RCE Public Stakeholder Feedback Session:
Proposed QHIN Metrics for Compliance, Process and Outcomes

July 21, 2020

ONC
TEFCA
RECOGNIZED
COORDINATING
ENTITY

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.

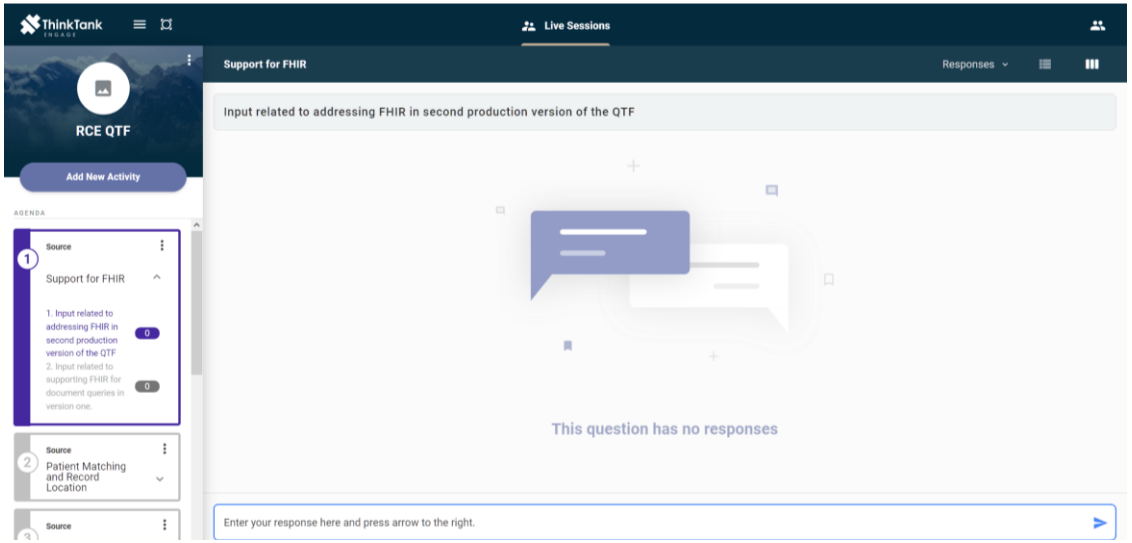
ONC TEFCA RECOGNIZED COORDINATING ENTITY

Approach to this Session

- There will be an opportunity to provide voluntary feedback via ThinkTank
- To access ThinkTank:
  - https://engage.thinktank.net/sessionJoin/-MC8LJ16itB374AGVEKC
  - Password: RCE7

ThinkTank Support

- The ThinkTank session will be available until midnight Tuesday July 28th to accept comments
- Please email Shane Hamstra at shamstra@rti.org with any questions
- Enter input by selecting the item, entering text and pressing the arrow on the far right:



ONC TEFCA RECOGNIZED COORDINATING ENTITY

Introductions

Mariann Yeager
CEO, The Sequoia Project

Dave Cassel
Executive Director,
Carequality

Stephanie Rizk
Senior Health IT Policy
Research Analyst
RTI International

Julie Seibert
Senior Research Public
Health Analyst
RTI International

Metrics Development Overview

- RCE has been tasked with developing a set of metrics to be reported on a regular basis by QHINs that assess the following:
  - Compliance with the Common Agreement; and
  - Process and Outcomes measures that demonstrate compliance.
- Specific details related to reporting are expected to be included in Standard Operating Procedures (SOPs) incorporated by reference into the Common Agreement, allowing flexibility over time.
- Metrics will be submitted for review and approval to the Office of Management and Budget (OMB) through the Paperwork Reduction Act (PRA) in February 2021.

Measure Domains

- Measures fall into three high-level domains:

Measure Domain (Donabedian)	**RCE-specific**
Structural	TEFCA infrastructure, operational compliance
Process	Increased access to information supports better point-of-care decision making
Outcomes	Improvements in health at population level

- Proposed measures focus initially on structural measures related on compliance; additional measures related to process and outcomes are proposed as longer-term and/or voluntary.

