Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Dana Alexander	GE Healthcare Information Technologies	'General concern about assumption that EHR vendors can/have implemented this functionality to support measures that rely on it.	Thank you for your comment. NQF appreciates your concern and looks to more fully engage the vendor community with QDM development. NQF will be sponsoring a 'collaborative' in 2012 that will bring together a multitude of stakeholders to discuss both the QDM and the Measure Authoring Tool (MAT).
Dana Alexander	GE Healthcare Information Technologies	Concerned with the assumption that the HIT Standards Committee recommendations will be accepted as presented by ONC and in proposed and final rules	Thank you for your comment. NQF appreciates your concern. Currently, the HIT Standards Committee Vocabulary Task Force recommendations have been submitted to the ONC via transmittal letter on September 9, 2011.
Dana Alexander	GE Healthcare Information Technologies	Vocabulary recommendations: concerned this proposal has not been adopted by ONC in regulations and so it seems premature to add to the QDM. Also, concerned about the reliance on SNOMED for topics where there is no defined transition path.	Thank you for your comment. NQF appreciates your concern. Currently, the HIT Standards Committee Vocabulary Task Force recommendations have been submitted to the ONC via transmittal letter on September 9, 2011.
Dana Alexander	GE Healthcare Information Technologies	Ensure the QDM and other existing clinical data models are harmonized both structurally and functionally	Thank you for your comment. NQF agrees that harmonization is an important component of the QDM development moving forward. NQF is currently working with several groups and initiatives to harmonize efforts.
Dana Alexander	GE Healthcare Information Technologies	Regarding annual updates: Consideration needs to be given to allow time for vendors, providers and others to consume and implement all substantial changes that are published'	Thank you for your comment. NQF appreciates your concern and looks to more fully engage the vendor community with QDM development. NQF will be sponsoring a 'Collaborative' in 2012 that will bring together a multitude of stakeholders to discuss both the QDM and the Measure Authoring Tool (MAT).

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Dana Alexander	GE Healthcare Information Technologies	'Care Goal: we agree with the addition of Care Goal as a category and its assigned states	Thank you for your comment. NQF strives to incorporate comments and suggestions from all stakeholders.
Dana Alexander	GE Healthcare Information Technologies	Condition/Diagnosis/Problem is only mapped to'states of being'. Because maintaining an active problem list is a Meaningful Use objective, the ability to collect information about'documentation' and'reconciliation' events for the'Condition/Diagnosis/Problem' category may be beneficial.'	Thank you for your comment. Please see the addition of 'reconcile' state to 'Condition/ Diagnosis/ Problem' in the QDM Update June 2012. NQF appreciates your efforts to help keep the QDM aligned with Meaningful Use objectives.
Dana Alexander	GE Healthcare Information Technologies	Category of Medication: would suggest the inclusion of the state of being 'inactive'. A history of medication use may be useful for determining future actions.	Thank you for your comment. NQF appreciates your comments that help keep the QDM relevant for the clinical practitioner. Please see the addition of 'inactive' to the states for the category of 'Medication' in the QDM Update June 2012.
Dana Alexander	GE Healthcare Information Technologies	Time attribute: The terms'sequencing' and'process context' are included in the visual representation. The use and value of these concepts is not intuitive and not fully explained. An example showing how 'sequencing 'could be used would be beneficial.	Thank you for your comment. NQF appreciates comments that help clarify the model. Please reference the QDM Update June 2012 to see an updated version of the timing attribute visual.
Dana Alexander	GE Healthcare Information Technologies	'Causative agent' is designated an attribute for'Adverse Reaction: Allergy' and'Adverse Reaction: Non-Allergic' but not included in the list of attributes.	Thank you for your comment. Please see the addition of 'causative agent' as an attribute of 'Adverse Reaction: Allergy and Non-Allergy' in the QDM Update June 2012.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Dana Alexander	GE Healthcare Information Technologies	Duration is discussed as an example of an attribute in the descriptions of 'Relative Timing' but is clearly stated to not be an attribute in the explanation of the time attribute. If the QDM grammar is able to extrapolate from the time attribute and allow for the use of duration as a sort of 'derived attribute' that would be beneficial.	Thank you for your comment. Please refer to the next version of the QDM for the attribute of 'length of stay' which is derived from 'admission datetime' and 'discharge date time'. NQF looks forward to working closely with stakeholders to provide additional capabilities for capturing the timing elements necessary for quality measurement.
Dana Alexander	GE Healthcare Information Technologies	Value' is used in some examples in the location of attributes ('Physical exam finding documented: diastolic blood pressure (value ≥ 90 mmHg)'). This may be confused with the 'value' QDM model component described in the glossary. Potentially renaming the QDM 'value' component to reflect its nature as a code from a selected taxonomy would decrease ambiguity here.	Thank you for your comment. NQF strives for consistency in the QDM and it's related documents. Stakeholder comments and feedback help us achieve this goal and deliver a quality product. Please note the change of 'value' to 'result' throughout the document for ease of reading and consistency.
Dana Alexander	GE Healthcare Information Technologies	'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 types of spacing and punctuation should be included in the model.	NQF thanks you for your comment. In an effort to streamline documentation, NQF encourages stakeholders to review the Measure Authoring Tool user guide for further information on syntax, functions and operators for use with QDM elements. Please see the Guidelines for Syntax section of the Measure Authoring Tool user guide (http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=68493) for guidance on syntax.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Dana Alexander	GE Healthcare Information Technologies	Regarding the specification of 'Functions' for sequencing and calculation. There are some valuable arithmetic functions missing such as AVERAGE and MEAN. SUM is included so why not the rest of the common set functions?	Thank you for your comment. NQF is currently working on a systematic method for expressing all functions, operators and relative timings. MEAN is a currently available mathematical operator in the QDM. Please see the next publication of the QDM for the addition of AVG or 'average'.
Dana Alexander	GE Healthcare Information Technologies	Problems driven by date does not always apply..e.g.. past medical history where no date is given by patient that needs consideration.	Thank you for your comment. NQF agrees that there are many instances within a patient history where a date is either unknown or not given. A possible solution to identify an unknown date would be to use the attribute of 'start datetime' and assign the SNOMED code for 'unknown: 261665006'.
