



2022

Annual Meeting

GRAND HYATT WASHINGTON

State of the Network

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eHealth Exchange™

How is eHealth Exchange different?



Diverse, Trusted Use Cases

- The longest-standing nationwide network supporting diverse use cases
- Ethical Exchange – trusted governance, inclusion, & transparency.

Federal Connectivity

- The only network enabling providers & regional networks direct exchange with Indian Health Service (IHS), FDA and SSA
- Primary method to exchange with VA & DoD

Incubated by the U.S. Department of Health and Human Services in 2006 as the “National Health Information Network (NHIN, NwHIN)”.

The eHealth Exchange is a non-profit Health Information Network (HIN) dedicated to the public good.

The oldest and most mature national patient data exchange network with over 14 billion transactions annually.

Vendor Agnostic

The only vendor-independent nationwide network.

Network of Networks

- Exchange with 61 state & regional HIEs
- Exchange with 25+ national networks

Exchange for the Public Good

Committed to patients' interests and public health

Integrity by design

We uphold federal standards for **transparency, inclusion, and trust.**

- Founded as a federal initiative
- Incubated by U.S. Department of Health and Human Services
- Structured as a nonprofit health tech firm

Privacy and security through **stewardship**

We honor **patient consent** decisions, don't **track** patient movements, & **never sell** data.

- Pass-through exchange
- No data repository to attract cyber-criminals
- No Social Security or driver's license numbers

Oversight by representation





Our participants **govern and manage** the network.

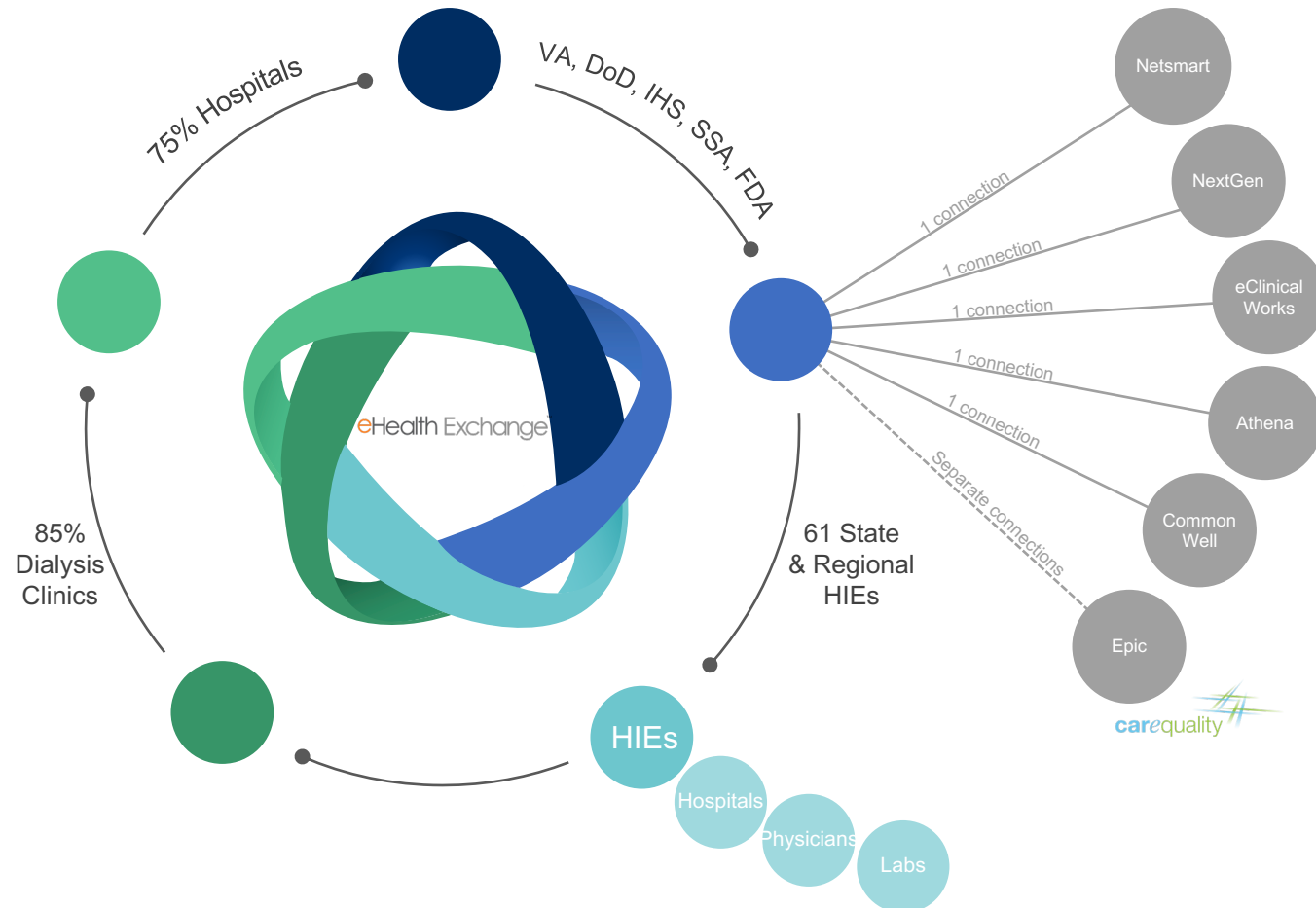
- Federal agencies
- Health systems
- State HIEs



