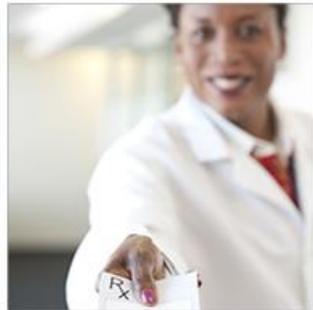


QDM User Group

June 15, 2016

Updated to Include Decisions Made on
the June 15, 2016 User Group Call



Proposed Updates for Draft QDM 5.0

Item	Description	Proposed
1	Modify syntax for “negation rationale”	5.0
2	Add “dateTime” as a result attribute [QDM-103 , QDM-41 , QDM User Group] and percentage as a result response	5.0
3	Add “target date” to Care Goal datatype, and percentage as a result response	5.0
4	Remove “Transfer from” and “Transfer to” – Add Encounter attributes – Origin, Disposition	5.0
5	Add “EventCode” to QDM to address all datatypes	5.0
6	Medication Attributes: Remove “cumulative medication duration”; Add Medication Supply	5.0
7	Create Allergy/Intolerance and Adverse Reaction Datatypes	5.0
8	Update all timing attributes to periods (intervals) [QDM-115]	5.0

QDM 5.0 – Negation Rationale

JIRA: QDM-147

1. **Retain Negation Rationale as an attribute for existing Datatypes**
2. **Change syntax slightly**
 - From: “Procedure, Performed Not Done: *Procedure* (negation rationale: *value set*)
 - To: “Procedure, *Not* Performed: *Procedure* (negation rationale: *value set*)
3. **CQL to EML Model Info to address the change. No change to QDM model**

Reference: <https://github.com/esacinc/CQL-Formatting-and-Usage-Wiki/wiki/Negation-in-QDM>

Assessment: Proposed Attributes (v5.0)

JIRA: QDM-128, QDM -122, QDM-61

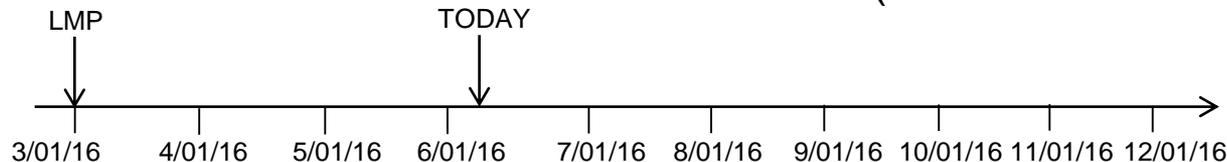
Existing Result Responses:

- *Is present*
- *Value set*
- *Numerical (with parameters <, ≤, >, ≥, =)*

New Result Response Types to add:

- *time/date stamp*
- *Percentage*
- **Examples:**

Assessment observation: Last Menstrual Period (to calculate Gestational Age)



Results that might be present in an EHR field: March 1, 2016 (Actual date and time), About 3 months ago (text description), 99 (number of days since last menstrual period)

Justification

Use of *Is present* may require parsing and results may be inconsistent. Need to assure answer is a date.

Care Goal (v5.0)

JIRA: QDM-151

- **Assure initiation and “targetDates” are covered with Start and Stop times**
Allows measures to create logic asking if the target outcome was met by the date specified by the clinician and patient.
- **Add “percentage” as a result response type for Target Outcome**

QDM 5.0 – Transfer to, Transfer from

JIRA: QDM-148

1. **Remove Transfer to, Transfer from Datatypes**
2. **Add one new attribute to Encounter, Performed**
 - **New** – Admission Source (to cover Transfer from)
 - Already present (to cover Transfer to)
 - Discharge Status – “The disposition of the patient at the time of discharge.” (uses disposition C-CDA Template)
 - **Change name** to Discharge Disposition
3. **Current Use:**
 - Transfer from 12 Measures
 - Transfer to 13 Measures
4. **Rationale:** Transfer from and Transfer to datatypes express reasons for excluding a patient from a measure because of source or destination that would be a reason not to follow through with the numerator actions.
5. Intra-facility transfers (e.g., ICU to Step-down) still require logic comparing times of arrival and departure from relevant locations

