



November 7, 2011

National Quality Forum
Attention: Quality Data Model (QDM) Review Panel
601 13th Street, NW
Suite 500 North
Washington, DC 20005
Submitted via email: qdm@qualityforum.org.

Re: QDM Draft October 2011

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. 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 so that stakeholders (i.e., providers, researchers, measure developers) who monitor clinical performance and outcomes can clearly and concisely communicate necessary information. 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.

Below we offer several comments and suggestions. Some of these recommendations are more general in nature while some are quite specific and detailed.

- We have a general concern about the implicit assumption that electronic health record (EHR) vendors can or have implemented the functionality to support measures that rely on the QDM.
- Regarding the vocabulary recommendations, we are concerned that this proposal has not been adopted by the Office of the National Coordinator (ONC) in current and/or future regulations and question if it is premature to add such recommendations to the QDM.

Also, we are concerned about the reliance on SNOMED for topics where there is no defined transition path.

- We suggest that efforts be undertaken to ensure that the QDM and other accepted clinical data models be harmonized.
- We support the proposed annual update process to keep current with industry needs. Because all substantial changes to the QDM are aligned with Meaningful Use (MU) requirements, we encourage NQF to coordinate and communicate with ONC and other Federal bodies and emphasize the lead time needed for providers, vendors and other stakeholders to comprehend and implement any required changes.
- We are concerned about the level of initial and ongoing training of providers that is required in order to implement the model.
- Regarding document organization, we suggest that the document be re-organized to be more reader friendly. For example, consider the inclusion of sub-headings on the top of each page as points of reference for the reader. It would also be helpful to include an Executive Summary.
- Condition/Diagnosis/Problem is only mapped to 'states of being.' Because maintaining an active problem list is an MU objective, the ability to collect information about 'documentation' and 'reconciliation' events (State of Action) for the 'Condition/Diagnosis/Problem' category may be beneficial.
- We suggest that you consider inclusion of Patient Education and Care Coordination categories.
- Regarding the category of Medication, we suggest the inclusion of the state of being "inactive." For instance, a drug may be on hold for a variety reasons, or a drug may be administered according to an ordered course and then completed. A history of medication use may be useful for determining future actions.
- Regarding the Physical Exam - "Alerted," we believe that it would be useful to clarify who is being alerted, what the alert concerns, and the purpose of the alert.
- Regarding the Time attribute, we note that the terms 'sequencing' and 'process context' are included in the visual representation. The use and value of these concepts are not intuitive and not fully explained. An example showing how 'sequencing' could be used would be beneficial. It is also unclear if 'process context' is an aspect of the timing attribute.
- 'Causative agent' is designated as an attribute for 'Adverse Reaction: Allergy' and 'Adverse Reaction: Non-Allergic' but not included in the list of attributes. We believe that its use is more consistent with the QDM component 'instance' than as an attribute.

- Duration is discussed as an example of an attribute in the descriptions of ‘Relative Timing’ but it is clearly stated that it is not an attribute in the explanation of the time attribute. It would be beneficial, if the QDM grammar could extrapolate from the time attribute and allow for the use of duration as a sort of ‘derived attribute.’ .
- ‘Value’ is used in some examples in the location of attributes (“Physical exam finding documented: diastolic blood pressure (value \geq 90 mmHg)”). This may be confused with the ‘value’ QDM model component described in the glossary. Renaming the QDM ‘value’ component to reflect its nature as a code from a selected taxonomy would decrease ambiguity here.
- A summary table of the available operators, functions and relative timings would be beneficial in the QDM overview document, but it would be more consistent to include the description of each term in the glossary section. Additionally, some operators and functions are mentioned, but never defined.
- The use and limitations of some functions is unclear. ADDED TO and SUBTRACTED FROM are described as only being applicable to dates while MULTIPLIED BY and DIVIDED BY do not have this limitation. It is not clear if there is another function available for adding/subtracting the values of non-date QDM elements and if so, whether there is a need for these to be separate from the functions for adding/subtracting dates.
- We believe that the Round function needs additional explanation. There is no indication of how the rounding occurs, whether to the nearest 10, 100 or some other factor.
- ABS, SUM and similar functions would be more useful if they returned a number rather than a true/false. For SUM, in the example, duration is being summed, but there is no indication how the system would know that it was measuring hours. This could result in errors if the syntax is not standardized.
- The functions which allow for selection of a specific occurrence (First, Second, Third ...) are incompletely expressive. A Select function, with the ability to designate any single entity, may simplify the grammar and would allow for complete expressivity.
- We believe that there may be some challenges regarding problems driven by date because in some instances, date may not always apply or be obtained (for example, in the case of a past medical history, where no date is provided by the patient). We encourage NQF to allow for some flexibility regarding date driven problems.
- Regarding tabs and/or parenthesis in the logic section, logical and mathematical operators are reviewed, but missing from the explanation is the use of parenthesis and tabulation in the grammar/specifications to indicate the order of operations. For complete clarity, the use and meaning of any type of spacing and punctuation should be included in the model.

- Regarding the specification of “Functions” for sequencing and calculation, some valuable arithmetic functions are missing, such as AVERAGE and MEAN. SUM is included so why not the rest of the common set functions?

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 of the issues we have raised.

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.