Memo

TO: Consensus Standards Approval Committee (CSAC)

FR: Interoperability Project Team

RE: Interoperability, 2016-2017: Informational Update

DA: August 8, 2017

NQF will provide an informational update to the CSAC on the Interoperability project at its August 8, 2017 meeting.

This memo includes a summary of the project, and themes identified from and responses to the public and member comments. Accompanying this memo is the draft report, which is available on the project webpage.

BACKGROUND

The Office of the National Coordinator for Health Information Technology (ONC) developed the Connecting Health and Care for the Nation: A Shared Nationwide Interoperability Roadmap as well as national standards as part of its certified electronic health record (EHR) technology, which provided nationwide standards for interoperability, both in the exchange of information and in its use. True interoperability is a significant challenge to healthcare organizations for various reasons, including the lack of a common, standard framework that reconciles the differences in data as well as the varying data types. Additionally, healthcare organizations maintain incompatible products and systems, which are unable to disclose the appropriate data within the organization and with partners in its community. For two systems to be interoperable, they must be able to exchange data in an agreed-upon format according to a standard and subsequently present that data in a way that a user can understand and use.

Through this project, NQF developed a measurement framework and measure concepts that serve as a foundation for addressing the current gaps in the measurement of interoperability.

METHODOLOGY

As a first step towards achieving these goals, NQF conducted an environmental scan and key informant interviews and published the results in the interoperability Environmental Scan Report and the interoperability Key Informant Interview Summary Report. Additionally, NQF convened an expert, multistakeholder Interoperability Committee to provide input and help guide the creation of a framework. Throughout this project, NQF solicited input from a multistakeholder audience, including NQF membership and public stakeholders.

MEASUREMENT FRAMEWORK

After consideration of the information gathered through the environmental scan and key informant interviews, the Interoperability Committee determined that a four-domain model provided the best combination of utility, simplicity, and accuracy in identifying and covering the main components of interoperability.

The Committee developed the following set of guiding principles that define the key criteria

when considering the measure concepts to guide their development into performance measures.

- Interoperability is more than EHR to EHR, and all sources of data should be taken into consideration.
- Various stakeholders with diverse needs are involved in the exchange and use of data, and the use of this framework and measure concepts will differ based on stakeholder perspectives
- The term "electronically exchanged information" should be used instead of "outside data" to completely fulfill the definition of interoperability.
- Interoperability needs will differ depending on the care setting.
- All critical data elements should be included in the analysis of measures as interoperability increases access to information.

The measurement framework contains essential categories (domains) and subcategories (subdomains) needed to ensure comprehensive performance measurement of interoperability. The Committee determined the following domains and subdomains that most accurately measure interoperability and its impact on health outcomes:

Domain	Subdomain
Exchange of Electronic Health Information	- Availability of Electronic Health Information - Quality of Data Content - Method of Exchange
Usability of Exchanged Electronic Health Information	- Relevance - Comprehensibility - Accessibility
Application of Exchanged Electronic Health Information	- Human Use - Computable
Impact of Interoperability	- Patient Safety - Cost Savings - Productivity - Care Coordination - Improved Healthcare Processes and Health Outcomes - Patient/Caregiver Engagement - Patient/Caregiver Experience

PRIORITIZATION OF MEASURES
Using these domains and subdomains, NQF worked with the Interoperability Committee to examine and develop measure concepts. Additionally, NQF examined a large group of quality measures from topics gathered through the literature to identify those that are "interoperability-sensitive" measures where the determination of the numerator for a measure requires the use of data that is produced external to the entity reporting the measure. These data may be acquired by electronic exchange or other methods; therefore, the measure is sensitive not

dependent on interoperability. This framework contains two distinct sections. Appendix A of draft report includes identified measure concepts aligned with the appropriate domains and subdomains within the report along with a timeline. The estimated timeframe states whether (1) the concepts are useful in the short-term (0-3 years); (2) the concepts will be useful in the mid-term (3-5 years); or (3) the concepts are potentially implementable in the long-term (5+ years). Appendix B of draft report shows existing measures as illustrative examples of the measure concepts created by the Committee.

COMMENTS AND THEIR DISPOSITION
NQF received 113 comments from 14 organizations (including 6 member organizations) and individuals   pertaining to the draft report.

A table of comments submitted during the comment period, with the responses to each comment and the actions taken by the Committee, is posted to the Interoperability project page under the Materials section.

Comment Themes and Committee Responses

The Committee reviewed all of the submitted comments and focused their discussion on topic areas with the most significant and recurring issues. Based on the comment themes, the following updates were made to the final report.

Definition of "interoperability"
The committee elected to retain the definition included in the ONC Nationwide Roadmap to Interoperability, but the final report now includes reference to the more aspirational 21st Century Cures definition.

Definition and examples of interoperability-sensitive measures
A more detailed definition of "interoperability-sensitive measures" was included to redefine it in a clearer manner, particularly around the relationship to impact/outcomes and interoperability.

Expand beyond EHR focus
In order to highlight the concept that interoperability is more than EHR to EHR, specifically data captured from medical devices/wearables, clinical trial databases, and multiple database systems, a section was added to acknowledge that interoperability expands beyond EHRs.

The role of privacy/security in interoperability
A measure topic under the "Method of Exchange" subdomain was added to highlight the importance of privacy/security in interoperability.

Inclusion of data blocking
Data blocking and its relationship to interoperability have been included in the final report as part of the 21st Century Cures definition.

Usability of Exchanged Electronic Health Information subdomains
The subdomains within "Usability of Exchanged Electronic Health Information" were updated to include: relevance, comprehensibility and accessibility.

Additional Measure Concepts

Numerous measure concepts were proposed within the comment period. Eight new measure concepts were added to the final report based on committee input. Refer to [table] of comments for measure concept specific responses.

Considerations for Future Interoperability Work

The final report includes suggestions for future work including:

- Interoperability measure concepts are included that go beyond just ambulatory and inpatient settings.
- The Framework is expanded to give specific guidance regarding medical devices, mobile health, research databases and other Internet-based tools used for healthcare.
- The inclusion of measure concepts associated with a testing environment to assess conformance to interoperability standards.
- The inclusion of a library of use cases that demonstrate the application and effectiveness of the Framework across different care settings and populations.

NEXT STEPS

NQF will submit the final deliverable to HHS by September 1, 2017.