



I am Phyllis Torda, Vice President for Strategy and the Quality Solutions Group at the National Committee for Quality Assurance (NCQA). NCQA is a private, nonprofit organization committed to improving health care through measurement, transparency and accountability. I am pleased to have the opportunity today to discuss with you NCQA's experience in developing e-measures. NCQA worked with others to develop the current standards used for specifying e-measures. In conjunction with our partners from Mathematica Policy Research and Booz Alan Hamilton, we used these standards to respecify 24 of our measures for Stage 1 of Meaningful Use; to specify or respecify 65 measures included in the Notice of Proposed Rulemaking for Stage 2; and we anticipate developing approximately 20 new measures for use by CMS and ONC in Stage 3.

NCQA understands that electronic health records are essential to continuing to measure and improve our nation's health care. EHRs support the following opportunities:

- Accessing clinical detail needed for improved quality measurement and support for coordination of care across settings, particularly when specialty care is involved
- Automating calculations that would be cumbersome to perform using paper records, such as the calculation of change over time in blood pressure or functional status, longitudinal risk prediction and composite measures
- Collecting patient-reported health status and other indicators that are then available for the provider and patient to use to fashion care plans and monitor outcomes of care
- Identifying process opportunities to improve care and incorporate those into clinical decision support tools.

We are fortunate to be playing a part in realizing these important opportunities. Today I would like to share with you some challenges we have encountered and ideas about how to address those challenges.

Data, data everywhere

Current e-measure specifications rely on encoded (numeric) patient data stored in structured fields. As traditional measures that rely on manual chart abstraction are respecified as e-measures, the number of structured, encoded data elements needed in the EHR system increases. This increase in data elements affects data entry requirements for providers, and vendors face the trade-off between creating new data entry features and enhancing the sophistication of their products.

We need to be strategic about what should be measured by whom. Oncologists need to collect data on stage but primary care physicians do not. As we move beyond the initial stages of quality measurement and reporting, could EHR certification requirements and Meaningful Use clinical quality measure reporting requirements become more specialty specific? In addition, certification requirements can promote greater attention by vendors to usability so that providers find it as easy as possible to enter the data needed for meaningful measurement.

We also need to group measures and measure results so that providers can see and understand the relationships between individual measures. This can be by patient or by the various stages of health or by condition.

Achieving standardized specifications

The current means of specifying measures for EHR reporting include using the National Quality Forum's Measure Authoring Tool (MAT) and the Quality Data Model (QDM) that underlies it, and the Health Quality Measure Format (HQMF) that is generated by the MAT. The current versions were based on existing quality measures and these formats do not allow us to take advantage of some new opportunities offered by EHRs. In trying to specify measures recommended by the HITPC Tiger Teams, such as blood pressure change over time or functional status over time, we have found that current versions of these standards do not fully accommodate the mathematic calculations needed.

As we prepare for Stage 3 we anticipate that specification standards will evolve to support the next generation of measures. Another option is approach measure specification by providing a narrative specification along with a "test deck" of simulated or deidentified patient data used for testing the implementation of the narrative specification and whether it produces accurate calculations. We are exploring with EHR vendors whether such an approach would work for them, and are eager for other ideas about how to address this issue.

Testing and validation

The testing protocols we have used rely on identifying whether needed data elements are collected as structured data in current EHRs. This approach allows us to evaluate feasibility for the EHR system implementations in place today, but not for what could exist in the future, especially if supported by ONC certification requirements. In addition there is always a question about the generalizability of feasibility testing results from the handful of sites that can be used for any one project.

Alternate approaches to testing might include exploring with vendors whether there are more "wholesale" approaches to testing, where tested software features could then be deployed to individual sites as software updates. We could test for accuracy of calculation with vendors, using test decks as described above. We could then perform additional testing at some sites using real data. Site-level testing might explore issues related to data completeness (reliability) as well as issues needed to establish the validity of a measure. As policy we need to be explicit about our goals with regard to generalizability and feasibility. For what type of sites do new measures need to be feasible—All? Some? A range? How much workflow change is acceptable?

As we move toward greater use of e-measure results, certification will need to incorporate automated testing and oversight methods for validating results. To do so, we can use of some of the same types of processes used for testing as part of measure development.

Interoperability

As we consider new measures to fill identified gaps and address the quality issues associated with coordination of care, the lack of information exchange from one setting to another remains a significant barrier. We can build these measures for situations in which providers are part of a system that shares an EHR, but quality will improve only with broader information exchange.

Conclusion

I hope it is apparent that measure developers have gained significant experience using EHRs to support quality measurement, and that we have opportunities and ideas about how to leverage that experience to improve the quality of the endeavor. Thank you.