This project is supported by the Office of the National Coordinator for Health Information Technology (ONC) of the U.S. Department of Health and Human Services (HHS) under 90AX0026/01-00 Trusted Exchange Framework and Common Agreement (TEFCA) Recognized Coordinating Entity (RCE) Cooperative Agreement. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by ONC, HHS or the U.S. Government.
Agenda

• Welcome
• Timeline
• QTF Overview
• Public Input Opportunities
• Questions & Answers
Meet the RCE Team

Mariann Yeager  
CEO  
The Sequoia Project

Alan Swenson  
Executive Director,  
Carequality

David Pyke  
Subject Matter Expert,  
Audacious Inquiry
Timeline
Timeline to Operationalize TEFCA

**Summer/Fall/Winter 2021**
- Public engagement webinars.
- RCE and ONC use feedback to finalize CA V1 and QHIN Technical Framework (QTF) V1.

**Calendar Q1 of 2022**
- Release Final Trusted Exchange Framework, CA V1 Final, and QTF V1 Final.

**During 2022**
- QHINs begin signing Common Agreement.
- QHINs selected, onboarded, and begin sharing data on rolling basis.

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2021 | 2022 | 2023
TEFCA Elements

Common Agreement

Standard Operating Procedures

QHIN Technical Framework

QHIN Onboarding

Metrics

Governance
QHIN Technical Framework (QTF) Overview
QTF Background

- The QTF outlines the specifications and other technical requirements necessary for QHINs to accomplish exchange.
- The QTF primarily addresses QHIN-to-QHIN transactions, and where possible we propose to be silent on how the necessary functional outcomes are achieved within a QHIN. Nonetheless, there are some requirements that must be enforced at the Participant and Subparticipant level.
QTF Background

• The Common Agreement will require compliance with the QTF.
• The RCE is responsible for working with ONC to develop the QTF.
• ONC published an initial QTF draft in April 2019, along with TEFCA Draft 2.
• We sought feedback in previous sessions on a variety of topics, including the use of FHIR, standards for Message Delivery, and a number of more detailed technical points.
• RCE analyzed stakeholder feedback and published a more comprehensive QTF Draft 2 in July 2021.
Elements of the QHIN Technical Framework

**Supported Information Flows:**
- Patient Discovery
- Document Query & Retrieve
- Message Delivery

**Functions and Technology to Support Exchange:**
- Certificate Policy
- Secure Channel
- Mutual QHIN Server Authentication
- User Authentication
- Authorization and Exchange Purpose
- Patient Identity Resolution

**Approach:**
- Build from current capabilities
- Deploy known standards
- Keep an eye toward future approaches

- Individual Privacy Preferences
- Directory Services
- Auditing
- Error Handling
- Onboarding and Testing
Exchange Modalities

Query

- Patient Query
- Document Query
- Document Retrieve

Message Delivery

- Message Delivery
QHIN Query – Background

• The QTF requires QHINs to support an exchange paradigm called “QHIN Query”, in which information is requested from other QHINs in either a targeted or “all QHINs” fashion.

• QTF Draft 2 specifies QHIN Query to be accomplished by SOAP-based IHE profiles.

• QTF Draft 2 fleshed out the Draft 1 requirements with reliance on existing Carequality specifications.
## QHIN Specified Standards - Query

<table>
<thead>
<tr>
<th>Exchange Functions</th>
<th>Specified Standard(s) / Profile(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Secure Channel</strong></td>
<td>• IETF TLS 1.2 w/ BCP-195 or IETF TLS 1.3</td>
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<td>• IHE XUA</td>
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<tr>
<td><strong>Authorization &amp; Exchange Purpose</strong></td>
<td>• IHE XUA</td>
</tr>
<tr>
<td><strong>QHIN Query for Patients</strong></td>
<td>• IHE XCPD</td>
</tr>
<tr>
<td><strong>QHIN Query for Documents</strong></td>
<td>• IHE XCA</td>
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<td><strong>Auditing</strong></td>
<td>• IHE ATNA</td>
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Information Exchange Modalities

