Hub Frequently Asked Questions (FAQ)
4-4-2019
Topics Addressed in the FAQs

- Architecture
- Workflow
- Governance
- Functionality
- Carequality
- Participant Outreach
- Migration
- Onboarding
- Message
- Testing
- Operational Support

- Security
- Patient Matching
- Transformation
- Duplicate Data
- Record Locator Service (RLS)
- Central Data Repository (CDR)
- Future Service(s)
- Cost
- RFP
- Operational Dashboard Concept
- etc
How does the Hub help my organization?

Instead of creating and maintaining expensive direct point to point connections with other eHealth Exchange Participants, a single connection from your organization to the eHealth Exchange Hub will provide your organization a:

✓ Simpler, less expensive way to exchange within our nationwide eHealth Exchange network

✓ Simple, inexpensive solution to exchange patient information with healthcare organizations who are not part of the eHealth Exchange network, but who exchange within other networks such as Carequality-enabled networks (if your organization does not already have Carequality access)

✓ Connection with the Patient Unified Lookup System for Emergencies (PULSE) platform to facilitate patient care during disasters

✓ Platform to facilitate future potential capabilities
Must my organization connect to the Hub?

If your organization exchanges for Treatment, creating 1 connection to the Hub is more practical than creating and maintaining connections with over 250 other gateways who exchange for Treatment.

- If your organization exchanges with any other eHealth Exchange Participant for Treatment purposes, your organization has a Duty to Respond to all other eHealth Exchange Participants exchanging for Treatment, even if their queries arrive infrequently from distant regions, and even if information cannot be provided.

- Your organization can fulfill its DURSA obligation to exchange for Treatment by either:
  
  • Creating 1 connection to the eHealth Exchange Hub to connect with other Participants exchanging for Treatment, or
  
  • Mutually-agreeing with other Participants exchanging for Treatment to maintain direct point-to-point connections. Importantly, your organization may not require another Participant who has implemented the HUB to spend resources to establish or maintain direct point-to-point connections with it.
When responding to Treatment queries, how may my organization respond?

When responding to Treatment queries, Participants may respond with any of the following:

- Clinical document(s)

- “Patient not Found” message if the requested patient couldn’t be matched to the responder’s master patient index

- “Unable to Respond” message if the responder uniformly applies supplemental requirements
How does the Hub operate?

Bi-directional Query/Retrieve

1. Patient Discovery
2. Query Documents
3. Document Retrieve

Hub provides minor translations required by Carequality
Architecture Questions

1. **Beyond the Hub, what other technology & services will be provide by the eHealth Exchange?**

   The eHealth Exchange plans to provide the following for Participants who utilize the Hub:
   
   a. Hub (centralized)
   b. TLS Connection Management
   c. Healthcare Directory (centralized)
   d. Certificate Management (centralized)
   e. Validation Services (centralized, future)
   f. Operational Dashboard (centralized; to monitor real-time failures and outages)
   g. Reporting (Centralized)
      - Auditing & other compliance
      - Performance (query count, successful transactions, failed transactions, transaction types, content compliance failures, & transaction timing metrics)
Workflow Questions

1. How will messages flow to support query & retrieve?

Message Flow

1. The Initiator sends message to Hub with patient demographics asking if Responder has a record of that patient. The Hub forwards message to Responder.

2. The Responder receives the Patient Discovery request, matches the requested patient against patients in its system, & responds to the Hub with patient matches. The Hub forwards the message.

3. Assuming the patient was matched, the Initiator sends a message to the Hub asking what documents the Responder. The Hub forwards the message.

4. The Responder receives the request and provides the Hub a list of documents for the patient. The Hub forwards this to the Requester.

5. The Initiator receives the document list and requests one or more documents. The Hub forwards the message.

6. The Responder receives request and provides the Hub the chosen document(s). The Hub forwards the document(s).

7. The Requestor receives the chosen document(s).
2. How will messages flow to support the Access Consent Policy (ACP) when the SSA facilitates Disability Determinations?
Governance Questions

1. **Will the eHealth Exchange manage business and technical aspects of the Hub?**
   The eHealth Exchange will manage both business and technical aspects of the Hub, recognizing that many services will be subcontracted to the Hub vendor. Once this is better defined, a Point-of-Contact document will be created so Participants know who to contact.

