eHealth Exchange™

Hub Frequently Asked Questions (FAQ)
12-6-2020

Topics Addressed in the FAQs

- Architecture
- Workflow
- Governance
- Functionality
- Carequality
- Message
- Testing
- Operational Support

- Security
- Patient Matching
- Transformation
- Duplicate Data
- Record Locator Service (RLS)
- Central Data Repository (CDR)
- etc

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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 provides 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

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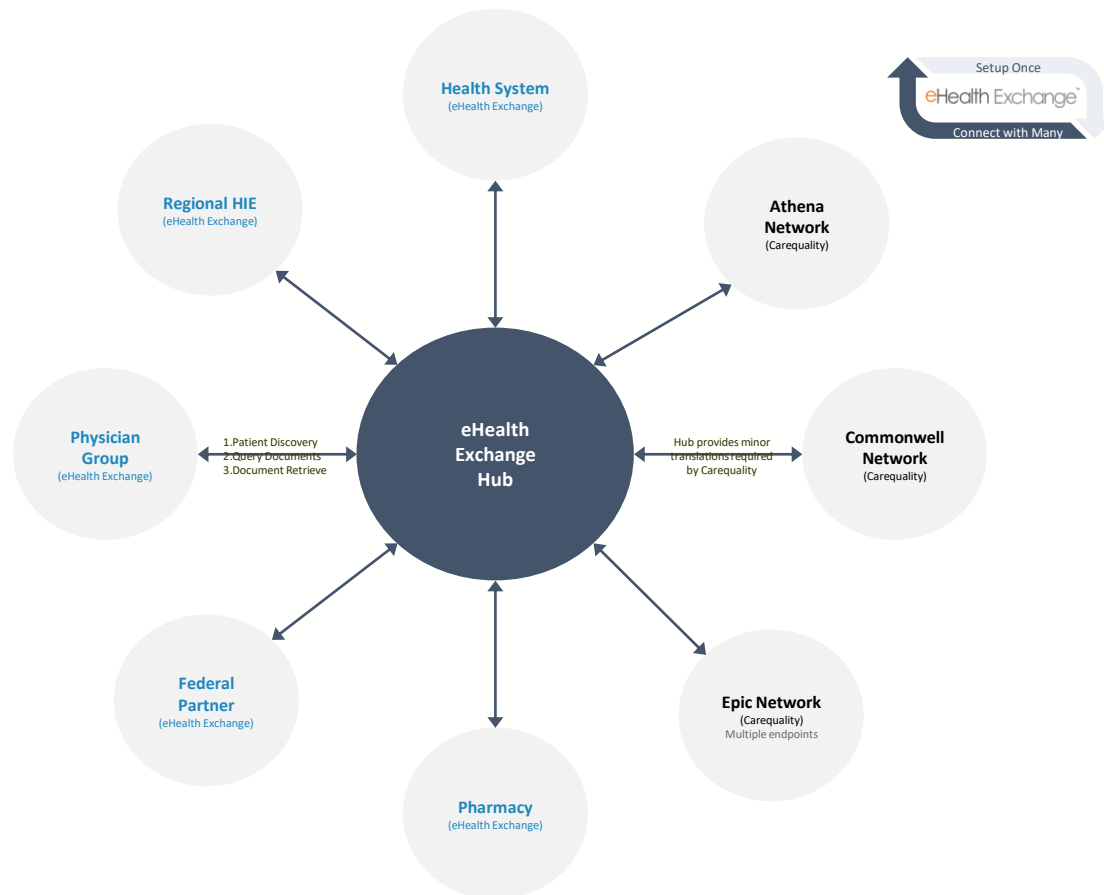# Must my organization connect to the Hub?

Yes

If your organization requests information for Treatment purposes from <u>any</u> other Participant, your organization has a Duty to Respond to <u>all</u> 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 must fulfill its DURSA obligation to exchange for Treatment by creating 1 connection to the eHealth Exchange Hub to connect with other Participants exchanging for Treatment.

