

April 9, 2024

# TEFCA Monthly eHealth Exchange Technical Webinar XCPD Aggregated Responses (Updated)

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eHealth Exchange™

# Agenda

- Monthly TEFCA Technical Webinars
- ONC/HHS/RCE Announcement
- TEFCA Overview - Reference
- TEFCA Monthly Technical Webinar Series
- XCPD Aggregated Responses
- Open Discussion / Q&A
- For More Information (Including Office Hours)

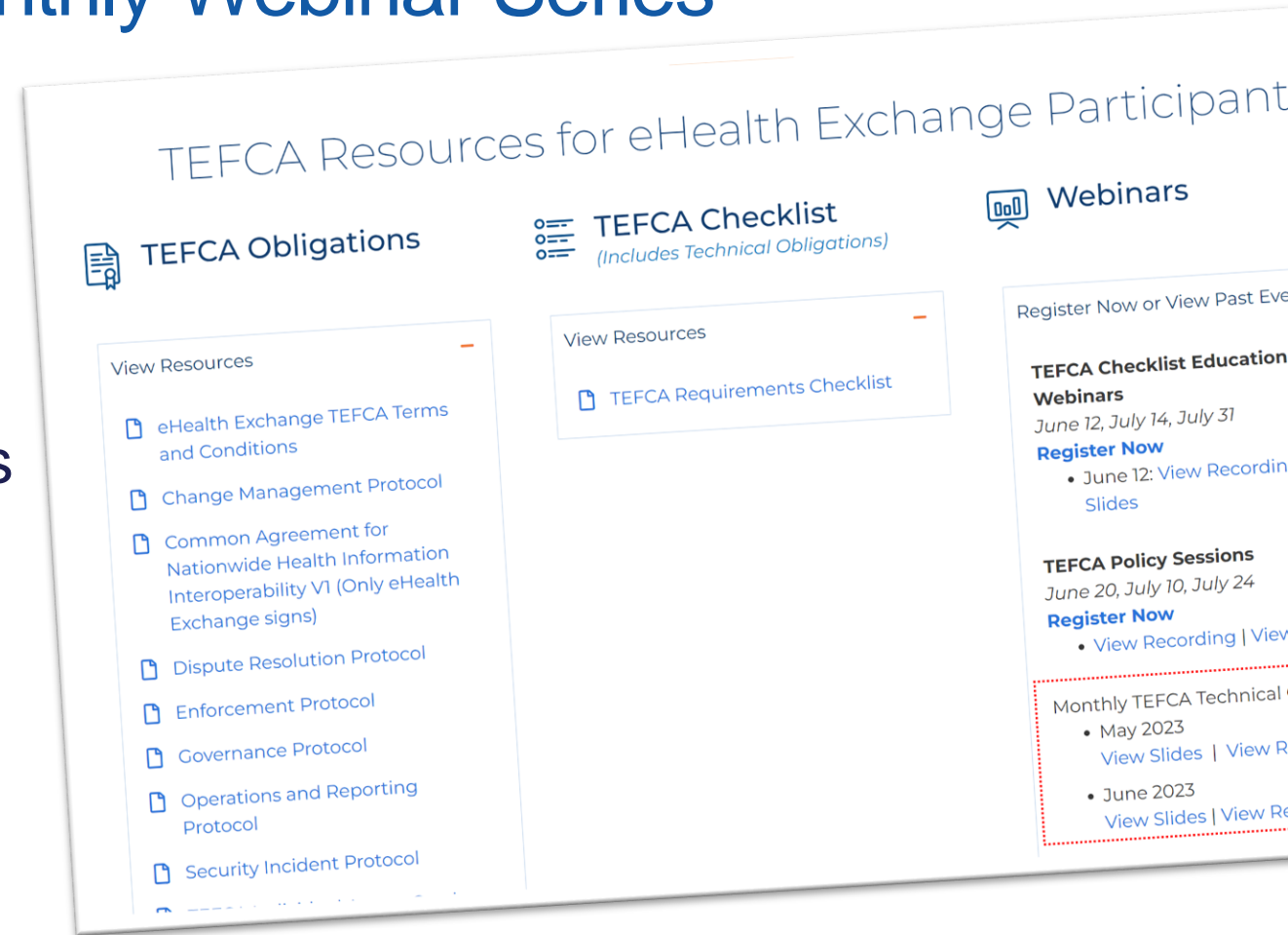
# Monthly TEFCA Technical Webinars

# eHealth Exchange TEFCA Monthly Webinar Series

- Today's webinar is part of a series
- Prior webinars covered:
- TEFCA Readiness Checklist
- Individual Access Services Providers
- Reporting Requirements
- Error Handling
- And more

Prior webinars can be found at:

<https://ehealthexchange.org/what-we-do/tefca-and-ehealth-exchange/>





# eHealth Exchange Monthly TEFCA Technical Webinar Series

- May 2023 - *TEFCA Individual Access Services Providers Requirements*  
[View Slides](#) | [View Recording](#)
- June 2023 - *TEFCA Directory, Errors, Logs, and Reporting Requirements*  
[View Slides](#) | [View Recording](#)
- July 2023 - *TEFCA Draft Monthly and Quarterly Reports Review*  
[View Slides](#) | [View Recording](#)
- August 2023 - *TEFCA Updates and Aggregated Patient Discovery Requirement*  
[View Slides](#) | [View Recording](#)
- September 2023 - *TEFCA Hub Development Updates*  
[View Slides](#) | [View Recording](#)
- October 2023 - *Validation Status for the eHealth Exchange Hub, Individual Access Services Provider (IAS) SAML Simplifications, Lesson's Learned, New potential Purpose of Use*  
[View Slides](#) | [View Recording](#)
- November 2023 - *TEFCA FHIR Support, TEFCA Hub Technical Readiness, New QHIN Technical Framework, TEFCA Directory, Lessons Learned from Initial Sub-Participants*
  - TEFCA Reporting Requirements: RCE Updates  
[View Slides](#) | [View Recording](#)
- December 2023 - *ONC/HHS/RCE Announcement, Updated FHIR Roadmap for TEFCA Exchange, TEFCA Hub Technical Readiness*  
[View Slides](#) | [View Recording](#)
  