2. **What will the Hub’s governance process look like?**
   The eHealth Exchange Coordinating Committee will continue to make all the network decisions they make today.

2. **Will OP&Ps change?**
   Yes, the Coordinating Committee will likely make some changes to some Operating Policies & Procedures to support the Hub.
Governance Questions

3. How will the Hub be addressed in the DURSA?

• The DURSA Amendment draft includes the concept of Network Utilities, any shared infrastructure used to facilitate the transmission of Message Content for the Network including, but not limited to, gateway services, healthcare directory, master patient indices, and record locater services.

• The Coordinating Committee may approve the use of various Network Utilities (in this case, the Hub), to support the operation of the Network.

• The Coordinating Committee may develop an Operating Policy and Procedure for implementation and use of the Network Utility (Hub) by Participants

• The eHealth Exchange contracted with InterSystems to provide Hub services

• Business terms are addressed in the eHealth Exchange Participant Agreement for non-federal Participants and in federal contracts with federal Participants
Functionality Questions

1. **What is a “Targeted” or “Directed” Patient Discovery?**
   A “Targeted” Patient Discovery request refers to the scenario where the initiator directs the query to a single destination, typically when the initiator already knows or suspects the patient has data at the destination gateway.

2. **Will the Hub Fan-out my single Patient Discovery messages to the entire network and Carequality-enabled networks?**
   No, to mitigate the possibility of Participants’ Gateways from being overwhelmed by too many incoming Patient Discovery messages, this “fan-out” functionality will only be allowed for the VHA while we measure the volume impact on other Participants. Since the VHA already sends Patient Discovery messages to other Participants they know have treated their patients, volume will not increase. Participants who already have Carequality access are encouraged to leverage Surescripts Record Locator Service (RLS) to identify which Participants they should query.
Carequality Questions

1. If my organization is already using Carequality via Epic Care Everywhere, via CommonWell, or via another Carequality “Implementer”, will I be impacted by the eHealth Exchange joining Carequality as an “Implementer”?

   No, if your organization is already using Carequality, you can ignore most Carequality references in this FAQ document.
Carequality Questions

2. How will the 1st eHealth Exchange Participant connecting to Carequality pave the way for subsequent eHx Participants?

Since the eHealth Exchange signed the Carequality Connected Agreement (CCA), once the eHealth Exchange DURSA is amended and the first eHealth Exchange Participant would:

a. Review OP&P #10 binding them to Carequality® Connection Terms.

b. Validate in a non-Production environment all relevant transactions with at least three other Carequality Implementers who utilize different technology platforms.

c. Perform Pre-Live Production Connectivity Validation by:
   i. Initiating a Patient Discovery transaction to at least four other live Implementers, of which at least 75% must return a “No Matching Patient Found” response rather than no response or an error. Alternatively, initiate successful Patient Discovery transactions to at least three Connections of an Implementer.
   ii. Receiving Patient Discovery transactions from at least four other Implementers, and respond successfully with a No Matching Patient Found” response for at least 75% of these transactions. Such a response is “successful” if it is received and processed without error by the querying system.

d. Then perform the Production connectivity confirmation again with at least half of the other Carequality Implementers.
Carequality Questions

3. **How can subsequent eHealth Exchange Participants connect to all Carequality Connections?**
   After the first eHealth Exchange Participant connects to half of the Carequality Implementers, each eHealth Exchange Participant connecting to Carequality via the eHealth Exchange would:

   a. Review OP&P #10 binding them to Carequality® Connection Terms.

   b. **Skip** non-Production environment transport verification since this is not customary or required in the Carequality world for Treatment transactions, but if strongly desired, request that one or more Carequality Implementers (not Carequality Connections) verify relevant transactions in a non-Production environment.

   c. **Skip** pre-live Production environment validation since this is not customary or required in the Carequality world, but if strongly desired, request that one or more Carequality Implementers (not Carequality Connections) perform Pre-Live Production Connectivity Validation.

