

# NQF Health Information Technology Advisory Committee (HITAC) Meeting Summary

July 13, 2012

## In Person Meeting

HITAC Members Present: Paul C. Tang (Chair), David W. Bates\*, Chad Bennett, Marilyn Jane Bowman-Hayes, Zahid Butt, Ian Z. Chuang, John F. Derr, James Ferguson, Caterina E. M. Lasome, Russell Leftwich, Michael I. Lieberman, Blackford Middleton, Eva M. Powell, Erik Pupo, Deborah Reid, Shannon Sims\*, Christopher S. Snyder, Christopher Tonozzi, Judith Warren

HITAC Members Not Present: Patricia A. Abbott, Allison Jackson, J. Marc Overhage, Christopher J. Queram, Martha A. Roherty, Marcia Thomas-Brown, Madhavi Vemireddy,

Federal Liaisons Present: Erin Grace, Christopher Lamer\*, Michael T. Rapp\*, Kevin Larsen

Federal Liaisons Not Present: Joseph Francis

\*via conference call

# **Welcome and Meeting Overview**

Paul Tang, MD MS, HITAC Chair, and Floyd Eisenberg, MD MPH, NQF Senior Vice President of Health IT, welcomed the committee members and reviewed the agenda. There were several important discussion items for the HITAC, including value set management and options to assess eMeasure feasibility, as well as updates on the Quality Data Model (QDM), Measure Authoring Tool (MAT), eMeasure Learning Collaborative, and Critical Path projects.

## **Member Introductions**

Ann Hammersmith, General Counsel, NQF, conducted the roundtable for members to formally introduce themselves and also disclose any potential conflicts of interest. Members had no additional questions for each other.

## **Value Set Discussion**

Dr. Tang introduced the next topic by stating there is need to disseminate more information and increase knowledge about the current activities to address value set management. Jamie Ferguson, Vice President of HIT Strategy and Policy at Kaiser Permanente, presented the recommendations made by the Vocabulary Task Force of the HIT Standards Committee regarding the creation of "one-stop"

shopping" for value sets, and the plans for the National Library of Medicine (NLM) Value Set Authority Center (VSAC). The VSAC will be a curated, national vocabulary repository to make available all the necessary Meaningful Use (MU) value sets and crosswalks to all stakeholders at no charge. Kevin Larsen, MD, Medical Director for Meaningful Use at ONC, added that the NLM has the MU Stage 2 measures and are analyzing the value sets to have them available when the MU Stage 2 final rule is released.

Public availability of value sets does not mean that they are in the public domain. The NLM licenses the existing vocabularies through the Unified Medical Language System (UMLS), and there are copyrights or licensing restrictions that may apply. The UMLS user account allows the user to view both the code and the descriptors, because the user attests to having the proper licenses to each code system.

The VSAC will encourage measure developers to use documentation and coding that can be found in EHRs. In addition to the value sets in the VSAC, Mr. Ferguson stated there are other downloadable files available through the NLM. The Convergent Medical Terminology (CMT) is a set of clinician- and patient-friendly terminology vetted by the International Health Terminology Standards Development Organization (IHTSDO) and mapped to standard vocabularies including SNOMED-CT, ICD-9 and ICD-10. CMT is an open source donation from Kaiser that vendors can use as a starter set; they can then be used by eMeasure developers. Additionally, Kaiser has donated their frequency distributions and "most frequently used" lists of concepts in EHRs, which are available for download.

HITAC members had the following questions and comments on the Value Set Authority Center and the Convergent Medical Terminology:

