EHR systems in the near future, making data portability an important issue

- Demand for patient engagement is growing, as is entrepreneurial activity in this area

IE WG Workplan

It appears that the RFC focus areas are still consistent with aspirational goals of Stage 3 and the gaps that still remain from Stages 1 and 2:

- Query for Patient Record as high priority for Stage 3
- Provider directory to support query as well as directed exchange required for Stage 2
- Data portability to meet growing need for cross-vendor data migration

Thus, the IE WG workplan is as follows:

- Focus on three areas: Query for Patient Record, Provider Directories, Data Portability
- For July HITPC meeting
  - Presentation of workplan
  - Preliminary recommendations on Query for Patient Record and Provider Directories
- For August HITPC meeting:
  - Final recommendations on all three focus areas

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Information Exchange WG Workplan

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Query for Patient Record
Background

HITSC and public comments suggested that Query for Patient Record approach in RFC be simplified and generalized

- Complex set of back-and-forth transactions
- Implied very specific user workflows

Query exchange is occurring in parts of the market where there is 3rd party governance to address policy, legal, and technical complexities

- Examples include Healtheway and selected state-, regional-, and private-HIE activities
- Single-vendor query exchange solutions are growing rapidly due to ability to eliminate technical barriers and facilitate trust frameworks among separate legal entities

New recommendations focus on enabling query exchanges through existing HITECH authority and without separate authority to regulate HISPs, HIE organizations, or other third party actors

- Current recommendation focuses solely on enabling provider directory functions within context of HITECH EHR certification authority and building on market developments in directed and query exchange

Recommendation on Query for a Patient Record

HITPC recommends:

- <u>Search for patient information</u>: EHR systems have the ability to electronically query external EHR systems for patient medical records

- <u>Respond to searches for patient information</u>: EHR systems have the ability to electronically respond to electronic queries for patient medical records from external EHR systems

Principles for Query Exchange

HITPC recommends that the following principles be used for establishing requirements and standards for query-based exchange:

1. <u>Continuity</u>**:** Build on Stage 1 and 2 approaches and infrastructure for directed exchange where possible, and allow use of organized HIE infrastructures where applicable and available

2. <u>Simplification</u>**:** Set goal of having query and response happen in a single (or minimal) set of transactions

3. <u>Generalization</u>: Accommodate flexibility in use cases, workflows, installed base capabilities, and legal/policy considerations
    - e.g., allow clinical sources to have flexibility in how they respond to requests
    - e.g., remain flexible to legal and policy variation across legal entities and states

Principles for Query Exchange (continued)

4. Transactions

    A. Querying systems must have the ability to:

        1. Discover address and security credentials of clinical source*

        2. Present authenticating credentials of requesting entity*

        3. Present patient-identifying information*

        4. Assert authorization for specific patient-level request*

        5. Indicate type of information being requested (optional)

        6. Securely transmit query message

        7. Log requesting transaction

        8. [Post-Query] Receive responding information

        9. [Post-Query] Log transaction and disclosure*

    B. Responding systems must have the ability to:

        1. Validate authenticating credentials of requesting entity*

        2. Match patient*

        3. Assess robustness of authorization for specific patient-level request

        4. Automate responses to requests based on robustness of authorization information presented by requestor (i.e., enable parameters to allow automation in certain circumstances determined by data-holder, such as requestor clinical setting (e.g., ED) or geography (e.g., within state))*

        5. Check for and respond with patient record information or with indication that no patient record information will be sent in response to query*

        6. Log transaction and disclosure

* Aligned with Privacy and Security Tiger Team recommendations already supported by HITPC

Principles for Query Exchange (continued)

5. Transaction details

    A. Addressing, Access to Security Credentials, and Authentication

        1. Standards should leverage (but not be restricted to) the considerable HISP policies and infrastructure being deployed to enable discoverability of addresses and security credentials for directed exchange

    B. Authorization:

        1. Variation in state- and organization-level policies suggests need to leave standard open to wide range of locally-determined authorization policies

        2. EHR systems should capture a structured consent indicator, and include such indicator in query message when querying, and consume such indicator when being queried*

        3. EHR systems should have ability to send and receive consent documents in query and responding messages

    C. Patient-matching

        1. Patient-identifying information and corresponding matching functions should be based on standardized demographic fields*

        2. Data-holding entity should determine threshold of assurance needed to establish a match (could be facilitated by record locator function of organized HIE, if available and desired)*

* Aligned with Privacy and Security Tiger Team recommendations already supported by HITPC