- TEFCA Checklist Education Webinars
  - June 12: [View Recording](#) | [View Slides](#)
  - July 14: [View Recording](#)
  - July 31: [View Slides](#)
  
- Source: <https://ehealthexchange.org/what-we-do/tefca-and-ehealth-exchange/>

# ONC/HHS/RCE Announcement



eHealth Exchange™



PRESS RELEASES, RCE, THE SEQUOIA PROJECT NEWS • DECEMBER 12, 2023

# ONC and The Sequoia Project Designate First TEFCA QHINs

## *TEFCA Goes Live On Schedule*

(Washington, DC – December 12, 2023) – **The Sequoia Project**, selected by the Office of the National Coordinator for Health Information Technology (ONC) as the Recognized Coordinating Entity® (RCE™) to support the implementation of the Trusted Exchange Framework and Common Agreement<sup>SM</sup> (TEFCA<sup>SM</sup>), today, on behalf of ONC, **designated the country's first Qualified Health Information Networks™ (QHINs™)** in a Common Agreement signing event alongside HHS Secretary Xavier Becerra, HHS Deputy Secretary Andrea Palm, and National Coordinator for Health Information Technology Micky Tripathi, in Washington, DC.

The newly designated QHINs include eHealth Exchange, Epic Nexus, Health Gorilla, KONZA National Network, and MedAllies.

The QHIN selection and onboarding process was necessarily arduous to ensure the pioneering

## Meet the Designated QHINs

Below are organizations that have successfully completed the Qualified Health Information Network™ (QHIN™) onboarding process and are recognized as Designated QHINs for TEFCA exchange. There are additional Candidate QHINs still in the onboarding phase listed [here](#).

eHealth Exchange™

VISIT WEBSITE →

EpicNexus

VISIT WEBSITE →

HEALTH®  
GORILLA

VISIT WEBSITE →

KONZA  
NATIONAL NETWORK

VISIT WEBSITE →

MedAllies

VISIT WEBSITE →

Kno2®

VISIT WEBSITE →

commonwell®  
HEALTH ALLIANCE

VISIT WEBSITE →

## Meet the Candidate QHINs

Looking for a list of [Designated QHINs?](#)

Below are organizations that have completed the Qualified Health Information Network™ (QHIN™) application and have been accepted into the project planning and testing phase of the onboarding and designation process. Inclusion on this page is not an endorsement and does not guarantee that an organization will be Designated as a QHIN™.

surescripts  
Health Information Network™

VISIT WEBSITE →

Sources:

<https://rce.sequoiaproject.org/designated-qhins/>

<https://rce.sequoiaproject.org/candidate-qhins/>

e



# eHealth Exchange is a Designated QHIN under TEFCA

eHealth Exchange is among the country's first Qualified Health Information Networks (QHINs) to achieve designation status under ONC's Trusted Exchange Framework and Common Agreement, also known as TEFCA.

We're ready to help HIEs, health systems, digital health platforms, and others who want to connect to the federally-endorsed TEFCA network.

[TEFCA RESOURCES](#) 

[FAQS](#) 

[CONTACT US](#) 

« NEWS

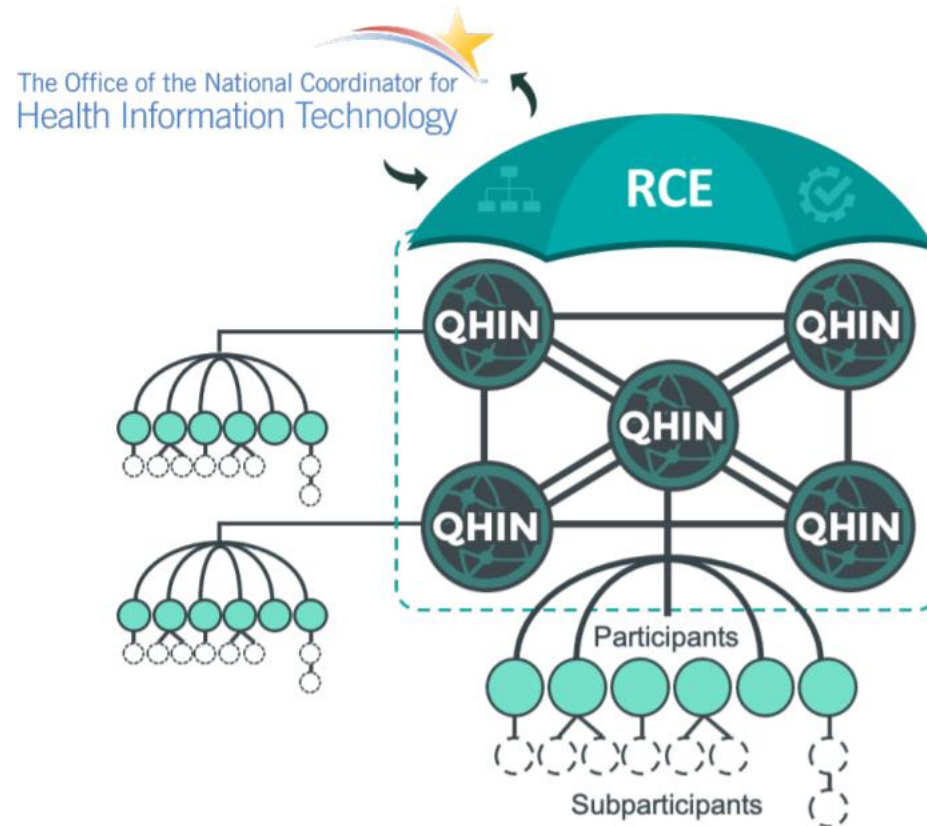
# eHealth Exchange Among First To Achieve TEFCA<sup>SM</sup> Qualified Health Information Network<sup>TM</sup> (QHIN<sup>TM</sup>) Designation