   **According to Carequality rules, eHealth Exchange Participants may not insist upon transport or content quality testing with Carequality for Treatment transactions.**
4. **What additional requirements must Carequality Implementers and Carequality Connections complete in order to exchange with eHealth Exchange via the Hub?**
   Carequality has some minor standard differences that must be addressed. As an example, the Hub will perform some minor, Participant-approved translations such as converting any “Emergency” Purpose of Use codes to “Treatment” supplemented with an “Emergency” Authorization type.

5. **Will the eHealth Exchange services bundle (e.g. Performance Monitoring, Content Testing) be a requirement for Carequality partners?**
   In the near-term, the eHealth Exchange cannot impose any response time or content requirements upon other HIE networks, but this may change as network-to-network rules of the road mature. Please note that HIE networks who have become Carequality Implementers have their own network rules, so many eHealth Exchange paradigms such as Performance SLAs, Partner Testing, and/or Content Testing do not apply, and the eHealth Exchange may not charge Carequality Implementers for use cases involving the Treatment Purpose of Use. We plan to provide performance monitoring of Hub connection to Carequality, but will not have any response time SLAs to enforce.

6. **How much extra will eHealth Exchange Participants be charged to connect with Carequality Implementers?**
   Please see the amended Participation agreement.
Carequality Questions

7. **How will Carequality partners be supported once they are in production?**
   Whereas some eHealth Exchange Participants (e.g. VA) currently help other point-to-point connections troubleshoot issues, the eHealth Exchange’s Hub will likely assume responsibility for much of this support in the Hub world.

8. **If I sign the choose to onboard to Carequality via the eHealth Exchange, must I respond to queries from all Carequality connections?**
   If you respond to queries from any Carequality connections for Treatment purposes, you must respond to queries for Treatment purposes from all remaining Carequality connections according to the Carequality® Connection Terms agreement’s Non-Discrimination requirement.

9. **Does Carequality have a centralized Hub**
   No, at the time of this writing, the 12+ HIE networks who are live on Carequality each have their own platform. The eHealth Exchange Hub will establish 11 connections with the Carequality Implementers Shared Gateways, as well as with Epic’s hundreds of endpoints across the United States.
Onboarding Questions

1. During technical on-boarding, what is the process to confirm interoperability?

Responding Gateway Setup

<table>
<thead>
<tr>
<th>eHealth Exchange’s Preferred Approach</th>
<th>Setup Approaches as Responding Gateway (RG)</th>
<th>Environment</th>
<th>Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Choice</td>
<td>The Hub’s Test Harness initiates a query to your gateway for the test patient you have active in your Production environment.</td>
<td>Production or Validation</td>
<td>Test Patient</td>
</tr>
<tr>
<td>2nd Choice</td>
<td>Another eHealth Exchange Participant initiates a query to your gateway for a real common patient you have active in your Production environment, as appropriate.</td>
<td>Production</td>
<td>Real Common Patient</td>
</tr>
</tbody>
</table>

Initiating Gateway Setup:
After your organization is successfully setup as a Responding Gateway (RG), we’ll leverage the Sequoia Interoperability Testing Platform (ITP) to serve as a test Responding Gateway (RG). The Hub Implementation team will contact you to request you initiate a query to the ITP’s Home Community ID (HCID) and the Hub’s Responding Gateway (RG) endpoints, so the ITP can hopefully match to your patient and generate a clinical document.

Participants brand-new to the eHealth Exchange must pass transport testing exercises before connecting to the Hub.
Message Questions

1. **Will the Hub serve as a pass-through?**
   The Hub will not store any clinical data, but will store audit logs as required. The Hub serves as a pass-through. Message initiators direct their queries to the Hub’s Endpoint URLs listed in the new Hub-aware directory with the Responding Gateway’s Home Community ID (HCID). Sub-organizations are differentiated by the Assigning Authority.

