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May 26, 2011

National Quality Forum
Attention: Quality Data Model (QDM) Review Panel
601 13th Street, NW
Suite 500 North
Washington, DC 20005

RE: 60-day Member Comment – Quality Data Model

Dear Quality Data Model Review Panel:

On behalf of AMIA (the American Medical Informatics Association) and its Nursing Informatics Working Group (NIWG), we are pleased to submit these comments to contribute to your important discussions. AMIA's NIWG made significant contributions to the comments in this letter. NIWG promotes the advancement of nursing informatics within the larger interdisciplinary context of health informatics. The Working Group and its members pursue this goal in many areas including professional practice, education, research, governmental and other service, professional organizations, and industry.

AMIA thanks the National Quality Forum (NQF) for providing an open comment period to solicit input on the Quality Data Model (QDM). AMIA recognizes the importance of having an information model that clearly defines concepts used in quality measures and care delivery to enable automation of structured data capture in health information technology. The QDM version 3.0 provides the potential for more precisely defined, universally adopted electronic quality measures to automate measurement through the use of electronic health information that is captured as a byproduct of care delivery. The QDM will enable the capture of performance data as a result of care process electronic documentation.

General Comments

The specification refers to IFMC as the subcontractor secured to develop a Measure Authoring Tool. However, the acronym IFMC is not explicitly defined. Providing the full name of the entity will enhance understanding of the relationship between the QDM and the Measure Authoring Tool. We assume that IFMC refers to the Iowa Foundation for Medical Care.

As stated in the specification, the QDM is intended to enable automation of data contained in Electronic Health Records (EHRs), Personal Health Records (PHRs), and clinical applications. However, data from administrative and financial applications are also critical to evaluating NQF-endorsed measures related to nurse staffing. Specifically, data from these systems are instrumental in calculating the percentage of productive nursing hours worked by registered nurse (RN) staff with direct patient care responsibilities. AMIA believes that the addition of administrative and financial applications to the specification will more adequately reflect existing NQF-endorsed measures. The QDM needs to support both clinical and administrative concepts associated with performance measurement and improvement.

As written within the specification, the "QDM is a model of information used to express patient, clinical, and community characteristics." However, QDM's vision is to support measurement and improvement efforts across all aspects of health and healthcare delivery. For this reason, AMIA believes that the patient, clinical, and community characteristics should be changed to "care delivery and population health characteristics," taking into consideration all aspects of care delivery including the social and economic wellbeing of the population. This is an important aspect of QDM's evolution and is aligned with the NQF National Priorities Partnership.

AMIA assumes that models of clinical decision support (CDS) can be thought of as a way to encode actions related to quality data. We believe that the same data elements (e.g., symptoms, problems, interventions, and diagnoses) can be combined with temporal constraints, setting, and other contextual information (are they at home, in the office, or in the middle of a transition?) to generate recommendations or suggestions about actions. The vocabularies, attributes, and concepts are very similar. We suggest that NQF provide examples of how the QDM will work with CDS standards to improve validity, usefulness, and facilitate adoption.

QDM Concepts

Within the QDM specification, there are repeated references to "clinical" concepts. A definition of clinical concepts should be added to eliminate any ambiguity in interpretation and use of the QDM. This is important because performance measurement involves the "person being measured" as well as the "healthcare delivery provided." As we suggest above, healthcare delivery is not restricted to "clinical" concepts; it also involves administrative and financial concepts related to the operational management of care. As an example, staffing and resource utilization are system factors and not necessarily considered "clinical" concepts. However, these factors are an important part of performance measurement. This is reflected in the existing NQF-endorsed measure "Practice Environment Scale - Nursing Work Index (composite and five subscales)."[1]

There is a QDM concept labeled "transfer"[2] to support continuity and coordination of care. In addition to transfer, care coordination functions typically involve a discharge from one location (hospital) and an admission to another location (home care agency). It is not clear how these concepts are handled within the QDM.

We believe that when planning and providing care, the concepts of "goal" or "expected outcome" are critical factors. Defining and monitoring goals are essential in preventing potential problems, resolving a currently existing problem, or maintaining or enhancing a present status or level of functional ability. Goals are subsumed within the QDM concept "characteristics." Given the critical importance of defining and monitoring goals within care delivery, AMIA believes that goals should be structured discretely to support future measures related to the planning and coordination of care. Clear, concise communication and monitoring of goals is essential to the plan of care and should be defined as a discrete concept along with the QDM concepts of condition/diagnosis/problem and intervention.