Today, **eHealth Exchange** announced it's been designated as a Qualified Health Information Network<sup>TM</sup> (QHIN<sup>TM</sup>) under the Trusted Exchange Framework and Common Agreement<sup>SM</sup> (TEFCA<sup>SM</sup>). This places eHealth Exchange's electronic data-sharing network among the country's first Designated QHINs to go live and operationally ready for exchange with other Designated QHINs.

# TEFCA Overview - Reference



# How Does TEFCA Work?



- ← ONC defines overall policy and certain governance requirements.
- ← RCE provides oversight and governing approach for QHINs.
- ← Qualified Health Information Networks (QHINs) connect directly to each other to facilitate nationwide interoperability.
- ← Each QHIN connects Participants, which connect Subparticipants.



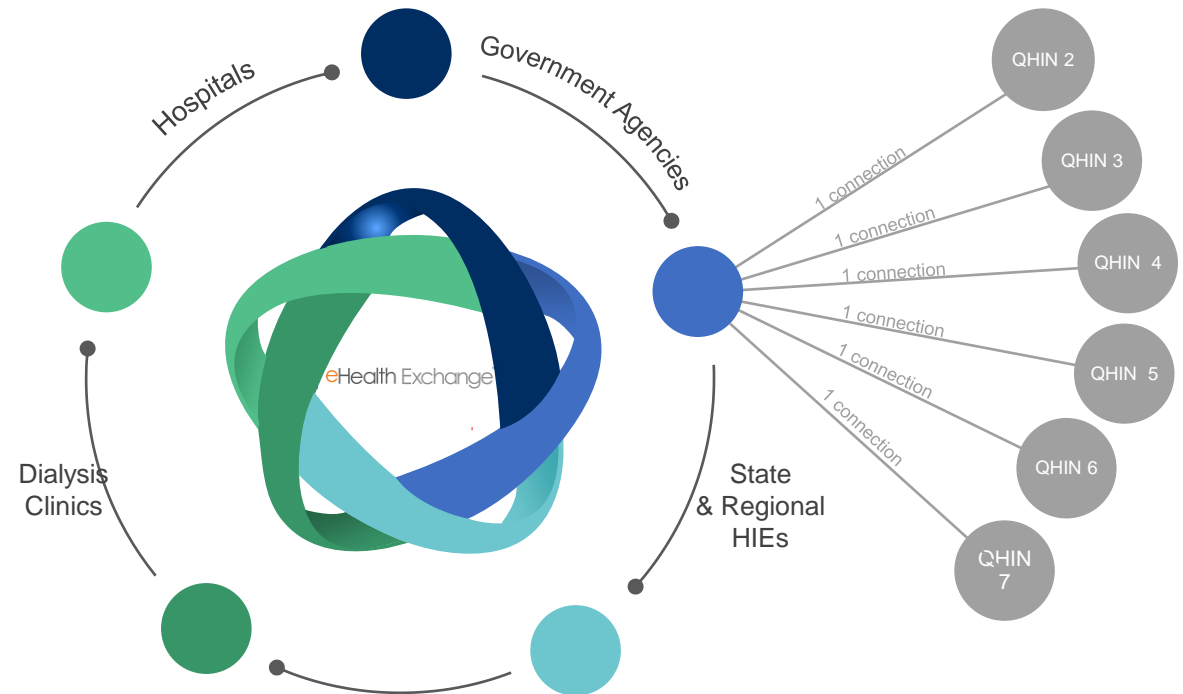
# What is the Trusted Exchange Framework (TEFCA)?

It's a federally endorsed governance framework for **cross-network** exchange of healthcare records.

Similar to Carequality, it's a framework, and not a network:

- Technical & policy agreements
- Governing structure
- Federated architecture

Enables healthcare organizations connected to a TEFCA Qualified Health Information Network (QHIN) to exchange patient data with other healthcare organizations connected to other QHINs.





## Pioneering Network Participants To Pursue TEFCA

Thank you to the network participants who have announced intentions to be among the first participants in eHealth Exchange's QHIN.

These pioneers represent 11 HIEs serving up to 126 million patients across 14 states and Washington, DC.



# What's changed?

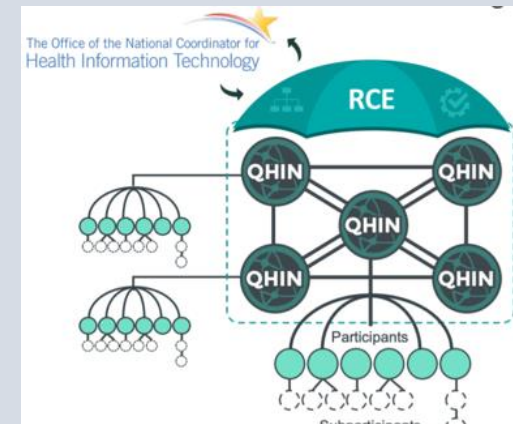
## Before: eHealth Exchange Connected with TEFCA

Your organization can exchange with the eHealth Exchange's 320+ health systems, federal agencies, providers and provider collaboratives.



## After: eHealth Exchange Went Live on TEFCA

Option for your organization to **also** exchange with healthcare organizations participating in TEFCA QHINs.