2. **Can the Hub be configured so I continue to receive errors (e.g. timeout messages)?**
   Yes, the Hub is a highly-configurable solution that allows:
   - The Hub to conceal some or all Responder-Hub error messages if desired by select Participants
   - The Hub to forward some or all Responder-Hub error messages if desired by select Participants. Partial successes and/or complete raw messages from Responding Gateway can be forwarded to initiators instead of receiving filtered error messages if desired. Additional fees apply for this option.
   - The Hub to forward or not forward partial-success messages from Responder-Hubs if desired by select Participants
Message Questions

4. Can the Hub be configured so the messages I initiate are resent but fail due to Responder downtime are resent by the Hub when the Responder’s system becomes operational?

No, the Hub returns error messages when Responding Gateways exceed timeouts. The Hub cannot be configured to retry x times before sending the Initiator a failure message.
Which eHealth Exchange Directory Should I Read?

• If your organization initiates requests to the Hub to retrieve patient information from other Participants, even if some of the responding Participants are not yet connected to the Hub, configure your system to use the new Hub-aware directory.

• If your organization does not initiate requests via the Hub with another Participant, assuming your organization and that Participant have mutually agreed to continue using point to point connections, continue using the traditional eHealth Exchange directory.
Testing Questions

1. **How will Transport testing work on the Hub?**
   - After each Participant initially conducts one-time Transport testing with the Hub, subsequent transport testing with other Participants will be semi-automated using core test patients and will be managed by Hub administrators.
   - PKI Testing will continue to use the eHealth Exchange security model and process.
Testing Questions

2. **How will Content testing work on the Hub?**
   - As a potential future service, if desired by eHealth Exchange Participants, the Hub should be able to ensure document types are part of a predetermined list such as C32/CCD, HL7 C-CDA R1.1 (9 document types), HL7 C-CDA R2.1 (12 document types), C62. This could potentially be configured universally, or could potentially be configured by Participant.

   - In addition, as a future option where fees would apply, the Hub could sample partners’ documents’ clinical content as those documents travel through the Hub to identify and report on CCDA content conformance issues.
     - This service would ideally be highly configurable to sample all messages, or to perhaps only validate one document’s content per every day for each exchange partner.
     - This service might ideally address any Participant-specific content requirements.
     - Fees would be charged for this service.
Operational Support Questions

1. How will eHealth Exchange Participants exchanging via the Hub be supported once in production?
   Participants can contact the Hub support team via phone, email, or web.

2. How will the eHealth Exchange’s Hub monitor Participant connections?
   Appendix A provides a conceptual illustration regarding a view both the eHealth Exchange and eHealth Exchange Participants MIGHT be able to see to monitor performance.

3. How will you communicate partner outages/unavailability?
   The new, centralized Hub “Dashboard” (see Appendix A) and corresponding Alerts should notify Participants of downtime, performance issues, etc. In addition, Participants will be able to subscribe to periodic updates.
Operational Support Questions

4. **How should Participants report partner related production issues?**
   Current Operating Policies & Procedures will still apply, but there might also be a static location for notices and Support contacts.

5. **Will there be a team we work with on technical production issues?**
   Yes; Participants can contact the Hub support team via phone, email, or web.

6. **Who will track certificate expiration dates?**
   The eHealth Exchange will continue to track certificate expiration dates.

7. **What will happen when a Responder has slow response time?**
   The Hub will automatically detect performance problems. The Hub administrator will report chronic concerns to the Participant and to the Coordinating Committee?
How Does Hub Security Work?

The eHealth Exchange has applied its secure by design architecture, Federal Bridge Certification Authority (FBCA) operational policies and procedures, and a leading edge PKI production assessment process, to the Hub via:

- Governance (the DURSA)
- Operating Policies and Procedures
- Technical Specifications
- Security-Focused Standards
- Reduced Cyber Threat Attack Surface Area
- Encryption of PHI In-Transit
- Certificate Trust
- Auditing
- eHealth Exchange Staff
- Encryption at Rest and In-Transit
- Cryptographic Signatures
Security Questions

1. **How will security be managed on the Hub?**
   - The Hub will be HIPAA Compliant.
   - The Hub will meet requirements of SOC-2 compliance and shall become certified if and as required by partners.
   - The Hub will pass an evaluation by the Sequoia PKI assessment tool.
   - The Hub will pass continuous 3rd party security vulnerability & penetration testing assessments.
   - The Hub will pass other certifications as is required by the eHealth Exchange.
Security Questions