QDM 5.0 – Datatype Codes (QDM-128)

JIRA: QDM-128

Jira Ticket QDM-128

<https://jira.oncprojectracking.org/browse/QDM-128>

Proposed Language in QDM:

- QDM datatypes implicitly refer to attributes about a set of items that are included in a value set. QDM does not currently state that the datatype attributes only refer to a specific item that is a member of the value set. This issue is handled implicitly and needs to explicitly specify the value set filter for the code.
- Therefore, each QDM datatype will require a new attribute: Code (Description = the single code or a member of the value set used to represent the quality data element)
- Measure developers do not need to create any new item within the MAT.

Cumulative Medication Duration (v5.0)

JIRA: QDM-65, QDM-84, QDM-79

QDM 4.3 Definitions:

- **Medication, Order:** CMD represents the intended number of medication days, based on the metadata of the order. Refills are taken into account.
- **Medication, Active:** CMD represents the same information as for Medication, Order.
- **Medication, Dispensed:** CMD represents the number of medication days available in the supply that was dispensed (i.e., picked up). Only actual dispenses should be taken into account.
- **Medication, Administered:** CMD represents the number of days for which an individual was actually administered the medicine, regardless of the supply in the order or dispense.

Cumulative Medication Duration (v5.0)

JIRA: QDM-65, QDM-84, QDM-79

Proposal: Remove Cumulative Medication Duration (attribute), add Supply Attribute

- Cumulative medication duration is actually a derivation from other data.
- CQL provides an opportunity to express logic to define cumulative medication duration and provide greater clarity than the current (QDM 4.3) attribute.
- Calculation using CQL requires an additional Supply attribute for the Medication, Administered or Medication, Dispensed or Medication Ordered datatypes:
 - Dose – Change description to “Dosage”
 - Frequency
 - Supply – (basically, # doses supplied) NEW

Allergy & Intolerance/Adverse Reaction Datatypes (v5.0)

JIRA: QDM-149

- Existing CDA and FHIR resources manage allergy, intolerance and adverse reactions as classes. QDM includes these concepts as subcategories of other classes (e.g., Med Allergy, etc.)
- Proposal:
 - Remove existing allergy, intolerance and adverse reaction/event datatypes
 - Add 2 new datatypes:
 - Allergy
 - Intolerance/Adverse Reaction
 - For each, attributes of
 - Substance
 - Type
 - Severity
 - Prevalence Period
 - Onset DateTime
 - Abatement (resolution)

Timing Period(s) – Relevant Period - Referential

JIRA: QDM-129

QDM Datatype	Description
Patient Care Experience	The <i>startTime</i> and <i>stopTime</i> to which the experience refers.
Provider Care Experience	
Care Goal	<p><i>StartTime</i> = when the goal should be effective (when recorded)</p> <p><i>StopTime</i> = when the target outcome is expected to occur</p>
Device, Recommended	<p><i>StartTime</i> (the first time the action is suggested to occur);</p> <p><i>StopTime</i> (the latest time the action is suggested to occur)–</p> <p>most likely at the granularity of date (not hour, minute, second)</p> <p>2) Immunization does not include “recommended” as an action; hence, “order” is included here</p>
Diagnostic Study, Recommended	
Assessment, Recommended	
Intervention, Recommended	
Immunization, Order*	
Laboratory Test, Recommended	
Physical Examination, Recommended	
Procedure, Recommended	
Substance, Recommended	