Creating 1 connection to the Hub is more practical than creating and maintaining connections with over 260 other gateways who exchange for Treatment

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How does the Hub operate?
Bi-directional Query/Retrieve

Health System
(eHealth Exchange)

Athena Network
(Carequality)

Regional HIE
(eHealth Exchange)

Physician Group
(eHealth Exchange)

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

eHealth Exchange Hub

Hub provides minor translations required by Carequality

Commonwell Network
(Carequality)

Federal Partner
(eHealth Exchange)

Pharmacy
(eHealth Exchange)

Epic Network
(Carequality)
Multiple endpoints

Setup Once
eHealth Exchange
Connect with Many
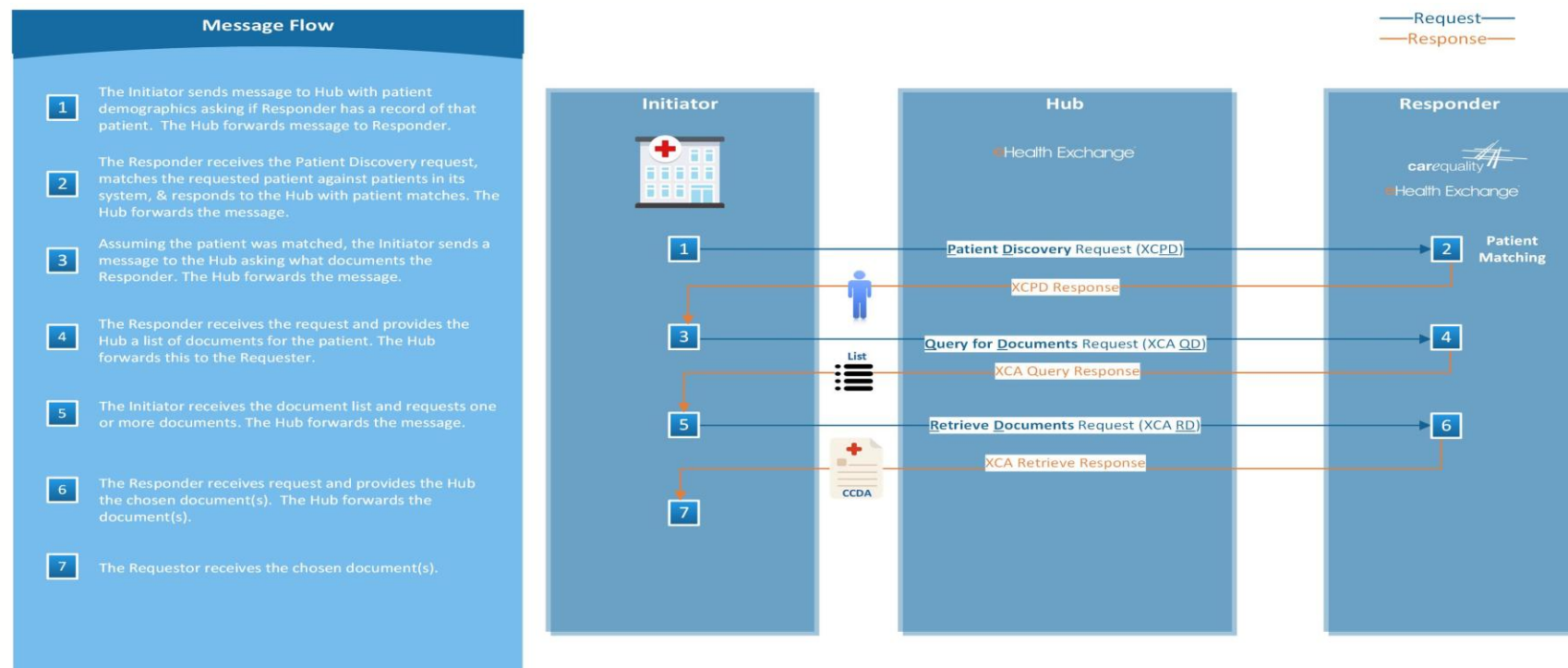
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Architecture Questions

1. **Beyond the Hub, what other technology & services are provided by eHealth Exchange?**

   The eHealth Exchange provides the following :

   a. Hub (centralized)

   b. TLS Connection Management

   c. Healthcare Directory (centralized)

   d. Certificate Management (centralized)

   e. Validation Services (centralized)