Principles for Query Exchange (continued)

5. <u>Transaction details (continued)</u>

    D.   <u>Response to request</u>

        1.   Data-holders decide content and format of response according to their processes, policies, and technology capabilities

        2.   Data-holders assure that information in response is covered by authorization presented by requesting entity

        3.   Data-holders will respond to all queries, including an acknowledgement of non-fulfillment of request (e.g., "No information will be sent in response to this query"). Such acknowledgement of non-fulfillment should not divulge any information about the patient (such as whether the data-holding entity has any information about the patient)*

* Aligned with Privacy and Security Tiger Team recommendations already supported by HITPC

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Provider Directories
Background

Provider directories are a critical component of both directed and query exchange

Current lack of standards appears to be an obstacle to faster progress in Stage 2 directed exchange, and unless remedied, may impede Stage 3 query exchange as well

New recommendations reflect feedback from previous HITPC recommendations on PDs as well as IEWG observations on current and expected market trends

- Previous recommendation was not focused specifically on HITECH statutory and programmatic authority, and also was prior to Applicability Statement for Secure Health Transport (ie, Direct)

- Current recommendation focuses solely on enabling provider directory functions within context of HITECH EHR certification authority and building on market developments in directed and query exchange

- Does not assume separate authority to regulate HISPs, HIE organizations, or other third party market actors

- We note that our comments on CMS/ONC RFI on HIE highlighted opportunity to use existing CMS databases (NPPES, Meaningful Use) to catalyze market provide directory capabilities

Recommendation on Provider Directories

HITPC recommends that:

- <u>Search for provider</u>: EHR systems have the ability to query external provider directories to discover and consume addressing and security credential information to support directed and query exchange

- <u>Respond to search</u>: EHR systems have the ability to expose a provider directory containing EPs and EH addressing and security credential information to queries from external systems to support directed and query exchange

Principles for Provider Directories

HITPC recommends that the following guidelines be used for establishing standards for provider directories:

1. <u>Scope</u>: Standards must address PD transactions (query and response) as well as minimum acceptable PD content to enable directed and query exchange

2. <u>Continuity</u>: Build on Stage 1 and 2 approaches and infrastructure for directed exchange where possible and allow use of organized HIE or cross-entity PD infrastructures where applicable and available (ie, remain agnostic to architecture and implementation approaches)

3. <u>Simplification</u>: Set goal of having PD query and response happen in a single (or minimal) set of transactions

4. <u>External EHR system</u>: An EHR system of another distinct legal entity, regardless of vendor

Principles for Provider Directories (continued)

5. Transactions:

    A.   Querying systems must have ability to:

        1.   Present authenticating credentials of requesting entity

        2.   Present provider-identifying information

        3.   Securely transmit query message

    B.   Responding provider directory must have ability to:

        1.   Validate authenticating credentials of requesting entity

        2.   Match provider

        3.   Respond with unambiguous information necessary for message addressing and encryption or acknowledgement of non-fulfillment of request

    C.   Provider directories must have administrative capabilities to:

        1.   Submit updated provider directory information (additions, changes, deletions) to external provider directories

        2.   Receive and process provider directory updates from external provider directories

6. Transaction details:

    a.   Provider directories should contain minimum amount of information necessary on EPs and EHs to address and encrypt directed exchange and/or query for a patient record messages

    b.   Provider directories should contain minimum amount of information necessary on EPs and EHs to disambiguate multiple matches (i.e. same provider at different entities, providers with the same name, etc)

Backup

Anatomy of a
Query for a Patient Record

Data Requestor

Discover provider address and security credentials

Send:

- Authenticating credentials
- Patient-identifying information
- Authorization for request
- Type of information being requested (optional)

query →

Receive:

- Medical record information or acknowledgment of non-fulfillment of request
- Log transaction

response ←

Data holder

Receive:

- Validate authentication credentials
- Match patient
- Verify authorization for request
- Check for requested information

Send:

- Medical record information or acknowledgment of non-fulfillment of request
- Log transaction

Anatomy of a
Provider Directory Transaction

Data Requestor

Discover relevant provider directory

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Send:

- Authenticating credentials
- Provider-identifying information

query →

Receive:

- Requested information or non-fulfillment message
- Log transaction

← *response*

Provider Directory Holder

Receive:

- Validate authentication credentials
- Match provider

↓

Expose:

- Provider addressing and security credential information, or ability to further specify request as determined by PD, or acknowledgment of non-fulfillment of request
- Log transaction