- Mr. Ferguson clarified that Kaiser practitioners have the ability to create pre-coordinated terms in their pick list; if that term is used frequently enough, they submit the term to SNOMED. These terms are mapped to ICD-9.
- Assuming that post-acute care will be part of MU Stage 3, home care and skilled nursing
  facilities should be informed of these activities to prepare for using SNOMED, LOINC, and
  RxNorm. There is a SNOMED nursing problem list that is posted on UMLS; having problem lists
  and value sets available will facilitate the steep learning curve for SNOMED and LOINC. There is
  now the opportunity to start thinking prospectively, and to map other existing clinical data sets
  for home health and nursing homes, such as like MDS/OASIS and the CARE Tool, to UMLS code
  sets.
- Dr. Warren added that the IHTSDO has a translation process that maps SNOMED to ICD-9 and ICD-10; these maps are vetted by the World Health Organization and the National Council of Health Statistics. The vetted maps are in the UMLS and are maintained by IHTSDO.
- There was discussion whether older measures in MU will be retrofitted to align with the
  Standards Committee recommendation that eMeasures should use existing documentation and
  coding already found in EHR systems. Dr. Larsen stated a challenge with the MU Stage 1
  measures is that they were retrofitted from claims-based and chart abstraction measures, and
  so were never intended to be constrained by SNOMED. Another challenge is that payer typology
  is in EHRs but not UMLS. The goal is to use the UMLS and the approved terminologies as the
  building blocks for MU measures. Dr. Eisenberg added that HIT Standards Committee Clinical

- Quality Workgroup and Vocabulary Task Force recommended specific code systems to use for QDM categories, and the question now is whether those code systems and value sets are added to UMLS.
- Regarding whether the VSAC will need to be the final arbiter of definitions, Dr. Larsen stated
  that is an open question for future work. The current work is focusing on making sure the
  measures maintain their intended logic.
- There was a discussion about thinking more holistically to include clinical decision support (CDS) along with quality measurement. They are two sides of the same issue: CDS is on the "if" side, while quality measurement is on the "then" side. Developing an ontological model that might accommodate both measures and CDS would be valuable to the entire health IT enterprise. There is a CDS consortium that is focusing on creating resources for cloud-based CDS. Dr. Middleton raised the caveat, however, that the dependence on SNOMED could create challenges for decision support reasoning when new SNOMED releases have appearingly arbitrary changes in hierarchies. The consortium has been looking at using the value sets of the NQF retooled measures, but are finding the cohort specifications are not always usable for CDS. Dr. Eisenberg commented that the curation role of the VSAC could address some of these issues.
- Regarding information on the outcomes from these tools, Mr. Ferguson stated that it is a work in progress, but there have been some published studies with positive results. The evidence is clear that well-designed, well-implemented, and well-used information technologies impact the process and outcomes of care. Dr. Middleton added that there is a subtle connection among the usability of the terminology itself, the clinician's workflow and decision support, and improving quality outcomes. One challenge to more wide-spread use of the technology is developing common data infrastructure and usability features that do not impede competitive interests.

Specifically regarding value set copyright and intellectual property, HITAC members had the following questions and comments:

- Mr. Ferguson clarified that UMLS license is open source. When obtaining a UMLS user account, the user attests to having the appropriate licenses to download and use the files. Dr. Larsen added it is similar to viewing a free library book.
- Specifically, CPT codes and their descriptors can be viewed because the user has an NLM
  account. Having the descriptors is essential because it is difficult to distinguish codes without
  them. However, any commercial use of the CPT codes would require a license for use. While
  measure posting is not a commercial use, it was unclear whether measure development is
  considered a commercial use.
- Dr. Middleton commented that some of the core constructs used in the national health IT infrastructure are stymied by proprietary rights and interests. This issue comes up repeatedly across different FACA and policy initiatives, and rather than continuing to work around the issue, he suggested that the NLM or another leadership body consider national licensure, similar to what was done with SNOMED. Others agreed, and commented that in the meantime, the VSAC is a valuable resource to post available value sets along with information on when to use them and who to contact to be allowed to use them.

- Another issue with intellectual property has arisen around standardized assessments in quality measure development. Dan Vreeman, PT, DPT, MSc, Regenstrief Institute, added there have been requests to model these instruments in LOINC; however, they need to have permission from the individual IP holders in order to create a derivative, which is a standardized representation of the assessment.
- Dr. Larsen commented that the VSAC is building a repository around a set of federally funded, nationally stewarded eMeasures. There are still questions to resolve around stewardship and governance of a commercial marketplace of both publicly- and privately- created value sets.

Dr. Tang thanked the HITAC for a rich and healthy discussion on value sets.