Dana Alexander	GE Healthcare Information Technologies	A summary table of the available operators, functions and relative timings would be beneficial in the QDM overview document, but the description of each term is something that is more consistent with the glossary section. Additionally, some operators and functions are mentioned, but never defined.'	Thank you for your comment. Please note a new summary table of operators and functions in the QDM Update June 2012. A glossary section will also be included. NQF strives for clarity and consistency and hopes these changes will this possible.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Rute Martins	The Joint Commission	The new definition for 'encounter' requires further clarification. While it should accommodate multiple settings it becomes unclear what an encounter is in an inpatient setting. Particularly: Can encounters be nested? For instance, if a patient was admitted as an inpatient as a result of an ER visit and also spent some time in the ICU, are these considered three separate encounters? And if so, will the inpatient stay as a whole include the ICU admission? In addition, in a hospital setting, there are countless interactions with multiple individuals who provide care to the patient, which, according to the note on page 9 (item 4) would amount to a number of encounters. However, this would commonly be regarded as a single encounter: a inpatient stay. How can the multiple 'levels' (inpatient encounter, ICU encounter, internist visit, nurse assessment) and 'modes' of interaction (telephone, electronic, verbal, in-person) be correctly mapped to correct EHR context?'	Thank you for your comment. NQF agrees that the concept and definition of 'Encounter' will be an ongoing discussion towards refinement. The idea of multiple levels and modes within an interaction will help to guide the QDM as we move forward to evaluate current EHR context for the Encounter category. Please look for updated information on the Encounter category in future versions of the QDM.
Rute Martins	The Joint Commission	The definition of QDM element is inconsistent across figures 1 (page 10) and 2 (page 11). Figure 1 defines a QDM element as being comprised by the category-state pair, whereas figure 2 includes the value set as well.'	Thank you for your comment. NQF strives for consistency in definitional aspects of the QDM. Please note changes in the QDM Update June 2012 to ensure consistency based on your feedback.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Rute Martins	The Joint Commission	There seems to be a fair amount of overlap among states of action, particularly: Requested and ordered: an order is a request, although the definition of order provides further detail on the concept. Transmitted and reported: a report seems to represent the transmission of a particular kind of information. To further standardize the use of states, a clear hierarchy should be defined to provide guidance on which state to use: e.g. more specific states take precedence over more general states.'	NQF thanks you for your comment. This issue was discussed and addressed by the Health IT Advisory Committee's QDM subcommittee. It was determined by the subcommittee that while both states may seem similar, there are truly distinct aspect to each that warrant keeping both states of action in the model at this time.
Rute Martins	The Joint Commission	The usage of documented is elusive. By definition, if there is no EHR documentation, no category or state can be captured. For instance, we can only know that a procedure was performed if there is documentation thereof. The state seems to be redundant and overlapping with all other states, which can be interpreted as specific types of documentation.'	NQF thanks you for your comment. This issue was discussed and addressed by the Health IT Advisory Committee's QDM subcommittee. It was determined by the subcommittee that while 'Documented' may seem to be an inherent definitional term behind the states of action, it has medico-legal aspects that render it indispensable in the model. Along with quality patient care and outcomes, documentation and the act of documenting care are part of the health care work product today.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Rute Martins	The Joint Commission	Multiple attributes can be added to a QDM element. However, it is unclear how these attributes would be joined (AND or OR). For instance, if looking for physician documentation for severity, does the QDM assume that severity has to be documented by a physician? More detailed information on this matter would be very much appreciated.'	NQF thanks you for your comment. Please see the Guidelines for Syntax section of the Measure Authoring Tool user guide (http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=68493) for guidance on syntax.
Rute Martins	The Joint Commission	The functions first, second, third, etc. do not allow for the handling of an unknown number of instances of a particular element. This is of particular importance to express logic that requires looping through all instances of a particular QDM element. Current operator and functions do not seem to provide the framework to allow for running a particular set of criteria for all (or a specified number of) QDM element instances (e.g. medication administered).'	NQF thanks you for your comment. Your suggestion of a 'loop' or 'select' function would be a valuable addition to the current functionality within the QDM. NQF will look into incorporating this funtionaility into a future version of the QDM.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Michelle Troseth	Elsevier Clinical Decision Support/CPM Resource Center	The Elsevier Clinical Practice Model (CPM) Resource Center is pleased to submit written comments on the October 2011 Draft Quality Data Model. The Elsevier CPM Resource Center is a leading business unit of Elsevier's Clinical Decision Support (CDS) organization (NQF Member #111551). Elsevier CPM Resource Center provides evidence-based clinical content solutions and services that are built on a proven professional practice framework. We work with a growing healthcare consortium to develop standardized tools and resources to minimize duplication and repetition of care, and to prevent medical complications for patients. One resource we offer is an updated and unified relational database that stores tagged data elements for comprehensive care planning/coordination and documentation of clinical services by a diverse interdisciplinary team, including comprehensive patient information exchange. The result is evidence-based standardized clinical documentation support designed to capture individual details at the patient level, and offering many opportunities for measures like those intended with the NQF's Quality Data Model (QDM). This clinical decision support database can be used in virtually any Health Information Technology (HIT) system, including electronic health records. In the near future, derivatives of these solutions will be delivered through mobile platforms and devices.'	Thank you for your comment. NQF appreciates feedback from all areas of health care stakeholders.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Rute Martins	The Joint Commission	Agree with rationale for functional status.	Thank you for your comment. NQF appreciates feedback from all areas of health care stakeholders.