1 Connection & 1 Trust Agreement Facilitate Exchange with 3,900 Hospitals Nationwide

Using a hub & spoke architecture, eHealth Exchange participants leverage 1 connection to exchange 14 billion transactions annually within all 50 states

- Via FHIR 
- Via C-CDAs 
- Via Push 
- Via Pull 



2022 Accomplishments

Innovative Value

Increased Value & Stickiness

- Implemented “Iris” Hub module for FHIR R4 exchange
- FDA went live retrieving vaccination adverse event details via FHIR R4
- Cedars-Sinai went live sending vaccine adverse event notifications to FDA via FHIR R4
- Continued PDMP FHIR Proof of Concept with CDC, DOJ, ONC, NE
- Increased compliance with content validation to 98% of Participants

Expanded Community

Increased Connectivity

- Grew to 327 participants
- Increased C-CDAs exchange 31% to 1.8B
- Expanded eCR so 90 participants + Carequality’s AthenaNet & NextGen can send to reports to APhl AIMS via eHealth Exchange’s Hub
- Cleared hurdles so federal agencies can exchange with Carequality
- Implemented Hub transformations to overcome interoperability barriers

Specifications

Standardization

- Replaced NHIN Authorization Framework Specification with eHx version
- Contributed to HL7 FHIR standards bodies:
 - HL7 UDAP
 - ONC FAST – Hybrid/Intermediary exchange

Policies & Procedures

Governance & Process Rigor

- Created/Updated 3 Operating Policies & Procedures
- Updated 1 technical specification
- Managed 5 Corrective Action Plans
- Updated the Validation Plan
- Published TEFCA Terms & Conditions
- Applied to become a TEFCA QHIN

Insightful Analytics

Hub “Dashboard” Web Portal”

- Introduced ability to report and summarize Carequality exchange metrics separately from eHealth Exchange exchange metrics