# How is the eHealth Exchange different?

## eHealth Exchange

- ✓ National non-profit focused on the Public Good
- ✓ Single technical connection instead of hundreds
- ✓ Vendor agnostic
- ✓ 24x7x365 monitoring
- ✓ Enforced content quality assurance
- ✓ Analytics dashboard
- ✓ Broad federal agency connectivity
- ✓ Trust (no patient tracking, no selling data)

## Other Networks

- ⚠ Multiple technical connections
- ⚠ Vendor specific
- ⚠ Limited to no 24x7x365 monitoring
- 🛑 No mandatory content testing
- ⚠ No or limited analytics portal dashboard
- 🛑 No broad federal agency connectivity



# XCPD Aggregated Responses





# Aggregated XCPD Responses Use Cases

There are two scenarios where an eHealth Exchange XCPD (PD) initiating gateway may receive an XCPD Aggregated Response:

- 1) eHealth Exchange in-network “group query”, “geospatial query”
- 2) TEFCA QHIN responses to eHealth Exchange Participants using a QHIN “broadcast query”

Note that the QHIN appears to allow for a single OR and aggregated XCPD response depending on the internal architecture of the QHIN (MPI or no-MPI).

Aggregated responses are not returned for TEFCA “targeted queries”.

**This is a likely breaking change**



# Is Support for Aggregated XCPD Responses Mandatory?

- As an eHealth Exchange Participant Initiating an XCPD request:



- For eHealth Exchange in-network transactions, support for Aggregated XCPD responses is NOT required. However, group query and geospatial query responses will not be fully available to initiators not supporting Aggregated XCPD responses.

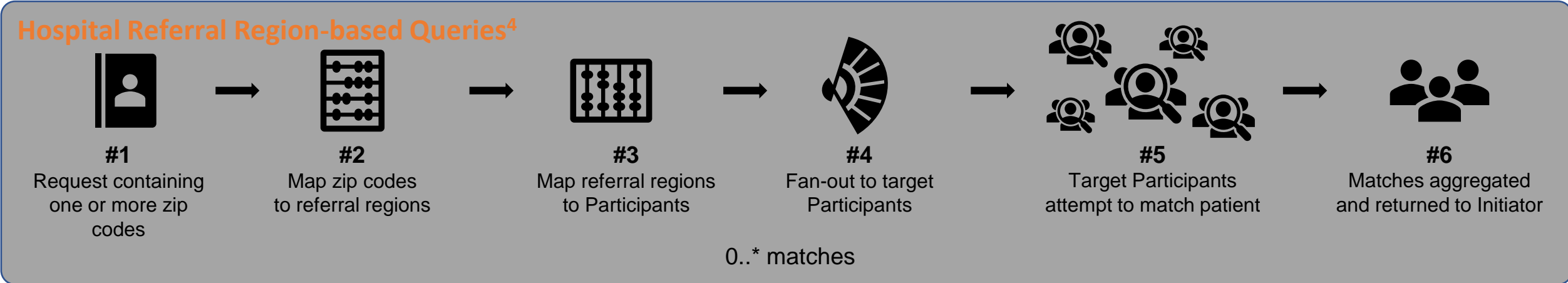
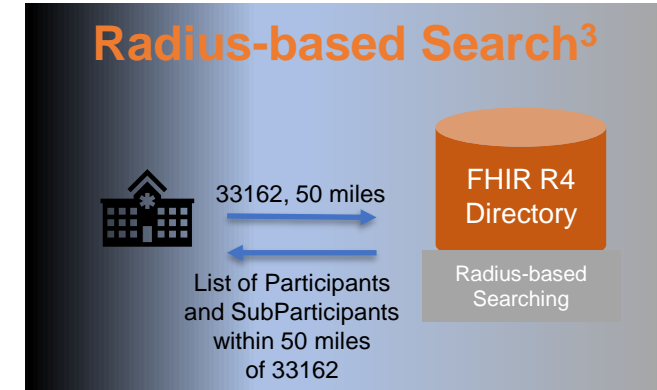
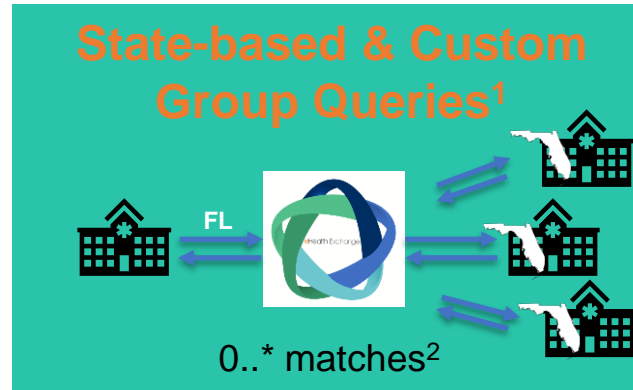
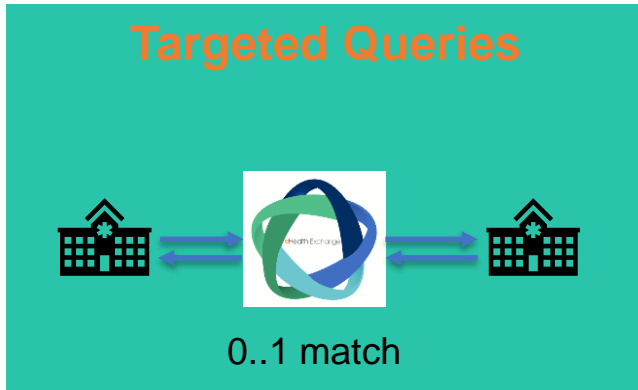


- For TEFCA, support for Aggregated XCPD responses IS required.