Any number of hops between Query Source and QHIN

Query Source

IHE XCPD [ITI-55];
IHE XCA Query [ITI-38];
IHE XCA Retrieve [ITI-39];

Initiating QHIN

Initiating Gateway

Responding QHIN(s)

Responding Gateway(s)

QHIN

QHIN

Request

Response

Request

Response

Any number of hops between Responding Source and QHIN
Message Delivery
The QTF requires QHINs to support an exchange modality called “QHIN Message Delivery”, in which information is delivered (or “pushed”) by one QHIN to another, either for the receiving QHIN’s own use or for it to forward on to a designated recipient system or user among its Participants/Subparticipants.

Potential use cases for QHIN Message Delivery include (but are not limited to):

- Messaging between provider organizations.
- Submission of public health reporting data.
- Submission of information from provider organizations to payers.
- Notifying relevant parties of events, care plan updates, or recommended clinical actions (e.g. alerts).

Received lots of conflicting feedback on whether Message Delivery should be implemented now or whether we should wait for FHIR.
Request for Feedback: Should QTF include QHIN Message Delivery?

- Option 1: **Require** “QHIN Message Delivery” modality in QTF using the Integrating the Health Care Enterprise (IHE) Cross-Community Document Reliable Interchange (XCDR) profile with a future transition to FHIR; or

- Option 2: **Defer** “QHIN Message Delivery” from QTF until a FHIR based solution is readily available; or

- Option 3: **Include** “QHIN Message Delivery” using XCDR as *optional* in QTF until a FHIR based solution is readily available.
QHIN Specified Standards – Message Delivery

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Information Exchange Modalities

Message Source

QHIN
Initiating QHIN

Initiating QHIN
Initiating Gateway

Responding QHIN(s)
Responding Gateway(s)

QHIN
Responding QHIN(s)

Responding Source

Request

IHE XCDR
[ITI-80]

Acknowledgement

Any number of hops between Message Source and QHIN

Any number of hops between Responding Source and QHIN

Acknowledgement
Participants and Subparticipants
Participant / Subparticipant Requirements

- Most requirements apply to QHINs
- See “Constraints for Participants and Subparticipants” for flow down technical requirements, including:
  - C-CDA 2.1
  - Include all available demographics
  - USCDI V1 data classes/elements
  - MUST handle parsing of (Instance) Access Consent Policy
  - Audit logging
  - TLS 1.2+ between Participant and QHIN
- Other requirements will be set by QHINs on their own Participants, including:
  - Patient lookup – RLS, QHIN-level eMPI, federated
  - Specific connectivity between QHIN and Participant
When Will TEFCA Have FHIR?

• FHIR roadmap planned for release with the final QTF Version 1.
• Value of FHIR based exchange when using certified health IT
• Need to address concerns based on QHIN-to-QHIN exchange model:
  – Security model with multi-hop.
  – OAuth not designed for multi-hop.
    • Originating user unknown to responder.
  – Routing RESTful transactions over multi-hop
• We are asking for feedback on how to support FHIR-based exchange in the future.
Discussion
Public Input Opportunities
Multiple Opportunities for Stakeholder Engagement

QHIN Technical Framework
• Essential Elements of QTF:
  A Technical Overview webinar
  August 18 from 3:00 – 5:00pm ET
  – https://register.gotowebinar.com/register/3460287754040093966
• QTF feedback form
  on the RCE website
  – https://rce.sequoiaproject.org/qhin-technical-framework-feedback/

HIMSS21 In-Person Sessions
• Preconference Interoperability and Health Information Exchange Symposium – August 9
• ONC TEFCA Update From the RCE – August 12

Presentation to the Health IT Advisory Committee (HITAC)
• October 13

Sign up for webinars at:
https://rce.sequoiaproject.org/

Questions?
Email us at rce@sequoiaproject.org
Questions & Answers