   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)
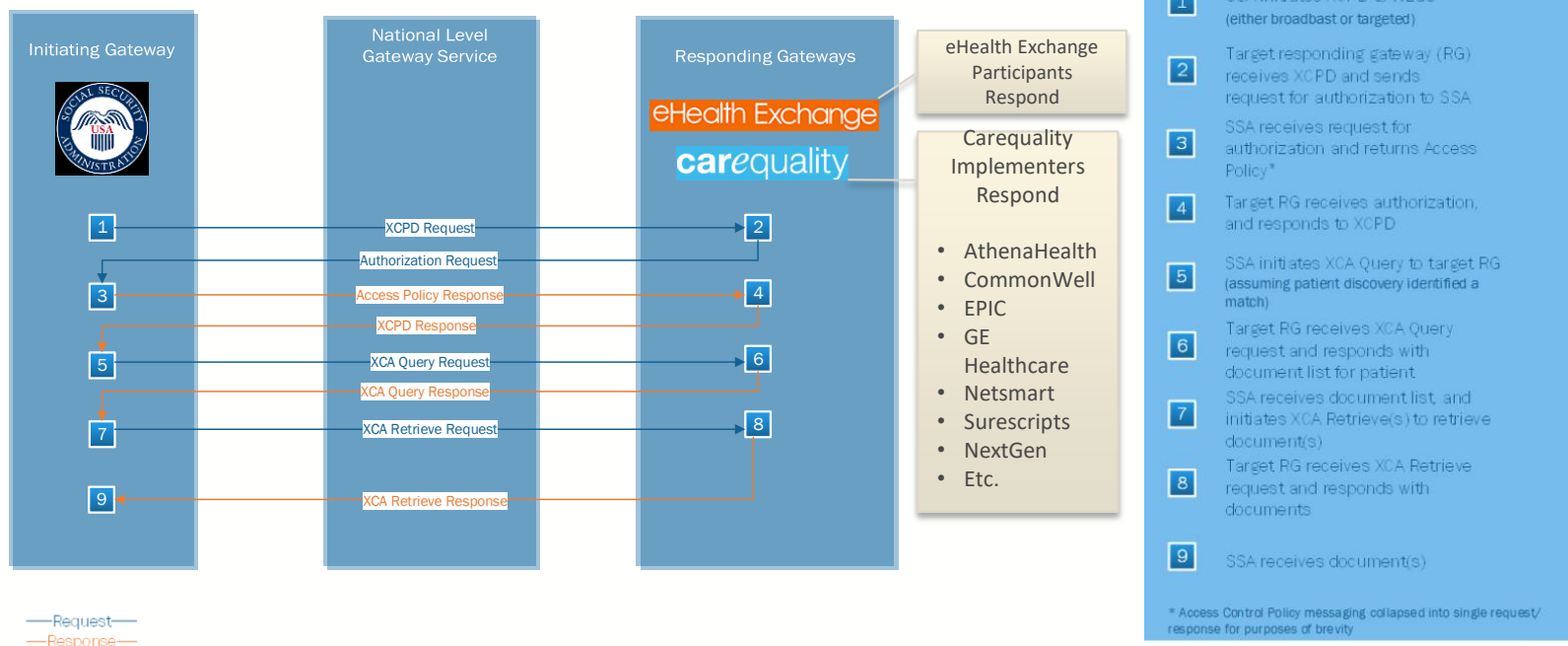
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Workflow Questions

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

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Workflow Questions

2. How do messages flow to support the Access Consent Policy (ACP) when the SSA facilitates Disability Determinations?

Initiating Gateway	
National Level Gateway Service	
Responding Gateways	eHealth Exchange
	carequality

eHealth Exchange Participants Respond

Carequality Implementers Respond

- AthenaHealth
- CommonWell
- EPIC
- GE Healthcare
- Netsmart
- Surescripts
- NextGen
- Etc.

1 — XCPD Request — 2
— Authorization Request —
3 — Access Policy Response — 4
— XCPD Response —
5 — XCA Query Request — 6
— XCA Query Response —
7 — XCA Retrieve Request — 8
9 — XCA Retrieve Response —

—Request—
—Response—

PD / QD / RD Message Flow

1. SSA initiates XCPD to NLGS (either broadbast or targeted)
2. Target responding gateway (RG) receives XCPD and sends request for authorization to SSA
3. SSA receives request for authorization and returns Access Policy*
4. Target RG receives authorization, and responds to XCPD
5. SSA initiates XCA Query to target RG (assuming patient discovery identified a match)
6. Target RG receives XCA Query request and responds with document list for patient
7. SSA receives document list, and initiates XCA Retrieve(s) to retrieve document(s)
8. Target RG receives XCA Retrieve request and responds with documents
9. SSA receives document(s)

* Access Control Policy messaging collapsed into single request/ response for purposes of brevity

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Governance Questions

1. **Does eHealth Exchange manage business and technical aspects of the Hub?**

   The eHealth Exchange manages both business and technical aspects of the Hub, recognizing that many services are subcontracted to the Hub vendor.