# Geospatial Queries – What’s New and Next

Available Now

Future



State-Based	Preconfigured fan-out to whole states. Target state must be specified on request.
Custom Group	Preconfigured fan-out to select partners. Custom Group must be specified on request.
Radius-based Search	FHIR Directory operation to identify Participants who provide service within an X mile radius of an address.
Hospital Referral Region	Dynamic fan-out based on patient address, leveraging the Dartmouth Atlas <sup>4</sup> Hospital Referral Region crosswalks.

<sup>1</sup> for XCPD only

<sup>2</sup> if >1 match, an aggregated response is returned

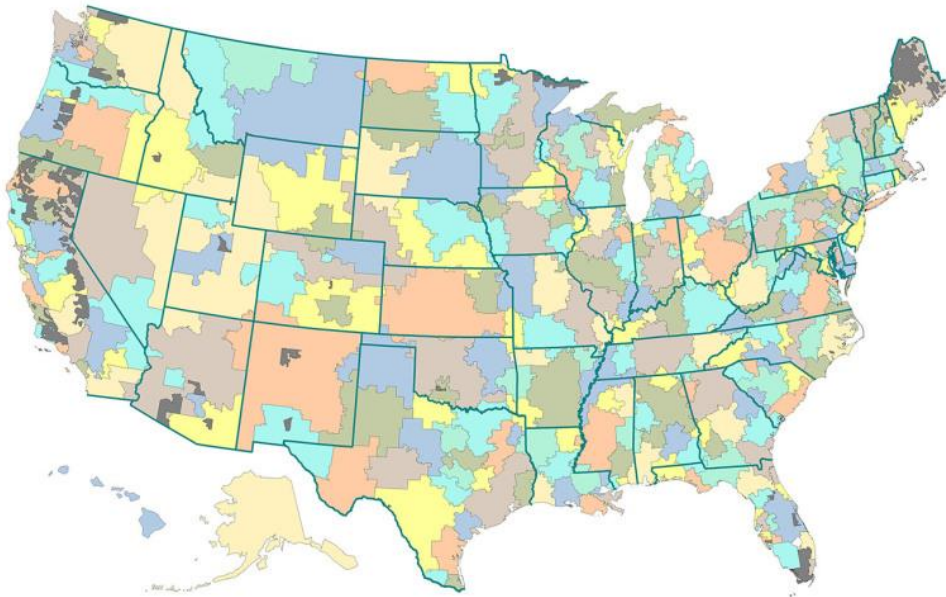
<sup>3</sup> results inform which Participants to target

<sup>4</sup> <https://data.dartmouthatlas.org/>

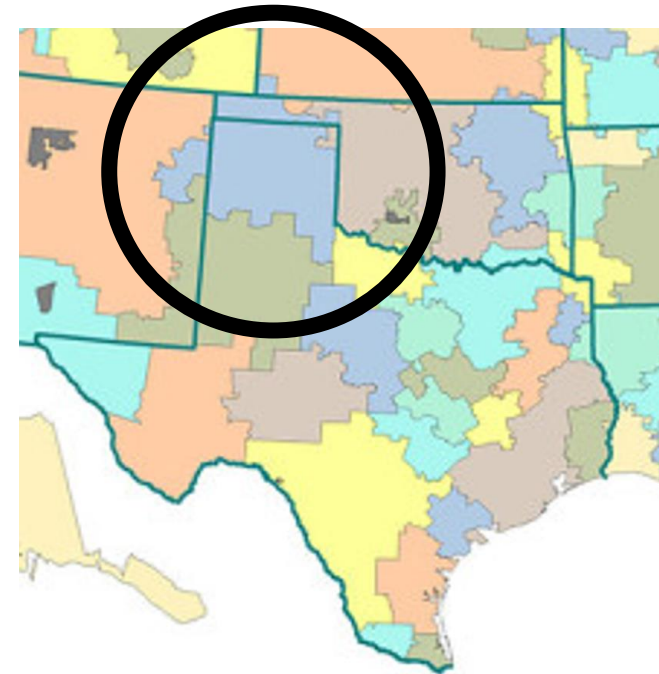
# Geospatial Queries – What's New and Next

## Dartmouth Atlas Hospital Referral Regions (HRRs)

“**Hospital referral regions (HRRs)** represent regional health care markets for tertiary medical care. Each HRR contains at least one hospital that performs major cardiovascular procedures and neurosurgery. HRRs were defined by assigning HSAs to the region where the greatest proportion of major cardiovascular procedures were performed, with minor modifications to achieve geographic contiguity, a minimum population size of 120,000, and a high localization index. **The process resulted in 306 hospital referral regions.**”



<https://data.dartmouthatlas.org/>



# Geospatial Queries – What’s New and Next

## What is an “Aggregated XCPD Response”?

- Within the ITI-55 Cross Community Patient Discovery specification<sup>1</sup> multiple “subject” blocks are allowed, each one representing a patient match:

/Envelope/Body/PRPA\_IN201306UV02/controlActProcess/subject

```

<controlActProcess classCode="CACT" moodCode="EVN">
  <code code="PRPA_TE201306UV02" codeSystem="2.16.840.1.113883.1.6"/>
  <subject contextConductionInd="false" typeCode="SUBJ" xmlns:hl7="urn:hl7-org:v3">
    <registrationEvent classCode="REG" moodCode="EVN">
  </subject>
  <subject typeCode="SUBJ" xmlns:hl7="urn:hl7-org:v3">
    <registrationEvent classCode="REG" moodCode="EVN">
  </subject>
  <subject typeCode="SUBJ" xmlns:hl7="urn:hl7-org:v3">
    <registrationEvent classCode="REG" moodCode="EVN">
  </subject>