[1] National Quality Forum (NQF)-Endorsed Standards, 2009.
[2] Transfer refers to the different locations or settings a patient is released to, or received from, to ensure the coordination and continuity of health care. (QDM, April 2011).

QDM States

The QDM state of “assigned” should be added to the QDM states of action to support existing NQF measures related to nurse staffing.

QDM Attributes

We believe that the QDM attribute related to the “actor” should explicitly mention data derived and recorded by consumers as a byproduct of self-care management.

From some of the examples, the “source” seems to be the source of an action where there is relatively little ambiguity (the primary care doctor is the source of the specialty consult). It is not clear if "source" is ever meant to be the source of information that drives the quality model -- such as the source of a diagnosis or the source of allergy information, or perhaps other important characteristics like "duration." What may be missing is a "certainty" attribute. For example, a patient can report an allergy to penicillin, though that report could be based on little evidence or based on a known, witnessed anaphylactic event. AMIA suggests that quality measures should account for certainty in assessing the appropriateness of aspects of clinical care. It would be interesting to report on the proportion of important "concepts" where the certainty is high versus low, versus unknown.

The reason "certainty" may not be included is because it is not part of the typical discrete data captured by the EHR. However, other items included in the QDM are also not captured systematically such as functional status or risk evaluation, although these certainly could be captured as well.

Concepts Accounting for Care Coordination

As the healthcare system has expanded over the past 40 years, many health professionals are providing care in accordance with their associated scope of practice standards. To this extent, the references to physician should be expanded to include provider or healthcare professional. This is of particular importance in care coordination. For example, nurses who work in long-term care settings (i.e. home care, skilled nursing, etc.) often make referrals to social workers and community support services. In addition, the communication between home care nurses and primary care providers during the initial visits to long-term care settings plays a significant role in prevention of re-admissions. During transitions from acute to long-term care, nurses reconcile

(i.e., look for omissions, errors, and/or incorporate new data) into the listed symptoms, problems, medications, interventions, and diagnoses. For this reason, the state of “reconcile” should be added as a state under the concept “symptom.” Similarly, "Recommend" could be a state associated with "Medication" or "Device." We suggest that NQF clarify the table beginning on page 23 (which lists only a handful of "states" associated with each concept). It is not clear to us if the mapping of concepts to states is meant to be illustrative or if the table is complete.

Definitions

Components of the definitions provided for “characteristics” and “symptom” overlap with the definition for “condition/diagnosis/problems.” Specifically, the definition of characteristics includes mental health, adherence, coping, grief, and substance use issues. These labels are considered diagnoses within the scope of nursing practice. A nursing diagnosis is a clinical judgment about individual, family, or community experiences and responses to actual or potential health problems and life processes.[3] AMIA maintains that additional clarity between the definition of characteristics and that of condition, diagnosis, and/or problem is needed.

The definition for condition/diagnosis/problems references “scientific interpretation of a result, assessment, and treatment response data.” Many times, consumers/patients report problems that become part of the problem list and are not scientifically interpreted based on a result or assessment by a provider. The definition of condition/diagnosis/problems should take into consideration consumer- and patient-centered care models whereby patient problems are recorded and monitored by providers and/or consumers in self care management.

The definitions for “environmental location” and “facility location” are not mutually exclusive. As an example, home could be considered an environmental location (patient developed chest pain at home) and also a facility location (the nurse is providing care during a home visit). In addition, it is not clear whether “facility location” is actually referencing “care provision location.” An unambiguous label is needed to differentiate the concepts related to location.

[3] North American Nursing Diagnosis Association (NANDA), 2009.

Concluding Remarks

AMIA is grateful for the opportunity to submit these comments. Again, we thank the NQF for soliciting public input to help inform the review of the QDM. Please contact us at any time for further discussion.

Sincerely,

Edward H. Shortliffe, MD, PhD, FACMI

President and CEO, AMIA

Rosemary Kennedy, RN, MBA, FAAN

Chair, AMIA Nursing Informatics Working Group

About AMIA

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.