2. How will the Hub reuse the proven eHealth Exchange security model?
   • A public key infrastructure from a single Managed Certification Authority will be employed, using a single managed root Certification Authority (CA), which is cross signed by the Federal Bridge Certification Authority (FBCA)

   • All connections between the Hub and Participants will be encrypted

   • All request messages will include SAML v2.0 assertion which will be signed using X.509 digital certificates

   • Solution will be AICPA SOC-2 compliant – following associated “trust service principles” for security, availability, processing integrity, confidentiality and privacy

   • Penetration testing and vulnerability assessments will be performed on a continual basis
Security Questions

3. **May we audit the Hub service provider?**
   No. Instead eHx requires its Hub vendor to meet the American Institute of Certified Public Accountants’ (AICPA) standard for SOC 2, RSM US, or achieve and maintain HiTrust CSF certification”

4. **Will data be stored outside the US or will personnel outside the US maintain the Hub**
   No

5. **Will my clinical data be comingled with other Providers’ data?**
   • No. eHealth Exchange data will pass through through servers and a Hub software instance dedicated to eHealth Exchange traffic
   • Transaction highlights will be stored with other Participants messages, logically & physically
   • The Hub will not store any clinical data, but will store audit logs to support regulatory requirements. This audit log data will comeingle message highlights with other eHealth Exchange Participants’ audit log data
Patient Matching Questions

1. How will Hub ensure unique patient ids?
   Initially the Hub will not have an MPI engine or unique patient IDs, but implementing an MPI engine a definitely possibility for subsequent iterations if desired by eHealth Exchange Participants.

2. Since the Hub won’t initially provide patient matching services via an MPI, how will correlation issues be resolved when patients are known at multiple partner locations?
   Since the Hub will operate via a pass-through model, the Hub will forward Patient Discovery messages to Responders so Responders’ systems can perform patient matching. When and if the Hub deploys an MPI, reconciliation is anticipated to add value to this challenge.
Transformation Questions

1. Why might SAML assertions be re-signed at the Hub?
   The Hub will look for missing attributes, identify SAML incompatibilities between partner pairs and when possible, mediate those differences so the partner pairs become interoperable. While the SAML assertion will be unmodified and forwarded to the target RG, the Hub will evaluate it to ensure all required attributes have been provided and that the two signatures are valid. Error messages might be returned accordingly. As a potential future service, the Hub may be required to modify and/or re-sign the SAML assertion and adjust attributes within the message if required by a vendor configuration. The Hub will also be a bridge to Carequality which has a new attribute within the SAML assertion. If the sending or response message must be modified (e.g. for Purpose of Use codes), the Hub may have to resign the message.

2. What might my organization request the Hub perform minor, non-clinical data transformations?
   To resolve transaction interoperability challenges resulting from vendor intricacies and initiator intricacies, some Participants might request the Hub compensate for transaction variations via implementation of customizations. As an example, as appropriate, if your organization is only able to represent states using two-characters (e.g. “FL” for Florida), but other organizations require the use of HL7 state codes, perhaps you’d ask the Hub to translate “FL” into the HL7 Florida state code.
Duplicate Data Questions

1. **How can duplicative information from multiple responders be minimized?**

Recognizing that we might not always want to or be able to reduce duplicate data, the eHealth Exchange will address this with each Responder in order to avoid duplicate responses whenever possible.

The eHealth Exchange might share an narrative description of potential duplicated information (e.g. the regional HIE shares similar information at the provider who is an eHealth Exchange Participant, but the regional HIE does not share discharge summaries) with Participants. If one Responder (e.g. a Regional HIE) provides data only for the past 90 days for a given patient, while a second Responder (e.g. the hospital who provided treatment) provides data for the past year, all of the data is not duplicative, but we might:

- Ask the regional HIE to not return duplicate information
- Configure the Hub to automate data filtering based upon precise Participant instructions
Record Locator Service (RLS) Questions

1. **Will the Hub provide a Record Locator Service (RLS)?**

   Initially the Hub will not have a Record Locator Service (RLS), but we plan to offer one quickly after the Hub goes live. Additional fees would apply.
Central Data Repository (CDR) Questions