Timing Period(s) – RelevantPeriod - Measured

JIRA: QDM-129

QDM	Description
Device, Applied	<i>StartTime</i> = when the device is inserted or first used; <i>StopTime</i> = when the device is removed or last used
Diagnostic Study, Performed	<i>StartTime</i> = when the diagnostic study is initiated; <i>StopTime</i> = when the diagnostic study is completed
Encounter, Active	<i>StartTime</i> = the time the encounter began (admission time); <i>StopTime</i> = the the time encounter ended (discharge time)
Encounter, Performed	<i>StartTime</i> = the time the encounter began (admission time); <i>StopTime</i> = the the time encounter ended (discharge time)
Patient Characteristic, Payer	<i>StartTime</i> = the first day of insurance coverage with the referenced payer; <i>StopTime</i> = the last day of insurance coverage with the referenced payer
Intervention, Performed	<i>StartTime</i> = the time the intervention begins; <i>StopTime</i> = the time the intervention is completed NOTE - timing refers to a single instance of an intervention. If a measure seeks to evaluate multiple interventions over a period of time, the measure developer should use CQL logic to represent the query request.
Laboratory Test, Performed	<i>StartTime</i> = the time the laboratory test begins (i.e., the time the specimen is collected); <i>StopTime</i> = the time the laboratory test procedure is completed (i.e., the time the final report is documented)

Timing Period(s) – RelevantPeriod - Measured

JIRA: QDM-129

QDM	Description
Medication, Active	<p><i>StartTime</i> = when the medication is first known to be used (generally the time of entry on the medication list);</p> <p><i>StopTime</i> = when the medication is discontinued (generally the time discontinuation is recorded on the medication list)</p>
Medication, Administered	<p><i>StartTime</i> = when a single medication administration event starts (e.g., the initiation of an intravenous infusion, or administering a pill or IM injection to a patient);</p> <p><i>StopTime</i> = when a single medication administration event ends (e.g., the end time of the intravenous infusion, or the administration of a pill or IM injection is completed - for pills and IM injections, the start and stop times are the same)</p>
Procedure, Performed	<p><i>StartTime</i> = the time the procedure begins;</p> <p><i>StopTime</i> = the time the procedure is completed</p> <p>NOTE - Timing refers to a single instance of an procedure. If a measure seeks to evaluate multiple procedures over a period of time, the measure developer should use CQL logic to represent the query request.</p>
Substance, Administered	<p><i>StartTime</i> = when a single substance administration event starts (e.g., the initiation of an intravenous infusion, or administering a the substance orally or topically to a patient);</p> <p><i>StopTime</i> = when a single substance administration event ends (e.g., the end time of the intravenous infusion, or the administration of a substance orally or topically is completed - for oral or topical administration, the start and stop times are the same)</p>

Timing Period(s) – RelevantPeriod – Special Cases

JIRA: QDM-129

QDM	Description
1) LocationPeriod	
Encounter, Active	<i>StartTime = the time the patient arrived at the location; StopTime = the time the patient departed from the location</i>
Encounter, Performed	
2) InvasiveProcedurePeriod	
Procedure, Performed	<i>InvasiveProcedurePeriod</i> <i>StartTime = specific to the time at which the procedure enters through the skin (e.g., incision time);</i> <i>StopTime = specific to the time at which the procedure exists from the skin (e.g., closure time)</i>
3) Radiation Duration	
Procedure, Performed	Radiation treatment - consider treatment as a procedure with a start and stop time and a dosage Radiation exposure during procedures or diagnostic tests - consider using the "InvasiveProcedurePeriod" NOTE: May need to add <i>dosage</i> as an attribute for Procedure, Performed

Laboratory Test Start Time

Vendor Responses:

1. Multiple times for lab results: Time of collection is most important

All lab systems report time that result was generated also (and sometimes multiple times in the case of prelim and final results). For the purposes of quality measurement, we have always interpreted “performed” time as collection time, since we interpret “performance” as the collection of the lab. To interpret performance as “running the lab in the machine” seems a stretch.

2. HL7 V2 OBX 14 Date/Time of the Observation:

“In all cases the observation date time is the physiologically relevant date-time or the closest approximation to that date-time. In the case of test performed on specimens, the relevant date-time is the specimens collection date-time. In the case of observations taken direction on the patient (e.g. X-ray images, history and physical), the observation date-time is the date-time that observation was performed.”

Invasive Procedure Timing

Vendor Responses:

- 1) Any linkage between the procedure and metadata for the procedure is done artificially as part of the reporting process.