2. **What is the Hub's governance process look like?**

   The eHealth Exchange Coordinating Committee makes all the network decisions.

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Governance Questions

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

- The DURSA 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 has approved the use of various **Network Utilities** (in this case, the Hub), to support the operation of the Network.

- The Coordinating Committee has developed an Operating Policy and Procedure for use of the **Network Utility** (Hub) by Participants

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

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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. **Does 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 is only allowed by the VHA & DoD. Other Participants 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 CareEverywhere, via CommonWell, or via another Carequality "Implementer", will I be impacted by the eHealth Exchange's status as a Carequality Implementer?**

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

Carequality Questions

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 performs some minor, Participant-approved translations such as converting any "Emergency" Purpose of Use codes to "Treatment" supplemented with an "Emergency" Authorization type

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Carequality Questions

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 25+ HIE networks who are live on Carequality each have their own platform. The eHealth Exchange Hub established connections with the Carequality Implementers' Shared Gateways, as well as with Epic's hundreds of endpoints across the United States.

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Message Questions

1. **Does the Hub serve as a pass-through?**

   The Hub does not currently store any clinical data, but stores 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 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 may apply for this option.
   - The Hub to forward or not forward partial-success messages from Responder-Hubs if desired by select Participants

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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?

<u>No</u>, 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?

FHIR or SOAP APIs

- 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 **Hub-aware directory**

SOAP API

- If your organization does <u>not</u> initiate requests via the Hub with another Participant, assuming your organization and that Participant have mutually agreed to continue using point to point connections, <u>continue using the **traditional eHealth Exchange directory**</u>.

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Operational Support Questions

1. **How do eHealth Exchange Participants exchanging via the Hub receive support once in production?**

    Participants can contact the Hub support team via phone, email, or web.

2. **How does the eHealth Exchange's Hub monitor Participant connections?**

    The dashboard empowers participants to monitor performance.

3. **How do you communicate partner outages/unavailability?**

    The centralized Hub "Dashboard" and corresponding Alerts notify Participants of downtime, performance issues, etc.

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How Does Hub Security Work?

The eHealth Exchange has applied its secure by design architecture, Certification Authority (CA) 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

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Security Questions

1. **How is security managed on the Hub?**
   - The Hub is HIPAA Compliant.

   - The Hub meet requirements of SOC-2 compliance and shall become certified if and as required by partners.

   - The Hub passes evaluations by the eHealth Exchange PKI assessment tool.

   - The Hub passes 3rd party security vulnerability & penetration testing assessments.

   - The Hub is HITRUST certified.

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Security Questions

2. **How does the Hub reuse the proven eHealth Exchange security model?**

   - A public key infrastructure

   - All connections between the Hub and Participants are encrypted

   - All request messages include SAML v2.0 assertion which are signed using X.509 digital certificates

   - Solution is HITRUST and AICPA SOC-2 compliant – following associated "trust service principles" for security, availability, processing integrity, confidentiality and privacy

   - Penetration testing and vulnerability assessments are routinely performed

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. **Is data be stored outside the US or is personnel outside the US maintaining the Hub**

    No

5. **Is my clinical data be comingled with other Providers' data?**

    *   No. eHealth Exchange data passes through through servers and a Hub software instance dedicated to eHealth Exchange traffic

    *   Transaction highlights are stored with other Participants messages, logically & physically

    *   The Hub does not currently store any clinical data, but stores audit logs to support regulatory requirements. This audit log data comingles message highlights with other eHealth Exchange Participants' audit log data

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Patient Matching Questions

1. **How does the Hub ensure unique patient ids?**

   The Hub does not have an MPI engine or unique patient IDs, but implementing an MPI engine a possibility for subsequent iterations if desired by eHealth Exchange Participants.

2. **Since the Hub doesn't provide patient matching services via an MPI, how are correlation issues resolved when patients are known at multiple partner locations?**

   Since the Hub operates via a **pass-through model**, the Hub forwards 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.

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Transformation Questions

1. **Why might SAML assertions be re-signed at the Hub?**

   The Hub looks 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. 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. **Why 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.

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Record Locator Service (RLS) Questions

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

   Surescripts Record Locator Service (RLS or RLE) can be used. Additional fees apply.

Central Data Repository (CDR) Questions

1. **Does the Hub provide a Clinical Data Repository (CDR)?**

   There are no immediate plans for the Hub to include a Clinical Data Repository (CDR) or Central Data Repository (CDR) at this time.

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