Rute Martins	The Joint Commission	'We believe this category cannot be entirely handled through logic, since there would be no clear-cut way to make a distinction between a transfer and an early readmission. Even though this might be a rare occurrence, it might be the object of some measures.'	NQF thanks you for your comment. This issue was discussed and addressed by the Health IT Advisory Committee's QDM subcommittee. It was identified that 'Transfer' needs to remain in the model as a unique category to aid in describing care coordination efforts moving forward.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Michelle Troseth	Elsevier Clinical Decision Support/CPM Resource Center	We applaud the reinstatement of Care Goal as a category in this version of the QDM. We encourage NQF to incorporate considerations for how Care Goals are most effectively used in day to day practice of clinicians, during hand-offs exchanging accountability for care from one clinician to another, whether within a healthcare setting or across episodes of care. We also encourage NQF to explicitly require Care Goals to be grounded in evidence-based practice. We encourage the NQF to consider broadening the understanding of the needed Mapping of Categories to States, in relation to the Care Goal. The current QDM Draft maps the Care Goal to: Acknowledged (State of Action) Documented (State of Action) Updated (State of Action) Active (State of Being) Resolved (State of Being) Care Goals, when effective, have been clearly articulated to the patient/significant other. We would encourage a new State be added, 'Reviewed (State of Action)' .'	Thank you for your comment. NQF agrees that a 'Care Goal' needs to be clearly articulated to the patient and/or patient proxy to be effective. To that end, NQF encourages the use of the 'acknowledged' state with Source of: Patient with 'Care goal'. This will help to demonstrate the articulation of the care goal to the appropriate entity.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Carmella Bocchino	America's Health Insurance Plans	AHIP supports the draft report and believes that the current report includes significant enhancements from the previous version of the Quality Data Model (QDM). The report clearly describes the QDM and its uses enabling its application in quality measurement. However, the term QDM seems to be a misnomer because it is not strictly speaking, a 'data model'. It is however, a 'quality data grammar' because it expresses the content of the measure to allow queries of existing data. Our understanding is that RIM (HL7's normative Reference Information Model) is where NQF expects the actual data to be stored and Health Quality Measures Format (HQMF) is how a measure is specified. QDM is just the 'grammar' used inside HQMF to get data out of RIM. Based on this understanding it would be important for NQF to clarify that the report pertains to quality data grammar and not a quality data model.'	Thank you for your comment. NQF will continue endeavors and activities towards developing the QDM further into a data model. NQF appreciates comments and feedback that will continue to support the further development of the QDM.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Carol Sakala	Childbirth Connection	Childbirth Connection appreciates the work of HITEP and the opportunity to comment. We feel that the new changes continue to add value and will enhance the work of the stakeholders, including measure developers, HHS, and NQF. We recommend that the introduction provide more information about the broader context for the report, clarifying how the it fits in with the National Quality Strategy, Health IT Meaningful Use, and the Measures Application Partnership. We also encourage HITEP to develop a plan to help measure developers and other stakeholders interpret the report, including various terms, as noted in our specific comments.'	Thank you for your comment. NQF has included a summary paragraph with reference links to give measure developers and implementers a broader scope of how the QDM has evolved.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Carol Sakala	Childbirth Connection	As consumer advocates, we encourage HITEP to make a small edit with major implications in the example of QDM use with a care coordination measure on page 41. The model is designed to assess communication among members of the team, including the patient and family. We hope HITEP will substitute the word 'acknowledged' for the word 'received' as it is crucial to give patients and family members an active role. National aims for patient and family engagement clarify that they should be able to understand and act on the information rather than merely receiving it.'	Thank you for your comment. Please note the changes made of 'received' to 'acknowledged'. NQF agrees with the national aims for patient and family engagement. An active patient and patient support system lead to better health care outcomes.
Carol Sakala	Childbirth Connection	We thank HITEP for reinstating the 'Care Goal' category in this version of the report. We support the rationale and definition of Care Goal. The recent meeting of the MAP Coordinating Committee underscored the importance of understanding the care goals of patients and their families when developing a treatment plan. Patient/family care goals often differ from those of clinicians, and the former should not be overlooked. Consideration of both perspectives will generally lead to a more comprehensive, appropriate, and effective treatment plan.'	Thank you for your comment. NQF appreciates feedback from all areas of health care IT stakeholders.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Carol Sakala	Childbirth Connection	We encourage HITEP to clarify the distinction between 'encounter' and 'interaction' to avoid errors in data translation. We recommend developing a more explicit definition of 'interaction' and distinguishing it from 'encounter' to clarify the value of the former for care coordination measures and in light of the importance of interaction for care provision that is not currently billable as an encounter. The report discusses these terms as distinct categories, but Table 1 on page 13 does not list 'interaction'	Thank you for your comment. NQF appreciates the need for streamlining and consistency in documentation. The work to consolidate 'encounter' and 'interaction' with input and feedback from stakeholders will continue.
Carol Sakala	Childbirth Connection	We are concerned with the inclusion of activities carried out by a patient or community volunteer in the category of 'procedures' There is a well established tradition of classifying a broad range of billable activities carried out by clinicians as procedures. We are unaware of quality measures that address procedures initiated by patients and community members. We encourage HITEP to develop a new category that is more suited to the contributions of patients and community-based volunteers.	Thank you for your comment. NQF strives for streamlined and consistent health care documentation. Based on stakeholder feedback regarding clinical necessity, 'intervention' has been re-instated as a category in the QDM.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Jenna Williams-Bader	NCQA	NCQA appreciates the opportunity to comment on the QDM. Based on our experience respecifying measures for EHRs, we have a few comments. NCQA has respecified at least one measure that defines what type of professional can perform an activity (e.g., an eye exam that must be performed by an eye care professional). We were not able to indicate this requirement using the current QDM structure (i.e., source and recorder are not appropriate attributes). We would like to recommend adding a performer attribute or some other method for capturing who performed an activity.'	Thank you for your comment. NQF appreciates feedback and looks to stakeholders to help inform the development of the QDM further. Please note the addition of two new attributes in this version of the QDM: 'performer' and 'participant'.
Jenna Williams-Bader	NCQA	Health Record artifact: NCQA thinks that this category appears to be left over from paper medical record and overlaps with communication. We recommend eliminating since it is unlikely to be useful for quality measurement.	Thank you for your comment. NQF appreciates feedback and looks to stakeholders to help inform the development of the QDM further. With regard to the deletion of the 'health record artifact', NQF believes that this category can reflect the generation of an electronic artifact like a summary of care. Please note in the latest version of the QDM that Health Record Artifact is now Health Record Component.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Jenna Williams-Bader	NCQA	Procedure' NCQA supports combining the procedure and intervention categories; however, since some of the activities are very different from typical procedures (e.g., patient counseling, patient self-care) procedure doesn't seem like the appropriate title. We recommend calling the category Intervention or something similar. Also, if the category is going to include interventions performed by non-clinical individuals (e.g., patients, caregivers, volunteers), we need to ensure that an appropriately-trained person enters the data into the EHR to ensure data validity, HIPAA compliance, etc.	Thank you for your comment. NQF appreciates discussion on this topic. We strive for streamlined and consistent documentation. Please note that 'intervention' has been re-instated as a cateogry in this version of the QDM based on stakeholder feedback.
