NATIONAL QUALITY FORUM
Driving measurable health improvements together

Meeting Summary

Electronic Health Record (EHR) Data Quality Best Practices for Increased Scientific Acceptability Technical Expert Panel (TEP) Web Meeting 3

The National Quality Forum (NQF) convened the Electronic Health Record (EHR) Data Quality Best Practices for Increased Scientific Acceptability Technical Expert Panel (TEP) on March 31, 2020 for their third web meeting.

Welcome, Introductions, and Review of Meeting Objectives

NQF staff welcomed the TEP Committee and participants to the web meeting, while providing updates about staff changes to the project team. NQF staff provided an overview of the agenda, the meeting, and recited roll call of the TEP. Objectives included reviewing public comments received on the third draft of the environmental scan; open discussion about unresolved remarks about the scan; and previewing discussion questions for the next TEP meeting in April. NQF staff also reminded the TEP of the scope and definition of data quality as it relates to this task order.

Discussion on the Environmental Scan and Public Comments Received

NQF staff started discussion on the environmental scan by providing an outline of public comments received. NQF received comments from one organization, The Mitre Corporation. Several comments warranted further TEP discussion and could be categorized in three overarching themes. Following this, NQF staff summarized each comment theme and opened the discussion for input from the TEP.

Aligning eCQMs with EHR Data

NQF staff summarized the comment regarding alignment between eCQMs and EHR data:

- The source data for eCQMs is rarely actual EHR data but is often derived from source systems which may or may not include EHR data. The source system is usually manipulated in various ways such as:
    - Mapping code systems used at the point of care to code systems used in eCQM
    - Mapping code systems used for billing to code systems used in eCQM
    - Converting unstructured data to eCQM relevant structured data
    - Translations to make measures more executable or optimized for executing on large number of cases. Vendors are not actually implementing directly off of CQL/ELM specification

The TEP generally agreed with the alignment issues highlighted by the comment and felt this could be more clearly acknowledged and elaborated on in the environmental scan. The TEP agreed with the comment that aligning data poses challenges at multiple stages including data collection and mapping of code systems. However, the TEP commented that this issue goes further including interoperability challenges of combining data from multiple health IT systems and using the transformed data to run eCQM measure specifications. Some TEP members mentioned they were able to implement directly from the CQL/ELM measure specifications, implying there is variability in how eCQMs are implemented.

However, all of these alignment issues are longer-term issues with no immediate solution. Discussions about this in future TEP meetings may lead to more concrete recommendations for moving forward.

The TEP also discussed the need for a well-defined data dictionary, including attributes within the data types and transformation rules that can be applied. Sometimes transforming the data is necessary to represent it the way the logical model requires it in a standardized way. The TEP also agreed that mapping code systems used for billing should be a priority while noting that some concepts within billing currently are not relevant within EHR data.

Simulated Data and NQF Endorsement Requirements

NQF staff summarized the comment regarding alignment simulated data and NQF endorsement requirements:

- NQF currently accepts simulated data (usually produced from CMS Bonnie) as part of NQF's Measure Evaluation Criteria on Feasibility. Other systems have robust ways of creating a higher volume of realistic simulated data. That can be a possible area of improvement for feasibility, but could larger more realistic simulated data be relevant for NQF Scientific Acceptability, especially given the testing challenges?

In its discussion of this comment regarding simulated data, the TEP considered the sequential nature of measure development. When a specification is in the creation stage, it is helpful to have test cases to check the logic. However, the TEP agreed that there is no substitute for live testing with live production data no matter how many test cases can be simulated. The TEP felt strongly that simulated data cannot be used for testing reliability or validity of measures or even for assessing feasibility of a measure. Simulated data is best used at earlier stages of the measure development process and is too biased to be useful for measure testing or endorsement.

In terms of the environmental scan report, the TEP suggested more clarity around the NQF requirements for developers to use simulated data. In its discussion, the TEP did not recommend using simulated data to assess of feasibility due to concerns about bias that could be introduced. The TEP also agreed that simulated data doesn't bring much additional value in terms of validating a measure. The TEP recommended that a more appropriate use of simulated data is in earlier stages of development to help to assess the correctness of the logic – to help identify that the specifications themselves are working as expected. The TEP agreed this is a potential recommendation to be expanded upon the final report deliverable for this task order, along with clarification about the use of simulated data and at what points in the development and endorsement cycles it would be appropriate to use.

Health Level Seven's (HL7's) new Evidence Related Standards and Relevance to NQF's Measure Evaluation Criteria

NQF staff summarized the comment regarding alignment simulated data and NQF endorsement requirements:

- HL7's had new evidence related standards such as Fast Healthcare Interoperability Resources Clinical Guidelines (CPG on FHIR) and Evidence Base Medicine on FHIR. Are these standards efforts relevant to NQF's Measure Evaluation Criteria on evidence or to other challenges EHR based measures face with evidence? Should the scan and recommendations report include more on them?

The TEP agreed that HL7's evidence related standards aren't an issue directly relevant to data quality and therefore may be out of scope for the environmental scan. TEP members noted that the intent of

the clinical guidelines on FHIR is a source of information for measure authors as they're creating FHIR-based eCQMs, but not necessarily relevant to the NQF measure evaluation criteria. The TEP noted that to the extent that guidelines are used for some evidence for quality measures (process of care type measures), the NQF endorsement criteria are still the same whether they are digital guidelines or otherwise.

Open Discussion and Brainstorming for Web Meeting 4

After reviewing the public comments from the environmental scan, the NQF staff facilitated discussion to address resolved comments from the TEP Committee before brainstorming topics for the next web meeting in April.

When discussing gaps identified in the scan, themes that were expressed among the TEP members included: 1) the use of unstructured data 2) access to data and operability, 3) the impact of NQF criteria on EHR based measures, 4) the inclusion of patient report outcome data and longitudinal records, 5) inability to conduct testing due to challenges such as lack of funds, and 6) more involvement in HL7 efforts from researchers that work with Quality Data Model (QDM). Despite the use of operability, data access and cost continue to be factors that affect measure developers on a consistent basis.

Subsequently, NQF staff and the TEP examined which opportunities were the most feasible if recommended by NQF. One proposal made was the use of a data pipeline to record data in a standardized fashion between different healthcare specialties. A data pipeline can use a natural language processing to read more rich unstructured electronic data.

The TEP suggested potential stakeholders to include when considering recommendations for EHR data and EHR based measures. Private registries, and registries such as Society of Thoracic Surgeons and National Surgical Quality Improvement Program (NSQIP), have a valuable perspective since their measures are still manually abstracted and are looking for opportunities to transfer to electronic records. Long Term and Post-Acute Care (LTPAC) Health IT Collaborative and National Association for Support of Long-Term Care are organizations from the post-acute care market that could provide important and valuable perspective on potential recommendations.

Public Comment

No comments were received during the member and public comment period.

Next Steps

The TEP Committee will reconvene on April 29, 2020 to identify potential best practices to promote data quality, including limitations or other barriers to implementation. The final environmental scan report will be submitted to HHS on May 19, 2020.