Structural (Operational) Metrics

Framework for Operational Metrics

1. RCE Onboarding & QHIN Rollout Tracking
2. Ongoing QHIN Compliance
3. Network Performance & Integrity
4. QHIN Network Security

Compliance - Onboarding

Proposed Measure	Outcome (Rationale)	Description/ Specification	Data Source(s)
1. Onboarding status	Required under terms of RCE Cooperative Agreement with ONC	1.1: Common Agreement signed 1.2: Application Received 1.3: Application accepted/rejected 1.4: Non-production onboarding completed 1.5: Production technical go-live 1.6: Full live participation	Onboarding application
2. Initial Compliance	Required to validate initial designation as QHIN	Specification 2.1: Pass/Fail	Combination of various methods (e.g. contractual, self-attestation, partner testing, technical testing), with pass/fail result

Compliance – Ongoing (1)

Proposed Measure	Outcome (Rationale)	Description/Specification	Data Source(s)
3. Ongoing Compliance - Policy	Requirement of RCE Cooperative Agreement; Necessary to assure trusted exchange	Specification 3.1: Retain right to request future proof of compliance	Initial and ongoing compliance assessments addressed in SOPs
4. Ongoing Compliance - Technical	Provides assurance of interoperability and compliance with RCE standards	Specification 4.1: Re-verify if substantive system changes	Initial and ongoing compliance assessments addressed in SOPs
5. Ongoing compliance – Network performance	Establish minimum expectations that QHINs should have in place to assure high performance and integrity. Establish a benchmark for the QHIN network and to inform development of Service Level Agreements (SLAs) over time.	Specification 5.1: Downtime for the QHIN's gateway actors (e.g., Initiating Gateway, etc.) in minutes in the reporting month Specification 5.2: Average response time for each inter-QHIN message type, per Responding QHIN transacted that reporting period, including message type, average response time and Responding QHIN.	Self-report in template provided by RCE

ONC TEFCA RECOGNIZED COORDINATING ENTITY

Compliance – Ongoing (2)

Proposed Measure	Outcome (Rationale)	Description/Specification	Data Source(s)
6. Ongoing Compliance – Security	Provide assurance of secure, nationwide exchange among QHINs and protect critical health IT infrastructure	Specification 6.1: The RCE is considering options for providing a sufficient level of assurance of security, such as: SOC 2 reports, third party accreditation, attestation / evidence of self-assessments according to a particular information security standard	Initial and ongoing compliance assessments addressed in SOPs
7. Ongoing Compliance – Flow Down Verification	Provide assurance of secure, nationwide exchange across TEFCA eco-system	Specification 7.1: Patient Matching: QHINs verify that minimum set of identity attributes / rules employed Specification 7.2: Clinical Content: Technical testing based upon sample files periodically assessed by QHIN or objective third party program Specification 7.3: Security: Self attestation of information security risk assessment / controls	Initial and ongoing compliance assessments addressed in SOPs

Feedback on Compliance Metrics

ThinkTank

Providing Feedback in ThinkTank

- For each measure concept, we invite your feedback around the following:
  - Feasibility for reporting in year 1 of exchange under Common Agreement
  - Level of burden to QHINs
  - Level of value to QHINs/TEFCA ecosystem
  - Suggested frequency of reporting
  - Suggested method of reporting
  - Suggestions for refinement of specifications

Process and Outcomes Measures

Near Term

Near Term Measures

- The following measures are proposed for ***mandatory*** reporting to the RCE ***within the first year*** of successful on-boarding as a QHIN:
  - Report on the number of **member organizations** participating in each QHIN.
  - Report on the number of document deliveries/healthcare organization **transaction volume.**

Near Term: Availability of Electronic Health Information

Proposed Measure	Outcome (Rationale)	Benefit to QHIN/RCE	Description/Specification	Data Source(s)
8. Number of "**member organizations**" affiliated with QHIN	Measure the proportion of the health care system capable of benefitting from HIE transactions	Foundational for understanding the impact of HIE on quality or cost effectiveness; Ability to track and assess gaps in connectivity related to various types of healthcare organizations (LTPAC, BH, etc.)	Specification 8.1: File with a list of unique health care organization name, type/classification, and total count Specification 8.2.:Provide updated list quarterly with notation of added or dropped organizations	Self-report in template provided by RCE
9. Report to RCE number of document deliveries/healthcare organization transaction volume - near term	Accurate measurement of transaction volume occurring at both an intra and inter HIN level	Measure increases in the amount of interoperable health data made available to support clinical decision making to highlight national-level growth in exchange over time.	Specification 9.1.: Number of documents delivered to one health care organization from another health care organization (via push or pull) that include clinical information Specification 9.2.: Number of document deliveries that take place between separate HINs via bridging gateways Specification 9.3.: Number of document deliveries that occur within HIN Specification 9.4: Include breakdown of number of transactions by exchange purpose	Transaction metadata from audit logs

ONC TEFCA RECOGNIZED COORDINATING ENTITY

Process and Outcomes Measures

Mid to Long Term

Mid/Long Term Measures

- The following measures are proposed for ***voluntary*** reporting to the RCE ***within three years*** of successful on-boarding as a QHIN:
  - Amount of health data exchange supported by **HL7 FHIR API** conforming to nationally certified standards.
  - Number of messages delivered by QHIN participants to a **public health agency** in support of syndromic surveillance reporting.
  - Percentage of **available structured elements** that were electronically exchanged per patient.
  - Number of times a **complete and current medical record** was accessible to both a patient and provider during a clinical encounter.
  - Percentage of **closed-loop referrals** where electronic health information is sent and received.
- Depending on advancements in the ecosystem, some or all of these measures may become mandatory in later years.