Jenna Williams-Bader	NCQA	Family history NCQA recommends including family history in the risk assessment category, since family histories are generally taken to assess a patient's risk for developing certain conditions. 'a patient's risk for developing certain conditions.'	Thank you for your comment. NQF agrees that the category of Family History can and should be considered as part of the Risk Assessment during patient/ client interview. NQF recommends keeping Family History as its own category as Family History is a distinct part of each clinical record: both on paper and in EHR's. Data stored in this area will need to be readily retrievable.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Jenna Williams-Bader	NCQA	Communication: 'NCQA does not support deleting this category. For example, this category will be necessary when we start integrating information from the personal health record into the EHR ; communication will allow us to determine the source of the information.	NQF thanks you for your comment. This issue was discussed and addressed by the Health IT Advisory Committee's QDM subcommittee. The subcommittee agreed that 'communication' is a unique and vital category within both health care delivery and performance measurement. The subcommittee will work with the HITSC Clinical Work Group to inform them on the necessity of keeping this key category in the QDM.
Jenna Williams-Bader	NCQA	Diagnostic Study: ' It is unclear what the result would include for this category. It could be the actual films or it could be a reading/interpretation/summary of the films. Both types of results are important for different types of measures. Also, for overuse measures, we'll need additional data, including number of studies, type of studies, setting of studies, etc.'	Thank you for your comment. Please see the QDM Update June 2012 for an expanded discussion and definition of diagnostic study.
Jenna Williams-Bader	NCQA	There are some elements that do not clearly belong in one category (e.g., education could be assigned to communication or intervention; pain assessment could be assigned to risk evaluation or functional status). If NQF were to provide more examples to illustrate elements that belong to each category, this would help measure developers to assign elements to categories in a standardized manner. It is important to clearly define which elements belong to each category since the type of category determines which taxonomies apply to the element.	Thank you for your comment. Please seethe QDM Update June 2012 for expanded examples of each category to assist measure developers.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Jenna Williams-Bader	NCQA	'Ordered In general, ordered does not inform quality measurement. In many cases, the most important information is the completion of an activity and is results (for example, for functional status, we need to know whether the assessment was performed and the answers to the questions that were asked of the patient). We would recommend deleting ordered for most categories.'	Thank you for your comment. NQF agrees with NCQA in that the important information lies within the completion of activities and not merely the request. NQF has received many requests from stakeholders to retain 'ordered' so it will remain for the near future.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Jenna Williams-Bader	NCQA	Relative Timing Active Medications It is difficult with the current logical operators to capture medications that start before or during an encounter that but do not stop before the encounter (or measurement period) and will therefore be active during the encounter (or measurement period).The current strategy for capturing this in the MAT uses 'AND: Medication active starts before or during Encounter, performed (or Measurement Period) and 'AND NOT: Medication, active ends before the start of Encounter, performed (or Measurement Period)'	Thank you for your comment. The QDM provides a mechanism to express the information required. Users are encouraged to consider the intended meaning desired in the measure. If the medication must be active during the encounter, it may not be signification if it was active prior to the encounter as well. The measure can also require the medication to be active prior to the encounter AND during the encounter as two separate statements.
Carol Sakala	Childbirth Connection	Considering the definitions in the table that begins on page 68, there appears to be duplication and overlap across several 'states of action' These include 'received' and 'acknowledged' 'dispensed' and 'administered' and 'alerted' and 'notified' Our general comment about the care coordination example on page 41 of the report supports use of the active state 'acknowledged' rather than the passive state 'received' in the context of communication to the patient and family. We also note that the chart beginning on page 68 includes no entry for 'received'	Thank you for your comment. NQF is working with stakeholders to help eliminate duplication in the 'states of action' area of the QDM while maintaining the ability to accurately express quality measurement elements.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Jay Lyle		The current mix of informal diagrams, natural language descriptions and operator definitions, and bullet-oriented syntax is confusing. It seems the most unambiguous conventions are the category, state, and attribute concept lists. A formal model (e.g., in UML) would help clarify and disambiguate the measure conventions. Harmonization with current efforts to specify detailed clinical models would be good--the earlier the better. This would not only clarify the QDM structure, but also make explicit how it resembles and differs from other modeling efforts, both structurally and functionally.'	Thank you for your comment. NQF agrees that a formal model in a structured format would improves understanding of the QDM. NQF is currently taking steps towards this goal. Please stay tuned to the project website http://www.qualityforum.org/QualityDataModel.aspx for more information.
Jeremy Michel	Yale Dept. of Medical Informatics	On the renaming of 'concept' to 'category': The term 'category' is a more accurate name for this data model component. This change should result in improved understanding of the QDM model.	Thank you for your comment. NQF appreciates feedback from stakeholders in all areas of Health IT.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Jeremy Michel	Yale Dept. of Medical Informatics	There is a lack of consistency in syntax throughout the model. In order for the QDM to be used in a consistent and interoperable fashion a standardized syntax would be beneficial. For example, maintaining the same quotation mark and parenthesis structure throughout the model. Even if a final syntax has not been decided on, maintaining consistency within the overview and glossary document would be beneficial for people trying to understand the model.	NQF thanks you for your comment. Please see the Guidelines for Syntax section of the Measure Authoring Tool user guide (http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=68493) for guidance on syntax.
Jeremy Michel	Yale Dept. of Medical Informatics	QDM Instance: The graphical description of the QDM element does not show the 'instance' of the element. On page 58 of the QDM draft, the explanation 'Aspirin is an instance of the category medication when a value set derived from RxNorm is applied' In the graphical representation the term 'code list' is used. Code list is not defined as a component of the QDM element within glossary	NQF thanks you for your comment. It is noted in the QDM document, value set is defined and the definition includes a refence to code list as an alternate name.
Jeremy Michel	Yale Dept. of Medical Informatics	The concept and use of the term 'Measurement period', while logical, is never defined. Is this a predefined QDM element, a predefined constant, or some other type of structure? A description of how 'Measurement Period' fits into the QDM model and how it should be used would be beneficial.'	Thank you for your comment. NQF has expanded the definition of measurement period. Please see the QDM Update June 2012 for an expanded definition.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Jeremy Michel	Yale Dept. of Medical Informatics	1) The 'Condition/Diagnosis/Problem' category and 'Symptom' category are not mutually exclusive. The 'Condition/Diagnosis/Problem' category description notes that a problem or condition may be a symptom. In the description of 'Symptom', there is mention of its differentiation from 'findings' but this term is not defined elsewhere in the QDM draft. Further description of the indications for the use of the Symptom category would be beneficial. There is apparent value in keeping it as a distinct category.	Thank you for your comment. NQF agrees that there is a distinct need for both a 'symptom' and 'condition/ diagnosis/ problem' category. Symptom may be more commonly found as unstructured data within EHRs so it should be used cautiously in eMeasures. NQF looks forward to working with stakeholders to further refine and differentiate these category definitions for better measure developer use.