# **eMeasure Feasibility Discussion eMeasure Feasibility Testing**

Similar to the value set activities, Dr. Tang commented that eMeasure feasibility is looking at ways to improve quality reporting that leverages data in EHRs. Dr. Larsen presented on feasibility testing of the MU eMeasures. Because this is a new process, there is not yet a standard way of conducting feasibility analysis for the eMeasures under development. The process needs to maintain flexibility for innovation, so that current challenges do not limit technology that may be possible in 2016.

Feasibility can be assessed at both the measure level and the data element level. In assessing the feasibility of the measure, it is necessary to look at the reasons why data elements in the measure may not be feasible and to factor in policy and incentive levers that will raise the availability of a data element in the future. Dr. Larson shared with HITAC a "best practice" from the Yale group, who are doing feasibility testing at the measure component level before they actually build the whole measure.

Using the value sets from the MU Stage 1 and 2 measures, Dr. Larsen stated they are also planning a quantitative process of evaluating the frequency of occurrence of codes in a large data set, such as an health information exchange (HIE) data set from multiple vendors. This evaluation could lead to a set of "pre-approved" value sets for measure developers.

Another area for future work is an on-going post-market feasibility analysis. From the elective measures in the Meaningful Use program, some measures are chosen quite frequently and others are less frequently chosen. A surveillance process could monitor post-market feasibility improvements and could then justify moving an elective measure to a required measure.

HITAC members had the following questions and comments on the MU Feasibility testing:

There was discussion as to whether there is a distinction between "implement-ability" based on availability of data within record systems, and the measure's performance, such as its predictive value. A measure could be feasible but not have good characteristics. The NQF measure criteria look at the scientific acceptability of the measurement properties; that is, the reliability and

<sup>&</sup>lt;sup>1</sup> The NQF Evaluation Criteria are: Importance to measure and report; Scientific acceptability of the measurement properties; Usability and Use; Feasibility; and Assess related and competing measures.

- validity of the measure. For *de novo* eMeasures with extensive reliability and validity testing of their performance, feasibility may not be as much of an issue as it is for the retooled measures.
- There is great interest is routinizing feasibility assessments to use a standardized quantitative and qualitative approach. Dr. Larsen commented that systems with greater experience with measurement from EHRs, like VA and Kaiser, often have different approaches.
- While there was a Likert scale for feasibility, there was not a strict threshold level. There was a
  judgment for some measures depending on policy priorities, and many options for the elective
  measures to allow for innovation.
- Regarding the elective measures, Dr. Leftwich commented that the ability of certified EHRs to report on measures will heavily influence which measures are selected. Dr. Larsen agreed, and added that use does not necessarily correlate with feasibility. A post-market surveillance on feasibility could provide more information.
- There was a discussion about feasibility for different practice settings and the varying sophistication of their EHRs. By looking at a large HIE, Dr. Larsen stated it was possible to segment the feasibility results by care settings. Also, professional societies could work with their members, particularly those in smaller practices, to contribute to the body of knowledge and the feasibility of useful measures. Care transitions, in particular, are one area that show very low feasibility for small practices, and ONC is interested in innovations to improve that feasibility by 2016.
- Regarding measuring other members of the care team, Dr. Larsen stated the MU program
  clearly defines who is an eligible provider. In the outpatient context, which is typically fee-forservice, there are not many incentives for team-based care; however, the inpatient measures
  are heavily reliant on a care team.
- Dr. Tang commented that the feasibility assessment process is very similar to the scoring metric used by HITEP in the development of the QDM. This metric looked at: authoritative source, standardized coding, fit to workflow, availability in EHRs, and whether it is auditable. It may be a useful exercise to revisit some of those criteria. Dr. Sims noted in particular the importance of fit to workflow, which may be a greater barrier than technical viability. Dr. Larsen added that they are now piloting recommended workflows for some measures.

#### New NQF requirement to assess eMeasure feasibility

Helen Burstin, MD, MPH, NQF Senior Vice President of Performance Measures, presented on how feasibility assessment relates to NQF endorsement. The Consensus Standards Approval Committee (CSAC) has been considering the differences between paper-based measures and eMeasures, and has developed guidance on eMeasure review and testing for reliability and validity. Measures that are retooled and previously tested would be evaluated differently than retooled measures not previously tested and de novo eMeasures. Two approaches to measure testing were put forward: 1) measure testing in a simulated EHR data environment, and 2) testing the output of EHRs versus visual inspection of an electronic record.