Mid Term: Method of Exchange

Measure	Outcome (Rationale)	Benefit to QHIN/RCE	Description/ Specification	Data Source(s)
10. Amount of health data exchange supported by HL7 FHIR API conforming to nationally certified standards	Support faster delivery of health information for a variety of purposes	Highlight the ability of the QHIN Necosystem to support measurement and growth of key interoperability requirements and regulations	Specification 10.1: Provide summary breakout of the method of exchange used for each reported transaction	Transaction metadata from audit logs
11. Number of messages delivered by QHIN participants to a public health agency in support of syndromic surveillance reporting	Coordination with public health; improvements in completeness of information over time	Identify benefit of electronic health information exchange to support modernization of public health information infrastructure and rapid surveillance capabilities	Specification 11.1: Total number of eCase reporting transactions managed by QHIN intended to report notifiable disease in which receiver was a public health institution	Transaction metadata from audit logs

Long Term: Quality, Usability, and Care Coordination

Measure	Outcome (Rationale)	Benefit to QHIN/RCE	Description/ Specification	Data Source(s)
12. Accuracy in return of available structured data elements electronically exchanged per patient in response to a query	Increase the consistency of data reliably delivered to requesting EHR system	Measure the concept of the quality of data content included in a transaction	Draft Specification: Leverage movement towards USCDI to measure ability of exchange processes to send individual data elements	Audit Log
13. Number of times a known medical record from outside source was unavailable during patient encounter	Reduce unnecessary health care utilization through improved communication between providers and patient	Measure the concept of usability of data being exchanged	Draft Specification: Number of time medication reconciliation data from outside source was unavailable during encounter.	Audit log; Self-report; other referral metadata
14. Percentage of closed-loop referrals where electronic health information is sent and received	Improvements in safety and efficiency through better care coordination between primary care and specialist providers; support for the impact of value-based care	Measure the concept of impact of interoperable exchange on care coordination	Draft Specification: Number of times a received request for information was accepted by consulting provider Draft Specification: Number of times consultation summary returned to referring provider's EHR	Audit log; other referral metadata

ONC TEFCA RECOGNIZED COORDINATING ENTITY

Additional Metrics Under Consideration

Measure	Outcome (Rationale)	Benefit to QHIN/RCE	Description/ Specification	Data Source(s)
15. Number of "**connected clinicians**" affiliated with QHIN	Measure the total number of physicians participating in RCE ecosystem, working towards development of a national "numerator"	Foundational for establishing a proportion of participation relative to all registered physicians ("denominator"); establishes a sound baseline for other concepts like transaction volume	Draft Specification: Provide a total number of "end users" registered with each participating organization affiliated with QHIN. Draft Specification: Provide NPI for each individual "end user" reported by each affiliated organization	Self-report in template provided by RCE Secure upload of template if NPI included.
16. Data could not be parsed or interpreted by a receiving system	Show decrease in failures and missed opportunities over time as QHIN ecosystem evolves	Identify areas of weakness or unexpected failure in the ecosystem	Draft Specification: Report on the date/time range, volume and significance of failed message delivery	As needed, report to RCE when outages occur

Feedback on Process and Outcomes Metrics

Mid to Long Term

Providing Feedback in ThinkTank

- For each measure concept, we invite your feedback around the following:
  - Feasibility to reporting within 3 years of QHIN agreement start date
  - Level of burden to QHINs
  - Level of value to QHINs/TEFCA ecosystem
  - Suggested frequency of reporting
  - Suggested method of reporting
  - Suggestions for refinement of specifications

References

Notice of Funding Opportunity Language

- *The RCE will monitor/surveil ongoing QHIN compliance with the Common Agreement's requirements and future updates throughout the period of performance. Such monitoring will include collecting metrics from the QHINs. See footnote.*
- *Determine appropriate **metrics for QHINs** to report to the RCE to demonstrate compliance with the Common Agreement, including both process and outcome measures. This will also include appropriate timeframes for QHIN reporting to the RCE.*
- *Monitor and evaluate Provisional QHINs through collection of metrics and reports that **confirm they meet the definition of a QHIN and are in compliance with the Common Agreement**. This includes **collection of Breach notifications from QHINs and reporting them to ONC**. Designate QHINs after confirming and documenting that the Provisional QHIN in question has satisfied the applicable requirements of the Common Agreement and the QHIN Technical Framework.*
- *Conduct **ongoing surveillance** to assess whether QHINs comply with the Common Agreement. This includes collecting ONC-approved metrics developed in Milestone 1 and, if necessary, assessment, revision and/or updates of metrics (subject to ONC approval).*