Business Discipline

Formalized Processes & Executed

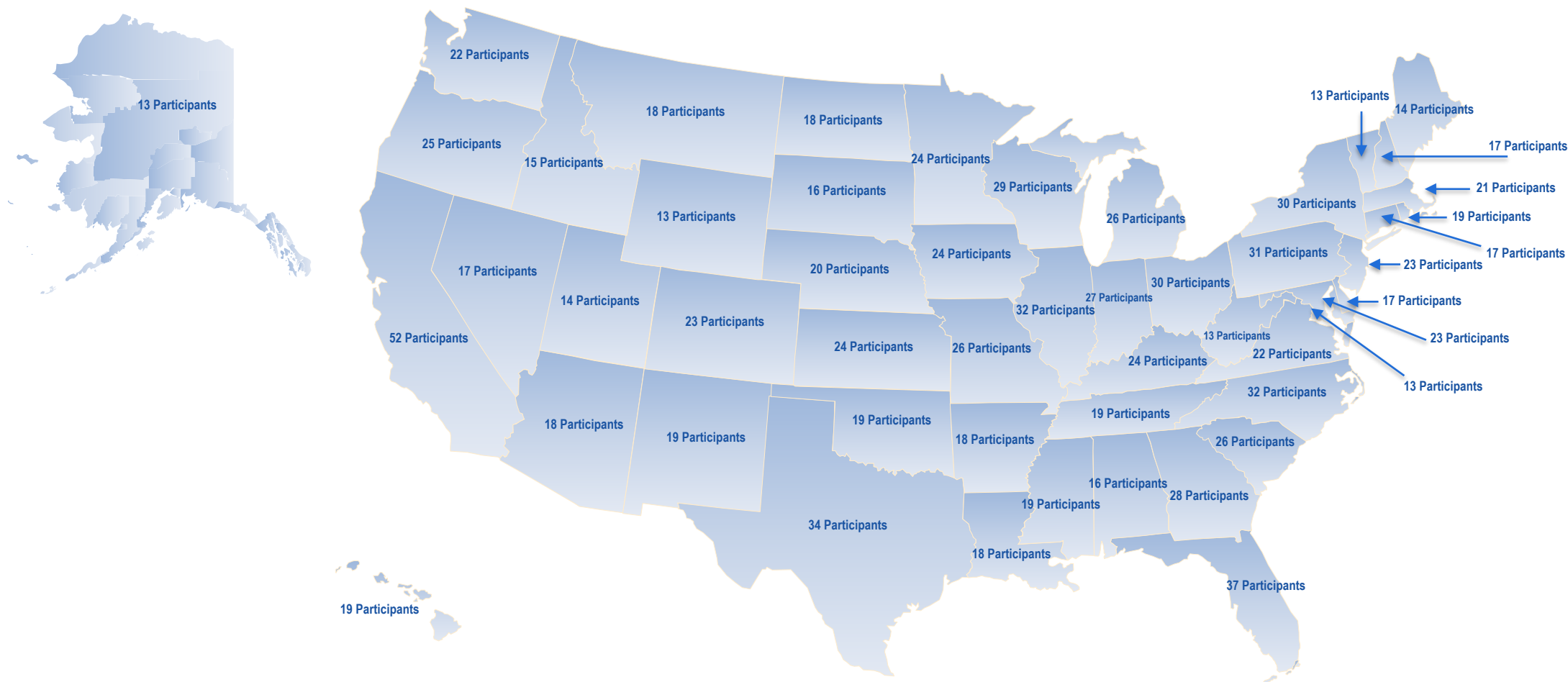
- Achieved HITRUST & NIST Cybersecurity Framework certifications
- Created/updated 14 internal SOPs

eHealth Exchange is HITRUST & NIST Cybersecurity Certified

- The Hub was already HITRUST certified
- eHealth Exchange expanded this HITRUST certification to all its operations on 11/17/2022 to demonstrate its commitment to:
 - Risk Management
 - Unparalleled Security Posture, and
 - Exceeding Compliance Requirements
- eHealth Exchange also became NIST Cybersecurity Framework Certified (for NIST 800-171) on 11/17/2022



327 Participants (Health Systems, Provider Groups, HIEs, Federal Agencies)



Including 62 State & Regional HIEs



Increased Value

Adopted Existing Solutions (2022)

1. Increased compliance with **content quality** validation to 98% of Participants
2. Increased **C-CDAs exchange** 31% to 1.8B
3. **Electronic Case Reporting (eCr)**: 90 participants + Carequality's AthenaNet & NextGen can submit notifications via the Hub
4. Expanded **Carequality** exchange

Introduced New Solutions (2022)