Jeremy Michel	Yale Dept. of Medical Informatics	2) Condition/Diagnosis/Problem is only mapped to 'states of being'. Because maintaining an active problem list is a Meaningful Use objective, the ability to collect information about 'documentation' and 'reconciliation' events for the 'Condition/Diagnosis/Problem' category may be beneficial.'	Thank you for your comment. NQF appreciates your feedback in helping the QDM becomes better aligned with Meaningful Use objectives. Please see the QDM Update June 2012 for the addition 'reconciled' to the category of 'Condition/ Diagnosis/ Problem'.
Jeremy Michel	Yale Dept. of Medical Informatics	1) Category of Medication: would suggest the inclusion of the state of being: inactive. A history of medication use may be useful for determining future actions.	Thank you for your comment. NQF appreciates your feedback in helping the QDM becomes better aligned with Meaningful Use objectives. Please see the QDM Update June 2012 for the addition of 'inactive' to the category of 'Medication'.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Jeremy Michel	Yale Dept. of Medical Informatics	Time attribute: The terms 'sequencing' and 'process context' are included in the visual representation. The use and value of these concepts is 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.	Thank you for your comment. NQF appreciates comments that help clarify the model. Please reference the QDM Update June 2012 to see an updated version of the timing attribute visual.
Jeremy Michel	Yale Dept. of Medical Informatics	'Causative agent' is designated an attribute for 'Adverse Reaction: Allergy' and 'Adverse Reaction: Non-Allergic' but not included in the list of attributes. Its use is more consistent with the QDM component 'instance' than as an attribute.	Thank you for your comment. NQF appreciates your feedback in helping to keep the QDM consistent and informative. Please see the QDM Update June 2012 for the addition of 'causative agent'.
Jeremy Michel	Yale Dept. of Medical Informatics	Duration is discussed as an example of an attribute in the descriptions of 'Relative Timing' but is clearly stated to not be an attribute in the explanation of the time attribute. If the QDM grammar is able to extrapolate from the time attribute and allow for the use of duration as a sort of 'derived attribute' that would be beneficial.	Thank you for your comment. Please refer to the next version of the QDM for the attribute of 'length of stay' which is derived from 'admission datetime' and 'discharge date time'. NQF looks forward to working closely with stakeholders to provide additional capabilities for capturing the timing elements necessary for quality measurement.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Jeremy Michel	Yale Dept. of Medical Informatics	Value' is used in some examples in the location of attributes ('Physical exam finding documented: diastolic blood pressure (value ≥ 90 mmHg)'). This may be confused with the 'value' QDM model component described in the glossary. Potentially renaming the QDM 'value' component to reflect its nature as a code from a selected taxonomy would decrease ambiguity here.	Thank you for your comment. NQF strives for consistency in the QDM and it's related documents. Stakeholder comments and feedback help us achieve this goal and deliver a quality product. Please note the change of 'value' to 'result' throughout the document for ease of reading and consistency.
Jeremy Michel	Yale Dept. of Medical Informatics	'A summary table of the available operators, functions and relative timings would be beneficial in the QDM overview document, but the description of each term is something that is more consistent with the glossary section. Additionally, some operators and functions are mentioned, but never defined.	Thank you for your comment. In an effort to streamline documentation for the ease of the user, please note that relative timings, functions and operators can be referred to in the Measure Authoring Tool (MAT) user guide Appendix F. The MAT user guide also provides syntax and style guidance for measure developers. Please refer to the user guide at this link: http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=68493
Jeremy Michel	Yale Dept. of Medical Informatics	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. Is there another function available for adding/subtracting the values of non-date QDM elements and if so is there a need for these to be separate from the functions for adding/subtracting dates.	Thank you for your comment. In an effort to streamline documentation for the ease of the user, please note that functions and operators can be referred to in the Measure Authoring Tool (MAT) user guide Appendix F. The MAT user guide also provides syntax and style guidance for measure developers. Please refer to the user guide at this link: http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=68493

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Jeremy Michel	Yale Dept. of Medical Informatics	The Round function needs more of an explanation. There is no indication of how the rounding occurs, whether to the nearest 10, 100 or some other factor.	Thank you for your comment. In an effort to streamline documentation for the ease of the user, please note that functions and operators can be referred to in the Measure Authoring Tool (MAT) user guide Appendix F. The MAT user guide also provides syntax and style guidance for measure developers. Please refer to the user guide at this link: http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=68493
		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 on how the system would know that it was measuring hours. This could result in errors if the syntax is not standardized.	Thank you for your comment. In an effort to streamline documentation for the ease of the user, please note that functions and operators can be referred to in the Measure Authoring Tool (MAT) user guide Appendix F. The MAT user guide also provides syntax and style guidance for measure developers. Please refer to the user guide at this link: http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=68493
Jeremy Michel	Yale Dept. of Medical Informatics	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.'	NQF thanks you for your comment. Your suggestion of a 'loop' or 'select' function would be a valuable addition to the current functionality within the QDM. NQF will look into incorporating this funtionaility into a future version of the QDM.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Jeremy Michel	Yale Dept. of Medical Informatics	On review of the category 'Communication' I noticed that the HITSC Clinical Quality Workgroup has suggested its removal. I am currently attempting to represent a consultation request within the QDM logic structure. I have found the communication category to be well suited for this task. I have looked for alternative methods of representing this information, should the communication category be removed, but have been unsuccessful.'	NQF thanks you for your comment. This issue was discussed and addressed by the Health IT Advisory Committee's QDM subcommittee. The subcommittee agreed that 'communication' is a unique and vital category within both health care delivery and performance measurement. The subcommittee will work with the HITSC Clinical Quality Work Group to inform them on the necessity of keeping this key category in the QDM.
Rosemary Kennedy, Edward Shortliffe	AMIA	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.	Thank you for your comment. NQF appreciates your concern and looks to more fully engage the vendor community with QDM development. NQF will be sponsoring a 'Collaborative' in 2012 that will bring together a multitude of stakeholders to discuss both the QDM and the Measure Authoring Tool (MAT).
Rosemary Kennedy, Edward Shortliffe	AMIA	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.	Thank you for your comment. NQF appreciates your concern. Currently, the HIT Standards Committee Vocabulary Task Force recommendations have been submitted to the QNC via transmittal letter on September 9, 2011.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Rosemary Kennedy, Edward Shortliffe	AMIA	We suggest that efforts be undertaken to ensure that the QDM and other accepted clinical data models be harmonized.	Thank you for your comment. NQF agrees that harmonization is an important component of the QDM development moving forward. NQF is currently working with several groups and initiatives to harmonize efforts.