```

- Within each subject block, the homeCommunityId of the responder can be found at:  
/Envelope/Body/PRPA\_IN201306UV02/controlActProcess/subject/registrationEvent/custodian/assignedEntity/id

```

<subject typeCode="SUBJ" xmlns:hl7="urn:hl7-org:v3">
  <registrationEvent classCode="REG" moodCode="EVN">
    <id nullFlavor="NA"/>
    <statusCode code="active"/>
    <subject1 typeCode="SBJ">
      <patient classCode="PAT">
    </subject1>
    <custodian typeCode="CST">
      <assignedEntity classCode="ASSIGNED_ENTITY">
        <id root="2.16.840.1.113883.3.579.1.22"/>
        <code code="NoHealthDataLocator" codeSystem="1.3.6.1.4.1.19376.1.2.27.2"/>
      </assignedEntity>
    </custodian>
  </registrationEvent>
</subject>

```



# eHealth Exchange Specifications: More Than One Subject

```

<id root="1.2.840.114350.1.13.0.1.7.1.1" extension="35423"/>
</targetMessage>
</acknowledgement>
<controlActProcess classCode="CACT" moodCode="EVN">
  <code code="PRPA_TE201306UV02" codeSystem="2.16.840.1.113883.1.6"/>
  <subject typeCode="SUBJ">
    <registrationEvent classCode="REG" moodCode="EVN">
      <id nullFlavor="NA"/>
      <statusCode code="active"/>
      <subject1 typeCode="SBJ">
        <patient classCode="PAT">
          <id root="1.2.840.114350.1.13.99998.8734" extension="34827K410"/>
          <statusCode code="active"/>
          <patientPerson>

```

```

</subject>
<subject typeCode="SUBJ">
  <registrationEvent classCode="REG" moodCode="EVN">
    <id nullFlavor="NA"/>
    <statusCode code="active"/>
    <subject1 typeCode="SBJ">
      <patient classCode="PAT">
        <id root="1.2.840.114350.1.13.99998.4029401" extension="34827R534"/>
        <statusCode code="active"/>
        <patientPerson>

```

Source:

<https://s3.amazonaws.com/seqprojectehex/wp-content/uploads/2018/09/28214615/nhin-patient-discovery-production-specification-v2.0.pdf> p

24



# IHE International Specification (Latest Version)

## 3.55.4 Messages

Initiating  
Gateway

Responding  
Gateway

Unfortunately, many organizations and technology vendors have implemented the XCPD Response in an oversimplified manner.