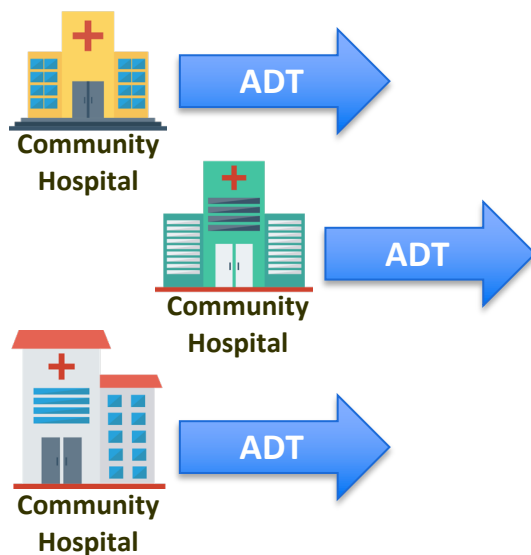
1. Retrieve data via FHIR for Public Health purposes
2. Send clinical alerts via FHIR
3. Enhanced Dashboard to distinguish exchange within eHealth Exchange from exchange with Carequality-enabled networks

Opportunities

1. Shape our interoperability roadmap (TEFCA QHIN, FHIR, notifications, value-based care, etc)
2. FHIR
 - Pull
 - Push
 - FDA, CDC
 - Innovate!
3. Evaluate conformance (quality) of Production data you receive
4. Send notifications (C-CDAs) via eHealth Exchange (e.g. populate your local HIEs' longitudinal patient records)
5. HIEs Help Hospitals Notify VA of Hospitalizations Without VA's Veteran List

How Local HIEs Help Hospitals Notify VA of Hospitalizations Without VA's Veteran List

- 1 Hospitals send ADTs for all patients to local HIE.



Every time HIE receives a hospital ADT (discharge and/or admit), for any patient, it sends VA an eHealth Exchange Patient Discovery request for Treatment (Care Coordination) in furtherance of a federal requirement to determine whether the patient is a veteran.

Local HIE

4

2a



2b

eHealth Exchange forwards patient matching request to VA for Treatment purposes to determine if Care Coordination should begin.



3

VA responds they have the patient (a veteran), or they have no record of the patient.

If the VA responds in step 3 that they matched a veteran, and the HIE sends the VA an unstructured alert in real-time via Direct Secure Messaging for HIPAA Payment purposes, then the hospital may reduce the later risk of a claim denial by fulfilling the VA's Notice of Admission requirement (which must occur within 72 hours).

Who Wins?

Veterans: additional care and services

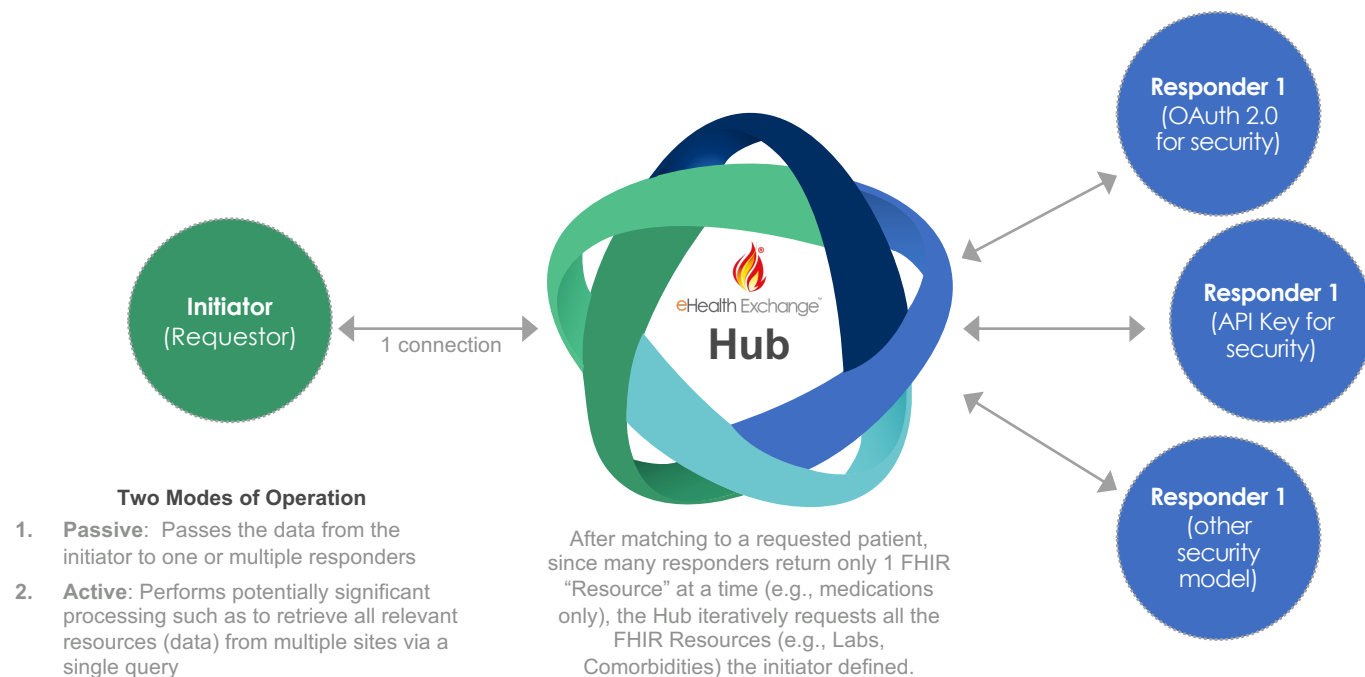
VA: informed to manage Transitions of Care