1. **Will the Hub provide a Clinical Data Repository (CDR)?**
   There are no plans for the Hub to include a Clinical Data Repository (CDR) or Central Data Repository (CDR) at this time.
Future Service(s) Questions

1. **What service(s) might the Hub offer in the future?**
   Moving forward, if desired by eHealth Exchange Participants, the Hub might offer:
   - Record Locator Service (RLS)
   - Master Patient Index (MPI) – Person Identity Management
   - Clinical Content Transformations
   - Operational Analytics
   - External Testing Tool Support
   - Push Transactions (e.g. HL7 v2, IHE, FHIR, Secure email)
   - FHIR Content Support Including Transformations
RFP Questions

1. **When was the Hub RFP be distributed to vendors?**
   The Hub RFP was distributed to vendor finalists on Friday 4/20/2018.

2. **Were eHealth Exchange Participants involved?**
   Work Group Participants from a cross-section of the eHealth Exchange were intimately involved in the selection process and overwhelmingly recommended InterSystems’ HealthShare-as-a-Service (HaaS).
Why is the Participant Agreement Changing?

<table>
<thead>
<tr>
<th>To Amend the Existing Agreement Structure</th>
<th>To Add a Hub Addenda</th>
<th>To Add a BAA Addenda</th>
</tr>
</thead>
<tbody>
<tr>
<td>• To enhance the agreement structure to facilitate the use of contract addendums</td>
<td>• To establish guardrails regarding use of the Hub</td>
<td>• Participants’ attorneys (not the eHealth Exchange) will likely insist upon signing a BAA since the eHealth Exchange is not a party to the DURSA and the eHealth Exchange is providing the Hub service on behalf of Participants</td>
</tr>
<tr>
<td>• General housekeeping</td>
<td></td>
<td>• This BAA is not replacing or superseding the DURSA.</td>
</tr>
</tbody>
</table>

Please e-mail questions or concerns to administrator@ehealthexchange.com
Amended Participation Agreement (Major Changes)

1. Participation Agreement Changes
   - Replaced “Sequoia Project” with “eHealth Exchange”
   - Enhanced agreement structure to facilitate the use of contract addendums (e.g. a Hub addenda & a BAA addenda)
   - Revises the section on Fees to reflect that eHealth Exchange will offer services and that there will be fees for those services that will be included in the fee schedule. Also, clarifies that fees associated with a contract addenda (e.g. the Hub) have the same late fees. Also, clarifies that late fees and expenses can be waived if a Participant is prohibited by law from paying those fees and expenses.
   - State Governmental entities are subject to their own state law
   - Corrects a mistake that stated the Coordinating Committee approved the original Participation fees years ago and removes language requiring the Coordinating Committee to approve amendments.
   - Says notices should be sent to the eHealth Exchange Executive Director instead of the Sequoia Project CEO
   - Adds new Hub fees and future Carequality fees to the fee schedule
   - States that Carequality fees won’t be charged until the eHealth Exchange onboards to Carequality

2. Added Hub Addenda
   Participants agree:
   - To “cooperate with eHealth Exchange and with the Gateway Vendor as reasonably requested to enhance the effective and efficient operation of the Gateway”
   - To only use the Hub for eHx approved business
   - To take responsibility of its users on the Hub
   - To use and control access to the Administrative Portal appropriately
   - Any fees their vendors charge are their responsibility
   - To comply “with all applicable privacy and security laws, including the HIPAA Regulations, and local and state laws rules and regulations”
   - That the eHealth Exchange can monitor and audit all access to and use of the Gateway and the content of any data or messages
   - To limit the eHealth Exchange’s liability to no more than fees paid for Hub specifically in past 12 months
   - That the eHealth Exchange has the right to suspend Participant’s Hub access and terminate agreement
   - That the eHealth Exchange is not responsible for inaccurate data, incomplete data, Participants’ use of data, or Hub downtime

3. Added BAA Addenda
   Clarifies the permissible uses and disclosures of protected health information by the business associate, based on the relationship between the parties and services being performed by the business associate.
Appendix A: Operations Dashboard Concept
Performance Monitoring Questions

