



April 1, 2011

National Quality Forum  
Attention: eMeasure Format Review Panel  
601 13th Street NW  
Suite 500 North  
Washington, D.C. 20005

RE: 60-day Public and Member Comment - Cycle 2-4, 113 eMeasures

Dear eMeasure Format Review Panel:

On behalf of AMIA (the American Medical Informatics Association), we are pleased to submit these comments to help inform your important discussions. AMIA is an unbiased, authoritative source within the informatics community and the healthcare industry. AMIA and its members are transforming health care through trusted science, education, and practice in biomedical and health informatics. AMIA members – 4,000 informatics professionals from more than 65 countries – belong to a world-class informatics community where they actively share best practices and research for the advancement of the field. Members are subject matter experts dedicated to expanding the role that informaticians play in patient care, public health, teaching, research, administration, and related policy. As the voice of the nation’s top biomedical and health informatics professionals, AMIA plays a leading role in moving basic research findings from bench to bedside, evaluating interventions across communities, assessing the effects of health innovations on public policy, and advancing the field of informatics.

AMIA thanks the National Quality Forum (NQF) for providing an open comment period to solicit input on the 113 retooled eMeasures. AMIA recognizes the importance of determining what measures need to be implemented and by when. Integration of patient-centered measures within electronic health records (EHRs) is a core building block for creating a higher quality, more affordable healthcare system, and is necessary to support meaningful use of EHRs. There are two aspects to the evaluation of eMeasures; the need to address the “what” – the content to be measured – and the “how” – the most effective method of gathering data necessary for quality measurement. Our comments focus more on the methods used to collect the information and not which measures need to be implemented.

The following general (not measure-specific) comments address some of the broader questions relating to 113 retooled eMeasures under review. They are organized into the following broad

issues: Complexity; Numerators and Denominators; Code Sets and Data Aggregation; Continuity of Care; and Dichotomous Indicators for Performance.

### **eMeasure Complexity**

Converting to eMeasures is a complex undertaking. AMIA believes that review of the 113 retooled eMeasures must take into account the inherent complexity presented by each measure. AMIA believes further that, before forcing a structured coded entry for many aspects of the measures, specific validation techniques should be described for each measure and associated codes. This will help ensure that the most effective structure is in place. Additionally, the domain of measurement (such as diagnosis, treatment, observation, history) should be clarified with each taxonomy specification. Although the current version makes an attempt at this with the ‘standard category’, a summary document would allow an implementer to know which standard categories are needed across which taxonomies. A broad-based taxonomy (like SNOMED-CT) that may bridge multiple domains often means the taxonomy holds only across the partial domains. An implementer may have difficulty knowing if their zero is lack of documentation or lack of concept linkage.

AMIA is concerned about the number of taxonomies included – more than 35, including different versions – and believes that such complexity might contribute to user/implementer confusion. Additionally, we believe that further review and revision of the instructions for performing the actual calculations is warranted. We believe that in the human readable version, the pseudo code does not match well to the machine readable version, making implementation much more difficult. The human readable version does not instruct on what to do with the many different taxonomy specifications for the same concept, requiring one to assume the ‘OR’, and does not specify whether it is the date or value that is required in the machine readable version.

AMIA believes that the inherent complexity of the eMeasures as proposed may lead to implementation challenges and difficulties. This is important because the eMeasures can be quite difficult to get right – with so many taxonomies and individual concept identifiers, there can be a significant gap between surface implementation of codes and the actual use. This problem actually could hamper efforts to measure quality or give the implementer a false security that they have the appropriate framework for implementation.

A significant challenge of meeting the eMeasures standard as intended is the availability of the data and information needed to describe them. Historically, national quality measure reporting demanded considerable effort to gather and aggregate the information required for report submission. Health care today is unavoidably characterized by a mixed hybrid of electronic clinical information systems in some settings, paper documentation within others, and a lack of comprehensive data for people coming from other healthcare locations or taking medications at home and forgetting to mention them. For institutions to gather, aggregate and report progress towards eMeasures, dedicated personnel must access the multiple different sources of data that are to be aggregated into just one quality measure. For example, to adequately answer NQF#0132 Aspirin at Arrival, the source of the data required could be found in the pre-hospital

clinical information system, an emergency department system, or the inpatient acute care clinical information system or even not in any system. It would be impossible for organizations to comply with this requirement for some (or many) of their patients. To complicate matters, a mix of paper and electronic records are typically involved in data aggregation. Even if the records are electronic, if the data are spread across two clinical information systems, it is unlikely that the medication aspirin is recorded identically in each one. These differences require thoughtful interpretation, aggregation and perhaps even extraction from narrative (even if electronic) reports. The electronic method of submitting these eMeasures will not change the challenges of data and information acquisition.

### **Numerators and Denominators**

As is generally the case, defining numerators and denominators is tricky. We believe that in spite of NQF's significant efforts, there are still questions concerning calculation of the denominator for a number of the measures, for example electronic prescriptions. We believe that how the denominator is calculated needs to be better clarified. For example, does the denominator include anyone seen in the last year, or within the last two to three years? Additionally, specifications are not clear about the timing of the numerator event -- any time in the last year, or 2 or 3? At other times, measures are assessed on the basis of a clinical finding such as a blood pressure value, but it is not clear if this means the value at the most current visit, or ANY time in the recent past, or an average of several values.