Rosemary Kennedy, Edward Shortliffe	AMIA	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.	Thank you for your comment. NQF appreciates your concern and looks to more fully engage the vendor community with QDM development. NQF will be sponsoring a 'Collaborative' in 2012 that will bring together a multitude of stakeholders to discuss both the QDM and the Measure Authoring Tool (MAT).
Rosemary Kennedy, Edward Shortliffe	AMIA	We are concerned about the level of initial and ongoing training of providers that is required in order to implement the model.	Thank you for your comment. NQF agrees that implementation training and guides will be necessary moving forward. NQF continues to work with several organizing bodies with regards to an implementation guide and release date.
Rosemary Kennedy, Edward Shortliffe	AMIA	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.	Thank you for your comment. NQF appreciates your comment and has made significant changes to the organization of this version to assist readability. Please see the addition of sub-headings as all as an executive summary in the QDM Update June 2012.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Rosemary Kennedy, Edward Shortliffe	AMIA	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.	Thank you for your comment. NQF appreciates your feedback in helping the QDM becomes better aligned with Meaningful Use objectives. Please see the QDM Update June 2012 for the addition of 'reconciled' to the category of 'Condition/ Diagnosis/ Problem'.
Rosemary Kennedy, Edward Shortliffe	AMIA	We suggest that you consider inclusion of Patient Education and Care Coordination categories.	NQF thanks you for your comment. This issue was discussed and addressed by the Health IT Advisory Committee's QDM subcommittee. The subcommittee agrees that both areas are essential for quality patient care and outcomes. The difficult comes with adding each as a new category to the QDM. At the present time, the concept of Care Coordination is still developing as a measurable entity within the health care domain. Many of the concepts central to care coordination (i.e. transfer, communication, care goal) are currently represented in the QDM to allow measure developers the beginnings of performance measurement within the care coordination framework. The concept of 'care coordination' is too broad and unspecified to make it a meaningful addition as a category to the QDM at this time. The subcommittee did agrees that the patient education is an important clinical intervention that greatly impacts patient outcomes. PLease see the addition of 'patient education' as an example in the 'Intervention' category of the QDM.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Rosemary Kennedy, Edward Shortliffe	AMIA	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.	Thank you for your comment. NQF appreciates your feedback in helping the QDM becomes better aligned with Meaningful Use objectives. Please see the QDM Update June 2012 for the addition of 'inactive' to the category of 'Medication'.
Rosemary Kennedy, Edward Shortliffe	AMIA	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.	Thank you for your comment. NQF appreciates comments that help to clarify the model. Please reference the next QDM version for an updated definition of 'alerted'.
Rosemary Kennedy, Edward Shortliffe	AMIA	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.	Thank you for your comment. NQF appreciates comments that help clarify the model. Please reference the QDM Update June 2012 to see an updated version of the timing attribute visual.
Rosemary Kennedy, Edward Shortliffe	AMIA	'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.	Thank you for your comment. Please see the addition of 'causative agent' as an attribute of 'Adverse Reaction: Allergy and Non-Allergy' in the next version of the QDM publication.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Rosemary Kennedy, Edward Shortliffe	AMIA	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.'	Thank you for your comment. Please refer to the next version of the QDM for the attribute of 'length of stay' which is derived from 'admission datetime' and 'discharge date time'. NQF looks forward to working closely with stakeholders to provide additional capabilities for capturing the timing elements necessary for quality measurement.
Rosemary Kennedy, Edward Shortliffe	AMIA	'Value' is used in some examples in the location of attributes ("Physical exam finding documented: diastolic blood pressure (value ≥ 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.	Thank you for your comment. NQF strives for consistency in the QDM and it's related documents. Stakeholder comments and feedback help us achieve this goal and deliver a quality product. Please note the change of 'value' to 'result' throughout the document for ease of reading and consistency.
Rosemary Kennedy, Edward Shortliffe	AMIA	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.	Thank you for your comment. In an effort to streamline documentation for the ease of the user, please note that functions and operators can be referred to in the Measure Authoring Tool (MAT) user guide Appendix F. The MAT user guide also provides syntax and style guidance for measure developers. Please refer to the user guide at this link: http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=68493

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Rosemary Kennedy, Edward Shortliffe	AMIA	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.	Thank you for your comment. In an effort to streamline documentation for the ease of the user, please note that functions and operators can be referred to in the Measure Authoring Tool (MAT) user guide Appendix F. The MAT user guide also provides syntax and style guidance for measure developers. Please refer to the user guide at this link: http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=68493
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Rosemary Kennedy, Edward Shortliffe	AMIA	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.	NQF thanks you for your comment. Your suggestion of a 'loop' or 'select' function would be a valuable addition to the current functionality within the QDM. NQF will look into incorporating this funtionaility into a future version of the QDM.
Rosemary Kennedy, Edward Shortliffe	AMIA	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.	Thank you for your comment. NQF agrees that there are many instances within a patient history where a date is either unknown or not given. A possible solution to identify an unknown date would be to use the attribute of 'start datetime' and assign the SNOMED code for 'unknown: 261665006'.
Rosemary Kennedy, Edward Shortliffe	AMIA	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.	Thank you for your comment. In an effort to streamline documentation for the ease of the user, please note that functions and operators can be referred to in the Measure Authoring Tool (MAT) user guide Appendix F. The MAT user guide also provides syntax and style guidance for measure developers. Please refer to the user guide at this link: http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=68493
Rosemary Kennedy, Edward Shortliffe	AMIA	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?	Thank you for your comment. NQF is currently working with stakeholders on a systematic method for expressing all functions, operators and relative timings. Our goal is a 'human readable' version of the document that is human readable with minimal instruction.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Robert Haskell	Siemens Medical	- The QDM itself is a good thing. It is important to have a consistent and common language of expression. My concern is how it does or does not reflect the reality of today's EMR content, especially given the apparent rate and quantity of quality measures looming on the horizon that may severely test this content.	Thank you for your comment. NQF appreciates your concern and looks to more fully engage the vendor community with QDM development. NQF will be sponsoring a 'Collaborative' in 2012 that will bring together a multitude of stakeholders to discuss both the QDM and the Measure Authoring Tool (MAT).