1. **How might an Operations Dashboard appear to me & to the eHealth Exchange?**
   TBD, but here’s a conceptual illustration regarding what you might see. Participants should also be able to subscribe to periodic updates at no cost.
Possible Operations Dashboard – Participant as Responding Gateway

Current Status: Normal Operation

Transaction Volume Detail
Participant as Responder

<table>
<thead>
<tr>
<th>Day</th>
<th>Week</th>
<th>Month</th>
<th>Quarter</th>
<th>Year</th>
<th>ALL</th>
<th>Avg Response (ms)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Patient Discovery (PD)**
  - Patient Matches: 52 364 1,456 4,368 17,472 52,416
  - Patient Not Found: 32 224 896 2,688 10,752 32,256

- **Query for Documents (QD)**
  - 32 224 896 2,688 10,752 32,256
  - [DocType]: 28 196 784 2,352 9,408 28,224
  - [DocType]: 4 28 122 336 1,344 4,012

- **Document Retrieved (RD)**
  - 12 84 336 1,008 4,012 12,096
  - [DocType]: 10 70 280 840 3,360 10,080
  - [DocType]: 2 14 56 168 672 2,016

99.5% Uptime (Past 30 Days)
Possible Operations Dashboard – Participant as **Initiating Gateway**

**Latest Activity**
- Last Request Sent: Wed, Jan-10, 2018 09:48:32
- Last Successful Response Received: Wed, Jan-10, 2018 09:49:00
- Last Patient Match Received: Tue, Jan-9, 2018 14:52:00
- Last Successful Document Retrieved: Tue, Jan-9, 2018 10:43:00

**Transaction Volume Detail**
**Participant as Initiator**

<table>
<thead>
<tr>
<th></th>
<th>Day</th>
<th>Week</th>
<th>Month</th>
<th>Quarter</th>
<th>Year</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Discovery (PD)</td>
<td>52</td>
<td>364</td>
<td>1,456</td>
<td>4,368</td>
<td>17,472</td>
<td>52,416</td>
</tr>
<tr>
<td>Patient Matches</td>
<td>32</td>
<td>224</td>
<td>896</td>
<td>2,688</td>
<td>10,752</td>
<td>32,256</td>
</tr>
<tr>
<td>Patient Not Found</td>
<td>20</td>
<td>140</td>
<td>560</td>
<td>1,680</td>
<td>6,720</td>
<td>20,160</td>
</tr>
<tr>
<td>Query for Documents (QD)</td>
<td>32</td>
<td>224</td>
<td>896</td>
<td>2,688</td>
<td>10,752</td>
<td>32,256</td>
</tr>
<tr>
<td>[Participant] [DocType]</td>
<td>28</td>
<td>196</td>
<td>784</td>
<td>2,352</td>
<td>9,408</td>
<td>28,224</td>
</tr>
<tr>
<td>[Participant] [DocType]</td>
<td>4</td>
<td>28</td>
<td>112</td>
<td>336</td>
<td>1,344</td>
<td>4,032</td>
</tr>
<tr>
<td>Document Retrieved (RD)</td>
<td>12</td>
<td>84</td>
<td>336</td>
<td>1,008</td>
<td>4,032</td>
<td>12,096</td>
</tr>
<tr>
<td>[Participant] [DocType]</td>
<td>10</td>
<td>70</td>
<td>280</td>
<td>840</td>
<td>3,360</td>
<td>10,080</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>14</td>
<td>56</td>
<td>168</td>
<td>672</td>
<td>2,016</td>
</tr>
</tbody>
</table>
How Can I Obtain More Information?

- **Website** – Registration for the secured Participant-only section is fast & easy

- **Monthly Participant Web Meetings** – Typically the 3rd Thursday of Each Month at 1 pm ET

- **Hub Web Meetings** – Typically Tuesdays at 1pm ET & Thursdays at 4pm ET

- **Email** – administrator@ehealthexchange.com any time if you have a specific question and cannot attend the Hub Web meetings

- **Annual eHealth Exchange Meeting** – December 4-6, 2019 at the Gaylord National Resort & Convention Center (Washington DC)