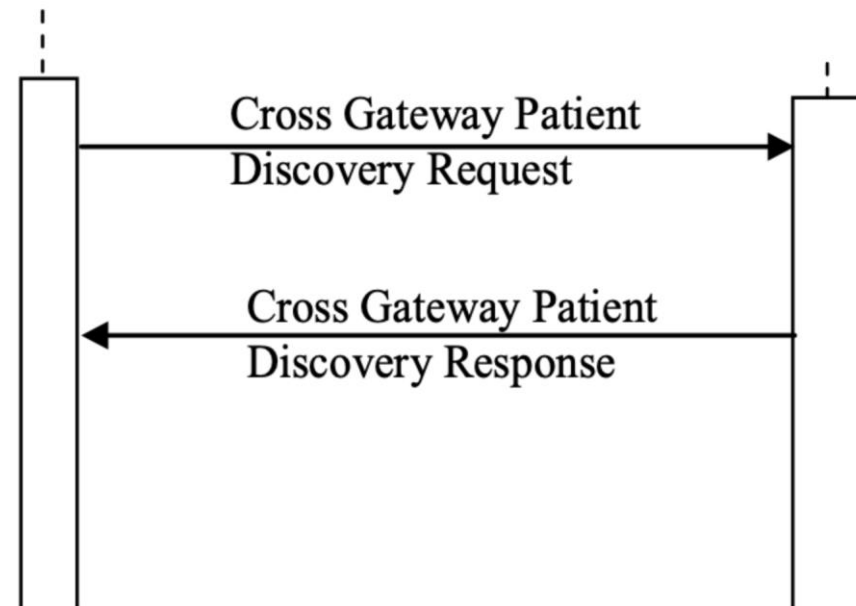


Image credit:  
<https://profiles.ihe.net/ITI/TF/Volume2/ITI-55.html>



# eHealth Exchange Aggregated XCPD Responses for Group Queries

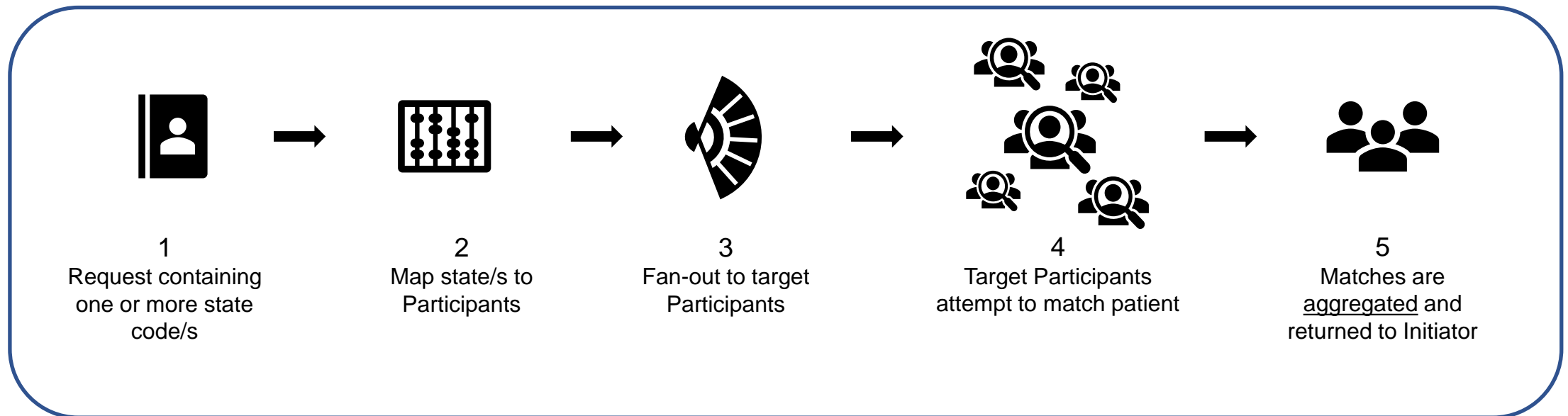


Image credit: Mike Yackanich



# IHE International Specification (Latest Version)

## 3.55.4.1.3.1 Query Parameter Processing

The Responding Gateway shall be capable of accepting, searching on, and responding with attributes in the Query Person by Demographics message.

Handling of phonetic issues, alternate spellings, upper and lower case, accented characters, etc., if deemed appropriate, is to be supported by the Responding Gateway rather than by the Initiating Gateway. The Responding Gateway shall return any matches to the query parameters that reflect a high degree of match, after consideration of all policy constraints; IHE does not further specify matching requirements, except as already discussed in the LivingSubjectName parameter description.

Source:

<https://profiles.ihe.net/ITI/TF/Volume2/ITI-55.html>



## IHE ITI-55 3.55.4.2.3 Expected Actions

Emphasis mine:

**Case 2:** The Responding Gateway finds more than one patient close to matching the criteria sent in the query parameters and the policy allows returning multiple.

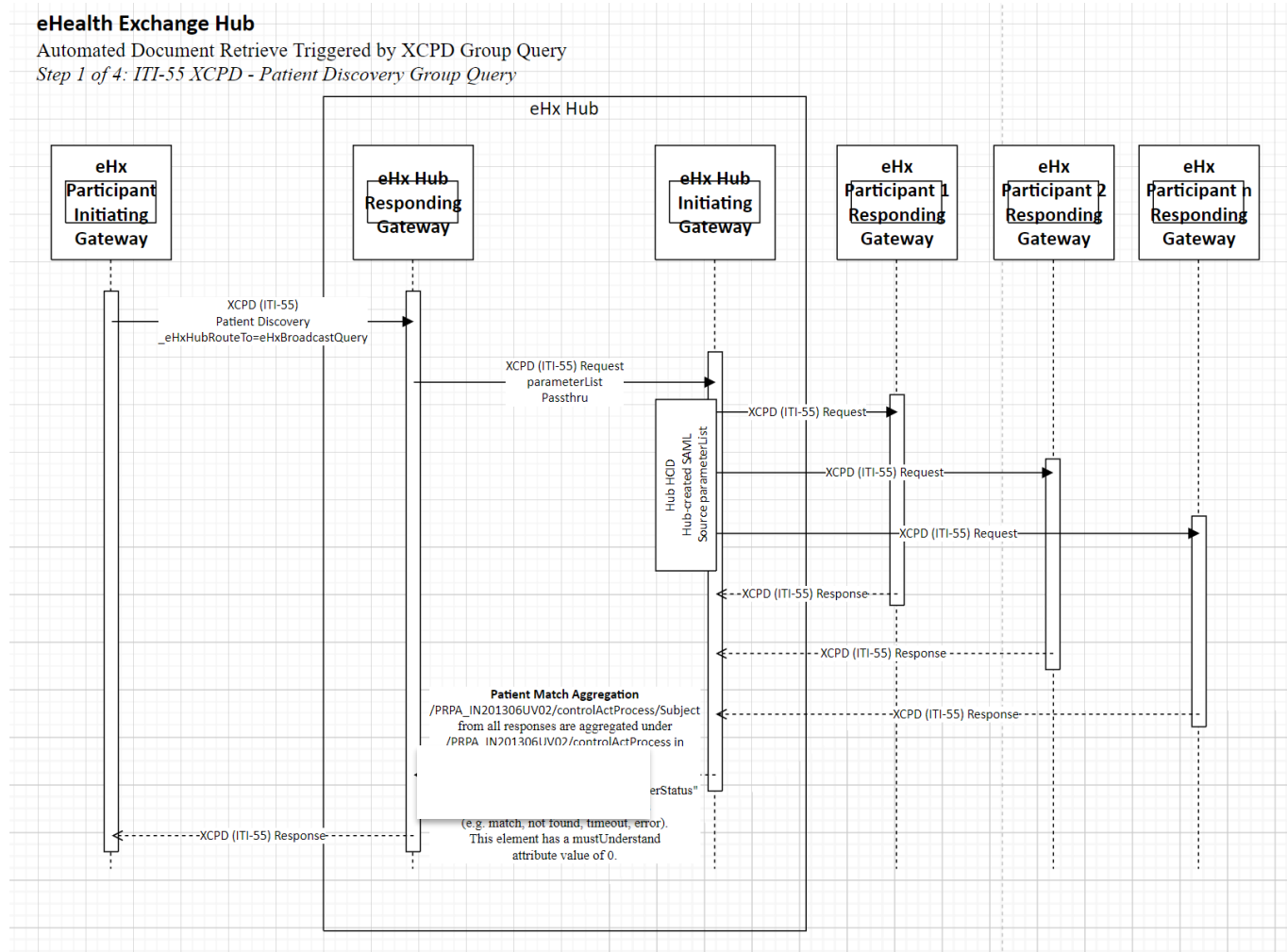
**AA** (application accept) is returned in Acknowledgement.typeCode (transmission wrapper).