QHIN Expectations

- QHINs must meet onboarding requirements and complete the required process.
- QHINs are responsible for taking steps to assure its Participants meet participation requirements in their network, along with applicable flow-down obligations from the Common Agreement.
- The RCE is expected to collect information from QHINs on performance measures to assess the measure the effectiveness of the network.
- QHINs must notify the RCE of breaches.

Process and Outcomes Measures (1)

- Framework of Performance Measures for Health Information Exchange
  - Three phases of measuring HIE:
    - 1) system/organizational policy
    - 2) system use (rate of institution participation, increase in use by care givers/clinicians)
    - 3) effects of system use (improvements in clinical effects such as decrease in duplicated medicine, increase in sharing public/population health information such as reporting for notifiable diseases)
- Health information exchange policies of 11 diverse health systems and the associated impact on volume of exchange
  - Collected institution level data on monthly volume of patient linkages established, and clinical summaries retrieved.
  - Linkage is measured as a successful **patient match** between two (2) organizations, in response to either auto-query or manual query. **Transfer of CCD encounter documentation** included information such as allergies, immunizations, medications, medical problems, medical and social history, advance directives, vital signs, and recent procedures and their results.

Process and Outcomes Measures (2)

- Analyzing the Public Benefit Attributable to Interoperable Health Information Exchange (2017)
  - Focused on collecting supporting information on the following use cases:
    - (1) **alert, discharge, and transfer (ADT) event notifications** to reduce unnecessary health care utilization through improved communication between providers and patients;
    - (2) **medication reconciliation** to reduce adverse drug events during care transitions through reduced medication discrepancies; and
    - (3) **closing the referral loop** to improve safety and efficiency through better care coordination between primary care and specialist providers.
  - Data Sources:

Exhibit 3: Data Sources and Potential Measures

Data source	Measures
Survey data	Process Measures; perceptions of usefulness of IEHI and usability of systems
Audit logs	Process measures: volume and use of exchange
HIE or EHR data	Process measures: volume and use of exchange
Time and motion studies	Process and outcome measures (e.g., efficiency and timeliness of electronic exchange)
Payment incentive program data (e.g., MIPS)	Process and outcome measures
Claims data, in combination with survey or clinical data	Process and outcome measures (e.g., patient outcomes, source of care, provider patient networks)

Process and Outcomes Measures (3)

- Analyzing the Public Benefit Attributable to Interoperable Health Information Exchange (2017) – cont.
- Outcomes that may be influenced by HIE

Category	Specific Examples
Clinical	
Utilization	Hospital admissions, hospital readmissions, number of imaging tests, repeat imaging tests, number of lab/diagnostic tests, repeat lab/diagnostic tests, number of ED visits, repeat ED visits, length of stay, outpatient visits
Quality of Care	Drug reconciliation and adherence, hemoglobin A1c levels, patient satisfaction
Care Coordination	Communication between different providers, consultation, referral ordering
Economic	
Costs	Visit costs, annual financial savings, costs of lab tests, costs of radiology tests
Population	
Public Health	Completeness of public health reporting, follow-up care for HIV patients
Disease Surveillance	Automatic reporting of diseases requiring public health notification

Source: Information derived from Rahurkar et al. (2015) and Hersh et al. (2015).[1]

- Additional Potential Use Cases

Exhibit 6: Additional Potential Use Cases

Potential Use Cases
▪ Public health reporting such as syndromic surveillance and immunization registries ▪ Tracking of opiate prescribing and use by integrating Prescription Drug Monitoring Program (PDMP) systems with IEHI ▪ Death notice integration with alert systems ▪ Advanced directive registry integration with IEHI ▪ ACO case management ▪ Data portability through structured clinical data exchange ▪ Query-based exchange to locate a patient's medical record ▪ Consent management ▪ Facilitation of coordination across diverse care teams ▪ Social determinants of health and unstructured data integration into a care plan available in an EHR ▪ Reporting of clinical quality measures ▪ Patient and/or provider attribution ▪ Provider directories

ONC TEFCA RECOGNIZED COORDINATING ENTITY

ONC
TEFCA
RECOGNIZED
COORDINATING
ENTITY

Questions & Answers