AMIA believes that NQF should consider more fully how quality measures might change across a variety of assumptions regarding numerator and denominator issues. Absolute quality scores are likely to change as the numerator and denominator changes, thereby making it easier or harder to achieve the measure. Increasing the timing over which an event counts in the numerator will make the quality measure easier to achieve. For example, expanding the time interval over which a patient could have last been seen in the clinic makes it harder to achieve a quality measure, since a patient who has not been seen in the past year has no opportunity to have a recent measure recorded. It is possible that quality scores will shift up or down evenly across providers under these different assumptions, resulting in no change in relative ranking of providers. AMIA believes that data on these types of occurrences over a wide cross section of patients and providers is required in order to make better assessments of various proposed assumptions.

### **Code Sets and Data Aggregation**

The code sets associated with each eMeasure are an important aspect of their implementation. AMIA realizes NQF worked with experts on code selection and are expecting ongoing refinement of these associated code sets with each eMeasure. AMIA believes, however, that the code sets should be reused and aligned among measures and measure developers. It is imperative to include context of use as well as methods to express how data move within the clinical workflow (source of the data, recorder of the data, setting, and location where the data can be found in the EHR). Inconsistencies of code sets used among measures or how they are

applied within the context of care will have significant implementation and support costs and may result in poor quality measurement data available.

NQF has defined the eMeasures with standardized code sets such as ICD9, ICD10, and SNOMED. Although it is important and very helpful for NQF to standardize the code sets associated with each eMeasure, the definition of the data contained within an institution's individual clinical information system is likely different, even if similar to the code sets identified by NQF. Therefore, even if an institution collects and stores the required data to meet an eMeasure, there will be considerable effort required by each institution to map their data element, or perhaps several elements, to the code set defined by NQF. The skill sets needed initially to map and maintain the mapping are different from the current skill set in place to collect and aggregate quality measure items. The increase in costs to accomplish and maintain the mapping would be an additional burden to healthcare providers, especially in smaller institutions that may not have the human or financial resources required.

A practical challenge to collecting and aggregating the information needed to report on eMeasures across the expected disparate systems is writing and implementing the queries against the clinical information systems. eMeasures, while clinically tangible can be very complex and even ambiguous. These traits complicate the query structure to obtain the eMeasure even more.

An additional practical challenge is the costs associated with creating and maintaining the interim storage structure and systems needed when gathering the data prior to submitting eMeasure reports. Data warehouses are a useful tool for aggregating data extracted from the transactional patient care systems. Data warehouses, however, are not yet a standard component of a provider's overall clinical system architecture. The expectation of all institutions reaching eMeasure reporting in the timelines outlined may not be reasonable without significant internal or third party vendor costs and effort.

Another concern is provider ability to reuse information collected to support the NQF eMeasures. Providers are responsible to multiple regulatory and oversight agencies and organizations. Many of these entities require data that are included in the NQF Quality Measures. However, if these third parties have different requirements than the proposed eMeasure definitions and aligned code sets, the burden and costs to providers will escalate.

### **Continuity of Care**

AMIA notes that continuity of care is an important quality measure that is not reflected in any of the quality measures under review. Generally, healthier patients are the ones seen less frequently. However, quality measurement is more difficult when a patient with co-morbidities is not seen in more than a year. Patients not seen in over a year may be exceptionally healthy with little motivation to see a provider, or may have transferred their care, or perhaps have died, so it may be unfair to penalize a provider for not seeing the same patients year after year. However, given the impact of patient turnover on the availability of numerator information (e.g., certainty of a colonoscopy in the past 10 years in a patient being seen for the first time), or denominator

information (e.g., a patient not seen for 2 years but still counts as a poorly controlled patient with Hypertension because his last BP was too high), it seems that patient turnover should be incorporated into the quality measures.

### **Dichotomous Indicators for Performance**

A final area of consideration relates to measures where the dichotomous indicator for performance may be variably associated with the actual quality of the intervention. As an example, we are concerned about setting a precedent that EHRs would be required to have a checkbox to indicate that smoking or alcohol cessation counseling was provided when two providers may handle that process in very different manners. Obviously counseling is important, and it is certainly easy to ask providers to check a box when they have completed a counseling task, but it is potentially problematic to rank one provider higher than another because a provider has checked the "smoking counseling" box more often. Patient readiness to quit smoking in the context of other goals should be assessed.

### **Concluding Remarks**

AMIA appreciates the opportunity to submit these comments. Again, we thank the NQF for soliciting public input to help inform the review of the 113 retooled eMeasures. Please feel free to contact me at any time for further discussion of the issues raised here.

Sincerely,

A handwritten signature in cursive script that reads "Edward H. Shortliffe". The signature is written in black ink and is positioned below the word "Sincerely,".

Edward H. Shortliffe, MD, PhD  
President and CEO, AMIA