In addition, the CSAC agreed that feasibility testing should be required for all eMeasures. More work is needed to define and standardize feasibility testing requirements for data elements, which is somewhat

unique to EHR-based measures. The evolving model for eMeasures may be better suited for the twostage endorsement process which NQF has begun piloting; this would evaluate the measure concept for the "must-pass" criterion of importance to measure prior to fully specifying and assessing feasibility.

HITAC members had a robust discussion on the testing methods, and Dr. Tang summarized as follows:

- HITAC members agreed that field testing in "real life situations" is more valuable than a simulated EHR environment or visual inspection. The field testing should include both quantitative and qualitative assessments.
- How each EHR system is deployed "in the wild" will impact the measure's results. Standardized workflows and implementation guides may be helpful in limiting variation.

HITAC members had the following questions and comments on other aspects of measure testing:

- As medicine becomes more personalized, there may be a need to consider validation and assessment of measures for individuals. This relates to the concept of delta measures, which are more easily done in EHR-based measures than with paper-based measures.
- Articulating the care plan and measuring care goals is also very patient-centered and applicable
  across care domains. However, there is little agreement on the definition of the care plan and
  the ability to share it across disciplines. It was noted that HL7 is working on a domain analysis
  model of a care plan.
- In many ways, measures can be thought of as software code in "if/then" statements, and can be tested using software code testing scripts. This methodology would not assess the measure's "truth," but can find logic errors.
- Collaboration with systems engineers during the measure development process could assist
  with standardizing where data elements are found in the EHR and capturing the data in
  structured, routine ways.

Dr. Tang concluded that both value set tools and eMeasure feasibility issues are very important topics in quality measurement, and there are potential follow up activities for HITAC.

# **Quality Data Model (QDM)**

Caterina Lasome, PhD, MSN, MBA, MHA, RN, QDM subcommittee co-chair, presented on activities related to the *QDM June 2012 Update* and the *QDM Style Guide*. Both documents were posted for public comments through July 16. The subcommittee will review the comments and provide more information at a future HITAC meeting. The subcommittee has also been updating a crosswalk between QDM versions.

HITAC members had the following questions and comments on the QDM:

Dr. Eisenberg clarified that earlier discussions about a data quality metric led to the
development of the Style Guide. The Style Guide incorporates feedback on data feasibility on
MU Stage 1 and 2 measures, what should be expected to be feasible based on 2014 EHR
certification, and code system (vocabulary) recommendations from the HIT Standards
Committee.

- Developing a definition of a data element would be helpful, especially in terms of assessing feasibility.
- There was discussion regarding the relationship between the QDM and Query Health's Clinical Element Data Dictionary (CEDD). The CEDD has been mapped to the QDM and can be more closely integrated into vendor products. Mr. Pupo commented that the CEDD could be thought of as an "implementable version" of the QDM, and one pilot project uses the i2b2 system to run queries based on QDM-expressed eMeasures. As new elements are identified for the QDM, there will need to be efforts to maintain CEDD alignment with the QDM. Dr. Eisenberg added that one difference between QDM and CEDD is that not all data needed to measure health status will be found in the EHR, and QDM may be able to address. The original framework for QDM describes health status as the intersection of four quadrants: individual characteristics, environmental characteristics, clinical data, and health related experience.
- Regarding the new two-stage review process for measure endorsement, Dr. Larsen asked if the
  concept approval phase will analyze whether the measure is "QDM-able." Dr. Burstin replied the
  extent of the measure specifications needed for concept review is still under consideration. It
  may be challenging to carry out a QDM analysis before the measure is fully specified, but this is
  an interesting question to examine further during the pilot stage.

## **Measure Authoring Tool Project Update**

Dr. Eisenberg provided a brief update and usage statistics on the Measure Authoring Tool (MAT). As stated at previous HITAC meetings, the MAT will be transitioning back to HHS, and NQF is actively working with HHS to complete the transition by December. Therefore, the Change Control Board and the Oversight and Testing Workgroup are placed on hold.