The final surgical procedure that was done is often not known until the procedure is coded and the right CPT codes or ICD-10-PCS codes are selected.

The procedure is also captured in non-discrete form in a physician note, but it is not generally captured in the problem list, which is only for diagnoses.

- 2) Surgical start/end time comes into the EMR in the operative report (which shows as an "observation"). The operation date-time listed in header of the report matches the column head as the 'observation time'.
- 3) Incision and closure times may be captured in the Anesthesia application but the timings are not transferred to the EHR or the operative report.

Timing Period(s) – PrevalencePeriod

JIRA: QDM-129

Prevalence Period: Onset DateTime to Abatement DateTime

1. Diagnosis
2. Device, Adverse Event
3. Device, Allergy
4. Device, Intolerance
5. Diagnostic Study, Adverse Event
6. Diagnostic Study, Intolerance
7. Immunization, Allergy
8. Immunization, Intolerance
9. Intervention, Adverse Event
10. Intervention, Intolerance
11. Laboratory Test, Adverse Event
12. Laboratory Test, Intolerance
13. Medication, Adverse Effects
14. Medication, Allergy
15. Medication, Intolerance
16. Procedure, Adverse Event
17. Procedure, Intolerance
18. Substance, Adverse Event
19. Substance, Allergy
20. Substance, Intolerance
21. Symptom

Timing Period(s) – AuthorTime

JIRA: QDM-129

Author Time: Time documented (single point in time)

- | | |
|---|----------------------------------|
| 1. Patient Care Experience | 17. Provider Characteristic |
| 2. Provider Care Experience | 18. Intervention, Order |
| 3. Communication: from Patient to Provider | 19. Intervention, Recommended |
| 4. Communication: from Provider to Patient | 20. Laboratory Test, Order |
| 5. Communication: from Provider to Provider | 21. Laboratory Test, Recommended |
| 6. Care Goal | 22. Medication, Discharge |
| 7. Device, Order | 23. Medication, Dispensed |
| 8. Device, Recommended | 24. Medication, Order |
| 9. Diagnostic Study, Order | 25. Physical Exam, Order |
| 10. Encounter, Order | 26. Physical Exam, Recommended |
| 11. Encounter, Recommended | 27. Procedure, Order |
| 12. Assessment, Performed | 28. Procedure, Recommended |
| 13. Assessment, Recommended | 29. Substance, Order |
| 14. Immunization, Administered | 30. Substance, Recommended |
| 15. Immunization, Order | 31. Patient Care Experience |
| 16. Patient Characteristic | |

Timing Period(s) – AuthorTime

JIRA: QDM-129

Author Time: Time documented (single point in time)

Additional Explanatory Description:

1. **Patient and Provider Care Communications** - Time the communication is sent
2. **Medication, Discharge** - Medication, Discharge refers to the list of medications included on the discharge instruction sheet provided to a patient
3. **Cumulative Medication Duration** is expressed in CQL logic which should include multiple dispensing events over the time period desired. To calculate Cumulative Medication Duration requires a new Supply attribute as well as the Frequency attribute of Medications

Timing Period(s) – Remove Timing

JIRA: QDM-129

Datatypes with StartTime and StopTime in QDM 4.3

1. **Family History** – Timing is not relevant - However, needs "Onset Age" as an attribute.
2. **Patient Characteristic, Birthdate** – Timing is not relevant - birthdate is an observation result.
3. **Patient Characteristic, Expired** – Timing is not relevant - expiration is an observation result.
4. **Patient Characteristic, Sex** – Timing is not relevant – sex as used in the QDM refers to administrative sex (i.e., birth sex)

Conclusion

- **Questions / comments**
- **Agenda items for next QDM user group meeting**
 - Contact us at qdm@esacinc.com
 - Or start a discussion: qdm-user-group-list@esacinc.com
- **Next user group meeting**
 - Ad Hoc meeting to complete Draft QDM 5.0 Content:
 - June 22, 2:30pm – 4:00pm EDT
 - Next monthly meeting
 - July 20, 2:30pm – 4:30pm EDT