Robert Haskell	Siemens Medical	- The concept of "measures that matter" is important....ones that have significant relevance and that have been thoroughly vetted regarding their data collection impact (i.e., extra data entry load on the clinician, overall data entry and possible HIT system modification costs). The issues are not technical, but are about the necessary data and the impact on end user workflow to assure their proper collection. Consistent workflow and data collection are necessary for consistently defined and comparable measures.	Thank you for your comment. NQF agrees with your concern. The QDM is not meant to increase the burden of data collection on the provider/ clinician rather it is an effort to help measure developers speak the same quality language.
Robert Haskell	Siemens Medical	Coming back to my first point above, are data model changes also necessary to satisfy the computational needs of the measure? Do the measures, expressed with QDM grammar, sufficiently conform to the state of EMR data models? I suppose the measure vetting process must get at this issue. Who does such vetting now? To get away from manual abstracting, the viability of each measure needs to be tested against the reality of current systems.	Thank you for your comment. NQF understands that the Department of Health and Human Services (HHS) has incorporated testing requirements into all new eMeasure contracts.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Richard Smith	Northwestern University	I am Richard Smith, Ph.D., a participant in the recent webinars of both QDM-&-MAT. Congratulations on a vital accomplishment to date. 40yrs. ago system analysis was projected to support the complexity of the health care industry. You have brought the needed rigor to aid both clinical decision making and a foundation for missing accountability.	Thank you for your comment. NQF appreciates comments and feedback from stakeholders in all areas of Health care IT.
Richard Smith	Northwestern University	QDM is a draft. I offer a set of observations for the final report. You have a varied audience for the draft and a wider potential for the final report. Please draw upon the Executive Summary(ExS) embedded within the HITEP-09 Report as a necessary inclusion.	Thank you for your comment. NQF appreciates feedback on how to make the QDM a more reader-friendly document. Please see the addition of the Introduction in the QDM Update June 2012.
Richard Smith	Northwestern University	I shall focus on Recommendation #3 (Communicate with all stakeholders and seek their buy-in, and educate and train the quality measure supply chain.) First, the Active NQF membership, who has helped, will continue to assist the QDM-MAT development. However, the implication of the final report has global and a fundamental application. The second group, Tangential, applies to my own initial interest to one of the 20 High-Impact priority clinical conditions. However, my direct concern has not yet been the focus of inquiry to match QDM, thus my transition to the QDM fundamentals.	Thank you for your comment. NQF appreciates comments and feedback from stakeholders in all areas of Health care IT.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Richard Smith	Northwestern University	The third set may be identified by my own internist who does NOT have a clue to the NQF mission offered a year ago and remains indifferent, yet QDM is about to envelop all Med/SURG. All groups are on a different Learning Curve, thus the final QDM must express (Teach) to all with the essence of the ExS or its equivalent up-date.	Thank you for your comment. As Health IT rapidly evolves, we all will be responsible for our own learning whether your role is clinically oriented or technically oriented. While NQF strives to make the QDM an accessible document, many new 'users' may need time to bring themselves up to speed.
Richard Smith	Northwestern University	Many NQF reports attest to the awareness of Fragmented Health Care! The HIT-QDM-MAT reports regrettable fall into this condition. QDM (Pg-8) links the set; however, it is NOT a teaching tool! The integration of each dimension is too vital not to make the interrelationships a feature rather than merely a set of linkages. The Tangential and Unaware audiences will find links too much of a barrier to pursue relevance. They need guidance at all stages to achieve and demonstrate effective skills of rigor.	Thank you for your comment. NQF strives for concise documentation within the QDM framework. In an effort to keep the QDM concise and appropriate, we will continue the use of links to keep the document length reasonable.
Richard Smith	Northwestern University	The ultimate QDM goal is to contribute to Reliability and Validity now within its own NQF focal effort. Again, the integration of each is missing or underplayed. They exist, yet are fragmented within separate NQF efforts. An interdependent approach is needed.	Thank you for your comment. NQF appreciates feedback from stakeholders in all areas of Health IT.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
Richard Smith	Northwestern University	The systemic gestalt is a vital view both to know and perform! (Content and Process)	Thank you for your comment. NQF relies on stakeholders comments from every area of health IT to keep the perspective of QDM development on a positive development track.
John Windle, MD	American College of Cardiology	I have had an opportunity to review the NQF data model. This is a substantial improvement over their current model, this document is much more closely aligned with HL7 modeling which is a positive step forward. However, at the highest levels I do have some concerns moving forward. Current quality metrics are simple: Is the patient on a beta blocker? Yes/No. This document starts us transitioning to more complex logic. My top concern is that it seems to believe that it is inclusive/complete and does not mark a pathway moving forward after this version. Ultimately quality will be supported at the level of decision support. This format moves us towards that goal but does not get us all the way there.	Thank you for your comment. The QDM is a work in progress that will continue to grow and evolve with input from all of our members and health IT stakeholders.
John Windle, MD	American College of Cardiology	Concept, category and state are used interchangeably,-a section describing the relationship of the three would be helpful (page 8 and 9)	Thank you for your comment. NQF strives for consistency and readability in the QDM. Please see further definition in the QDM Update June 2012.
John Windle, MD	American College of Cardiology	If they are interchangeable consider renaming of 'concept' to 'category' to maintain consistency between historical versions of the QDM (page 8 and 9)	Thank you for your comment. NQF strives for consistency and readability in the QDM. Please see further definition in the QDM Update June 2012.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
John Windle, MD	American College of Cardiology	The heading for Tables 1 and 2 lists "all the categories and states" which apparently are numerical and alphabetical, there is no identified mechanism to expand or modify these statements, i.e. genetics, phenotypic expression and therapeutic are not present. How will that be handled? (page13)	Thank you for your comment. NQF appreciates input from stakeholders in all areas of Health IT. New additions for categories and states will be handled through stakeholder input and comment periods in addition ONC and CMS input. Please check to the NQF website frequently (qualityforum.org) for upcoming comment periods.
John Windle, MD	American College of Cardiology	Page 11, Figure 2. QDM Element Structure: The ovals describing the medication containing the information: Code list, Taxonomy, Individual codes and Aspirin, RxNorm, 12345, 67890, ... There is no clear definition or extension from the previous diagram or descriptive text describing what part of the QDM Element this information actually constitutes. Is it a Category/State tuple or category specific attribute? Please improve the left hand portion of Figure 2 to include a definition of what specific part of the QDM element this information is. By Figure 3 they have been labeled 'Value Sets.' Please also include 'Value Sets' in the Figure 2's illustration and descriptive text.	Thank you for your comment. NQF appreciates feedback to help keep the QDM consistent and informative for all readers. Please see the QDM Update June 2012 for an updated version of Figure 2.