HIE: unique and valuable use case to participants (leveraging its ADT network)

Hospital: reduced denials due by better compliance with notices of admission

Deploying FHIR Nationwide

Live Today & Preparing for TEFCA FHIR Specifications



Why Does FHIR Matter?

- Specific data versus entire C-CDA
- Enables exchange with non-traditional responders (e.g. SDoH) who don't want to build traditional IHE/SOAP/C-CDA exchange.
- Aligns with the CMS Patient and Payor APIs which are all FHIR and don't support SOAP/C-CDA.

Benefits

(eHealth Exchange's Vendor Agnostic FHIRProxy Service)

- One-to-Many:** Initiators (data requestors) only have to create one connection to the eHealth Exchange FHIRProxy service instead of having to establish and maintain connections to multiple responders.
 - Participants need only one connection to Hub, with the Hub acting as a trusted third-party intermediary to access multiple target responder FHIR resource repositories.
 - The Hub FHIRProxy service alleviates the need for initiators to vary their FHIR security models (e.g. various flavors of OAuth 2.0, API Key, etc.).
- Retrieve Full Patient Snapshot Simultaneously:** Whereas some EHR vendors expect one request per FHIR resource type (sometimes ~16 times for a given patient for **Encounters, Observations, Medications, Immunizations, Document References, etc.**), the Hub can overcome this via retrieval of resources on behalf of requestor and asynchronously POSTing these back to the requestor's FHIR server.
- Write Capability:** The Hub can synchronously or asynchronously write data to FHIR repositories (e.g., POST an authorization to a for purposes of benefits determination).
- Performance:** The Hub's FHIR services leverage the same scale-out design as is currently in place for the SOAP/IHE transaction processing, which allows us to more easily scale as volume grows.
- Future:** Potentially transform responders' FHIR resources into C-CDAs when initiators cannot support FHIR interactions.

2023 Roadmap*

Join TEFCA

Launchpad for exchange innovation

- Publish flow-down provisions
- Complete Hub enhancements such as RLS
- Go-live on at least:
 - Treatment**
 - Responses to individuals**

Expand Purposes

Leverage your existing connection for more

- Respond to Individuals' requests**
- Government Benefits Determination
- Public Health**
- Healthcare Operations (HCO)**
- Payment**

FHIR at Scale

Pioneer exchange at-scale

- Rollout FDA pull
- Scale submitting alerts to FDA
- CDC quality metrics
- TEFCA FHIR roadmap**
- Adopt FAST's transaction routing

Directory

Further automation capabilities

- Upgrade from Argonaut's FHIR version to FHIR R4
- Populate sub-participants
- Web portal for directory updates

Content Quality

Data useability for care & analytics

Option for Participants to confirm the Production data they receive conforms with standards:

- Terminology (e.g. LOINC, RxNorm)
- Required Fields
- Message Structure

* Not sequenced according to anticipated delivery dates

** Timing dependent upon Recognized Coordinating Entity (RCE)'s TEFCA schedule & actual designations of QHINs



eHealth ExchangeTM

THANK YOU FOR YOUR PARTICIPATION

BeMyQHIN.com