HITAC members had the following questions and comments on the MAT:

- Regarding the activity level of the MAT users, it was noted that some accounts have not been very active while others, particularly the HHS contractors, have completed several measures.
- Because NQF continues to manage the QDM, which is the basis for building measures in the MAT, NQF will continue having input into the MAT after the transition.

# **eMeasure Learning Collaborative**

Dr. Butt provided an overview and status update of the eMeasure Learning Collaborative. The Planning Committee, which has representation from HITAC members, is planning the next in-person meeting, entitled "Advancing Solutions for eMeasure Implementation." The meeting will have three breakout groups that focus on medication management, condition/problem management, and data visibility for essential elusive results. (Note: the meeting date has been changed to September 21, 2012.)

HITAC members had the following questions and comments on the eMeasure Learning Collaborative:

 Following the in-person meeting, NQF will submit a report documenting repeatable best practices that can be repeated and recommendations for addressing gaps. HITAC will review the meeting summary and help to formulate the recommendations.

- While the contract for this project will end this year, the Planning Committee is looking into
  ways to continue this forum. There is a good sense of momentum from the April meeting to
  continue as an online community with additional meetings if funding is secured.
- It was suggested that the Collaborative may be able to leverage work with the ONC Regional Extension Centers.
- Ms. Grace noted that AHRQ has had experience with web-based workshops that were
  interactive and successful, and is willing to share more information on their model.

# **Critical Path Projects**

Dr. Kennedy provided a status update on the Critical Path projects, which are assessing the readiness of electronic data to support quality measurement on two selected topics, patient safety and care coordination. The patient safety scope is focusing on medical device safety, specifically infusion devices in the acute care setting. The care coordination scope is focusing on communication of the patient plan of care during transitions of care. Technical expert panels (TEPs) were convened to define the necessary data elements within EHRs and existing health IT infrastructure, and subcontractors are conducting environmental analyses based on the TEPs work. Following the completion of the environment analyses, the TEPs will reconvene to develop recommendations and action steps to address gaps, and a draft report with their recommendations will be posted for public comment. The recommendations will also inform the QDM.

HITAC members had the following questions and comments on the Critical Path projects:

- The patient safety project is focusing on infusion in acute care, but home infusion could be follow-up project.
- Regarding the Patient Safety TEP's infusion system schematic, the new FDA unique device identifier (UDI) standards will apply to infusion pump supplies. The question then becomes, is the EHR the right place for this data? The TEP will be looking further at this issue.
- Another follow up activity for the Patient Safety TEP is to compare their list of data elements to the Common Formats. There is a TEP member who is also on the expert panel for the Common Formats for coordination between these efforts.
- While the care planning process flowchart depicts a more generic adult model, the Care
  Coordination TEP had significant input from a framework developed for the pediatric setting.
  The TEP also had considerable discussion about including the patient's goals and patient's
  experience, as well as the methodological challenges of capturing patient-generated data.
- The S&I Framework has had different workgroups looking at care plans and transitions of care, and developed use cases that could not cover all the needed elements of the care plan. To have a comprehensive care plan that is the "source of truth," it may need to reside outside the EHR.

#### **Public Comment**

There was no public comment.

# **Meeting Wrap-Up and Next Steps**

Dr. Tang summarized that there are two main topic areas on which this advisory committee can make recommendations to NQF to promote the effective use of eMeasures:

- 1. One lever is the endorsement criteria. HITAC could provide feedback on how testing criteria—reliability/validity, usability, and feasibility—could be different for eMeasures.
- 2. Another lever is NQF's role to convene and educate. HITAC could discuss how NQF should expand its role for the eMeasure Learning Collaborative as a model for convening and educating the field to shape the development of useful eMeasures and their use.

Dr. Tang and Dr. Eisenberg will discuss further these potential new activity areas for HITAC, and follow up with the HITAC members who expressed interest in possible subgroups.

The next meeting will be a conference call on September 14, 2012.

# **ADJOURN**

Dr. Tang thanked the participants and the meeting was adjourned.