John Windle, MD	American College of Cardiology	Page 11, Figure 2. QDM Element Structure: Why not use real data where possible (i.e.: NDFRT C34432 for Aspirin) rather than made up numbers?	Thank you for your comment. NQF appreciates feedback to help keep the QDM consistent and informative for all readers. Please see the QDM Update June 2012 for an updated version of Figure 2.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
John Windle, MD	American College of Cardiology	Page 11, Figure 2. QDM Element Structure: The left side diagram element contains 'Concept,' yet on the top of page 9: "Renaming of 'concept' to 'category' to maintain consistency between historical versions of the QDM and based on comments received." Shouldn't this element reflect the renaming and be labeled 'Category?' Concept (Category?) Medication	Thank you for your comment. NQF appreciates feedback to help keep the QDM consistent and informative for all readers. Please see the QDM Update June 2012 for an updated version of Figure 2.
John Windle, MD	American College of Cardiology	Page 11, Figure 2. QDM Element Structure: Unless the provider hands the patient the Aspirin and confirms that it has been taken this "State" should be "Ordered." Administration would then be a separate event altogether. State Administered Which is reflected in the Data Flow: Data Flow Sender=Provider, Receiver=Pharmacy System	Thank you for your comment. NQF appreciates feedback to help keep the QDM consistent and informative for all readers. Please see the QDM Update June 2012 for an updated version of Figure 2.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
John Windle, MD	American College of Cardiology	Page 11, Figure 2. QDM Element Structure: As this is now the provider's 'Order,' and an example order being something along the lines of: 'ASA 325mg X2 po q6' Timing Datetime, End Date Actor Subject=Patient Data Flow Sender=Provider, Receiver=Pharmacy System Category or State Specific Dosage=325mg The above example seems to be missing additional data covering the formulation, administration route, recurring dosage or contraindications, if that patient is intolerant. Category or State Specific Dosage=325 Units=Milligrams Quantity=2 Route=Patient Oral Frequency=6 Hours Question, should all Value Set attributes related to formulation of a medication be included implicitly in Value Set representation? Since 'NDFRT C34432' is a 325mg tablet, is there a need to have a 'Dosage' attribute? Or should all the ordering information be explicitly represented as the set of attributes as described above. While it is clear that the NDFRT record will provide some of this information (medication, Dosage, Units), when the time comes to actually evaluate the data, having all the information as Attributes within the QDM element will simplify the process. Overall, the inconsistency of the data representation and context need to be reviewed, reassessed and resolved in order to make the figure congruent with the intended representation.	Thank you for your comment. NQF appreciates feedback to help keep the QDM consistent and informative for all readers. Please see the QDM Update June 2012 for an updated version of Figure 2.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
John Windle, MD	American College of Cardiology	Page 22-26 for relative timing is horrible complex and is far outside the clinical workflow. It is computational and good for writing the rules but we need to emphasize that each problem/patient concern/patient trigger has a s time stamp and state, then allow the computer science calculations to occur in the background.	NQF thanks you for your comment. The relative timings are part of HL7's normative Reference Information Model (RIM), which is incorporated in the HL7 Draft Standard for Trial Use, eMeasure Representation of the Health Quality Measure Format (HQMF). The timings are temporal comparators, codes defined to define act relationships that connect two acts. They are part of the ActRelationshipType code system, available at: http://www.hl7.org/v3ballot/html/infrastructure/vocabulary/ActRelationshipType.html.
John Windle, MD	American College of Cardiology	Page 20 "The information provided in the QDM so far provides a clear method to articulate each data element used within a measure, a clinical decision support rule, or a request for information for other purposes." This is not quite accurate. No methodology for describing how to create a measure, clinical decision support rule or request for information has been described so far. No discussion of using QDM elements to describe measures, clinical decision support rules or request for information appears until Relating QDM Elements as Grammar appears until page 22. Suggest rephrasing 'method' to 'basis' or 'foundation.' Perhaps before listing the Elements & Grammar a simple illustrative example of each concept and use should proceed the sections on Relative Timings, Operators & Functions.	Thank you for your comment. NQF appreciates feedback that increases the consistency of the QDM architecture.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
John Windle, MD	American College of Cardiology	Page 39) Example Measures Using Expression Language (Syntax) Illustrations consistent with the page 7 example should be provided for the Example Measures Using Expression Language (Syntax) section beginning on page 39. Additionally examples given are inconsistent. Of the parts (a, b & c) as described in: "A. Hypertension: These examples are provided to show how the QDM can be used to express required measure criteria. The examples do not explore all of the clinical permutations or appropriateness of measure design, which requires detailed clinical evaluation and may be managed using a composite measure approach (e.g., <a> proportion of patients with improvement, <b> mean or median time to improvement for those who improved, <c> mean or median of actual change in diastolic BP fromintake or initial diagnosis until six months post intake, etc.)." As no formula is represented using the a, b or c as mentioned above, nor is there any direct correlation between a, b & c and the sections a & b which follow, the syntax expressed seems disjunct. Either make them correspond or use a different method of identification.	NQF thanks you for your comment. Please refer to the next version of the QDM for an updated example of the expression language syntax. Steps were taken to incorporate stakeholder feedback into this example to make it easier to understand and more applicable to real world scenarios.

Submitter Name	Submitter Organization	Comment	National Quality Forum Response
John Windle, MD	American College of Cardiology	comment 109 cont'd: Page 39) Example Measures Using Expression Language (Syntax) There are errors: Initial Diagnosis to diastolic BP less than 90 using blood pressure taken by a device in the patient's home: Should be: "Initial Diagnosis of diastolic BP" A. Hypertension: a. Initial Diagnosis to diastolic BP less than 90 using blood pressure taken by a device in the patient's home: o "Patient characteristic documented: birth date" <= Not a requirement of (a) If it should be a requirement of (a) then (a) should be rewritten: Initial Diagnosis of diastolic BP less than 90 using blood pressure taken by a device in the patient's home and the patient's age is 18 or greater. In general it is misleading to suggest that there exist implicit yet unindicated criteria not directly stated in the measure be implied in the expression of the measure.	NQF thanks you for your comment. Please refer to the next version of the QDM for an updated example of the expression language syntax. Steps were taken to incorporate stakeholder feedback into this example to make it easier to understand and more applicable to real world scenarios.