**OK** (data found, no errors) is returned in QueryAck.queryResponseCode (control act wrapper)

**One RegistrationEvent (and the associated Patient role, subject of that event) is returned for each patient record found.** The community associated with the Initiating Gateway may run its own matching algorithm to select from the list of returned patients. If a correlation is found, the Responding Gateway may continue as if only one entry had been returned, see Case 1. If a correlation is still not clear it is expected that human intervention is required, depending on the policies of the Initiating Gateway's community.

# Aggregated XCPD Responses Sequence Diagram

Interactive review





## Anticipated Problems

- Only parsing the first <subject> element
- Only parsing the last <subject> element
- Processing error while parsing the response
- Silently failing



## Suggested Next Steps

- Determine if your gateway technology supports this standards-based feature
- Work with eHealth Exchange staff to
  - Assess your gateway’s technical capability to support aggregated XCPD responses
  - Understand the impact if your technology platform does not support aggregated XCPD responses
  - Create an action plan

# Q&A/Open Discussion



For More Information



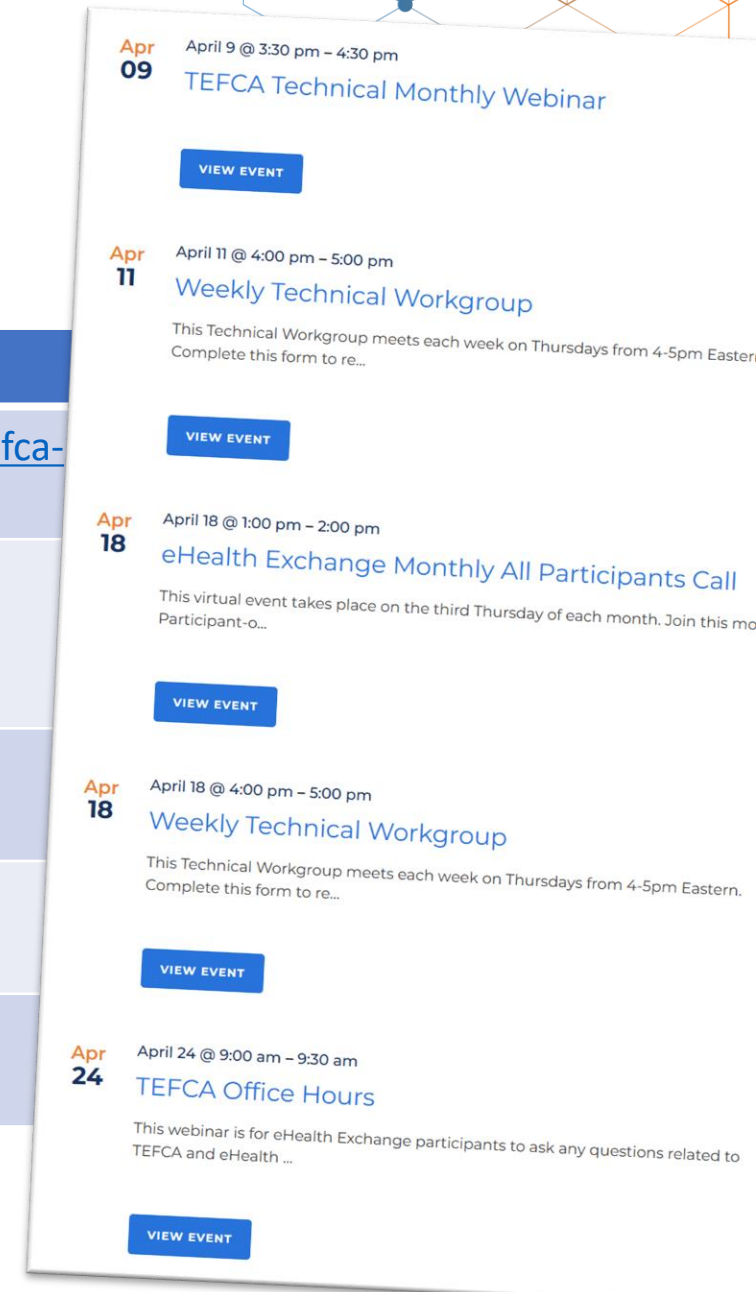
eHealth Exchange™





# How might I obtain additional information?

How	When	Where
1. Visit eHealth Exchange Web Site	Any time	<a href="https://ehealthexchange.org/what-we-do/tefca-and-ehealth-exchange">https://ehealthexchange.org/what-we-do/tefca-and-ehealth-exchange</a>
2. Monthly Participant Web Meetings	Typically, the 3rd Thursday of Each Month at 1 pm ET	<a href="https://ehealthexchange.org/events">https://ehealthexchange.org/events</a>
3. Monthly TEFCA Technical Call	See web site	<a href="https://ehealthexchange.org/events">https://ehealthexchange.org/events</a>
4. Email	Any time if you have a specific question	<a href="mailto:administrator@ehealthexchange.org">administrator@ehealthexchange.org</a>
5. Monthly TEFCA Office Hours (Q&A)	See web site	<a href="https://ehealthexchange.org/events">https://ehealthexchange.org/events</a>





## Major Technical Differences eHealth Exchange QHIN Participants Must Support

- Adopt USDCI v1 data classes and elements
- Adhere to Project US@ patient addressing
- Adopt IHE ITI Technical Framework Revisions 17.0 (versus Revision 8.0)
- Accept aggregated XCPD responses
- New PurposeOfUse values
- Various requirements such different consent attribute structure, sub-participant directory entries and detailed reporting, onboarding log submissions, specific test patients, and quarterly reporting.

## Next Steps

1. Review the published policy documents (not discussed today)
2. Review the TEFCA Readiness Checklist
3. Let the eHealth Exchange staff know of your organization's intentions (if you haven't already)

email: [administrator@ehealthexchange.org](mailto:administrator@ehealthexchange.org)