

# Quality Data Model (QDM) User Group Meeting |Minutes

Meeting date | 06/21/2017 3:00 PM ET | Meeting location|Webinar link:  
<https://esacinc2.webex.com/esacinc2/j.php?MTID=m44a035b19cbc63ce3310c583e0354de8>

Time	Item	Presenter	Discussion/Options/Decisions
5 Minutes	Announcements	Chana West (ESAC)	<ul style="list-style-type: none"> <li>- CMS has released the latest changes to the <a href="#">Quality Data Model (QDM) specification, version 5.3, for use with Clinical Quality Language (CQL)</a>. Support for these features and modifications will be implemented in the production version of the Measure Authoring Tool (MAT) anticipated to be released in Fall 2017 (version 5.4).</li> <li>- CMS has issued technical guidance for vendors on how to correctly submit QRDA Category I files electronically using QRDA templates for the Encounter Order/Performed, Diagnosis, Device Order, and Transfer From/To Quality Data Model (QDM) data types. <b>This guidance is for electronic clinical quality measure (eCQM) submissions for the Hospital Inpatient Quality Reporting (IQR) Program and the Medicare Electronic Health Record (EHR) Incentive Program for Eligible Hospitals and Critical Access Hospitals (CAHs) for calendar year (CY) 2017 and QRDA Category I files only.</b> <ul style="list-style-type: none"> <li>• Please visit the <a href="#">eCQI Resource Center QRDA Space</a> for detailed descriptions of the issue, guidance and examples on how to properly submit QRDA templates.</li> </ul> </li> </ul>
30 Minutes	QDM 4.3 to QDM 5.3 Transition:  <b>Example: Laboratory Test, Performed</b>	Floyd Eisenberg (ESAC)	External review of the QDM 5.3 documentation raised questions about some of the QDM conceptual model diagrams and explanations. The implementation of tooling to address CQL causes a portion of the QDM data element to be expressed in the HQMF and attributes (or metadata) for the data element to be written in CQL. While the QDM data element still uses the content allowed by the data model, the documentation should more clearly indicate the change starting with the QDM version 5 family (i.e., 5.0, 5.01, 5.02, 5.3). Please refer to the final version of the QDM User Group slide deck for the June 21 meeting for diagrams.



Time	Item	Presenter	Discussion/Options/Decisions
30 Minutes, Cont.	QDM 4.3 to QDM 5.3 Transition: <b>Example: Laboratory Test, Performed,</b> Cont.	Floyd Eisenberg (ESAC), Cont.	<p>ESAC summarized, the <b>QDM 4.3 basic structure</b>:</p> <ul style="list-style-type: none"> <li>• Category – Datatype (context) – Datatype (context) Value Set – Datatype (context) attribute</li> <li>• Laboratory Test – Performed – LOINC lab tests – Result thresholds</li> </ul> <p>As an example, a measure may seek to specify all High Density Lipoprotein (HDL) lab tests performed for which the results are below the lower threshold of normal (&lt; 40 mg/dL).</p> <p><b>Considerations for QDM 5.3:</b></p> <p>QDM 5.3 structure has not changed: category, datatype, value set or direct referenced code, attributes</p> <p>The part of the QDM data element defined up front in the HQMF includes the category, datatype, value set or direct referenced code. The retrieve request to clinical software can include any of the potential metadata allowed by the QDM datatype as specified in the QDM model. Requesting a retrieve of all possible metadata would be excessive and such is not really the intent.</p> <p>Instead, the CQL further specifies the QDM data element based on the desired attributes (metadata) defined consistent with QDM 5.3. Unlike QDM logic, CQL allows expression of multiple attributes and attributes of attributes. Example:</p> <p>Laboratory Test, Performed</p> <p>To identify all patients with equivocal or abnormal antinuclear antibody test (ANA)</p> <ul style="list-style-type: none"> <li>– Normal is &lt; 1:80</li> <li>– Equivocal is = 1:80</li> <li>– Abnormal (elevated) is &gt; 1:80</li> </ul> <p>The portion of the QDM data element expressed in HQMF:</p> <ul style="list-style-type: none"> <li>• Laboratory Test, performed: antinuclear antibody (ANA)</li> <li>• A LOINC value set for ANA</li> </ul> <p>[Attributes expressed via CQL, not directly in the HQMF]</p> <p>The portion of the QDM data element expressed in CQL:</p> <ul style="list-style-type: none"> <li>• Component: Homogenous Pattern (result ≥ 1:80)</li> <li>• Component: Speckled Pattern (result ≥ 1:80)</li> </ul> <p>Uses LOINC value sets for “homogenous pattern” and “speckled pattern”</p>

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30 Minutes	QDM 4.3 to QDM 5.3 Transition:  <b>Example: Encounter, Performed</b>	Floyd Eisenberg (ESAC)	<p>For this example, the measure seeks to identify emergency department arrival time.</p> <p>The portion of the QDM data element expressed in HQMF:</p> <ul style="list-style-type: none"> <li>• Encounter, Performed: ED Encounter</li> <li>• Uses a SNOMED-CT and/or CPT value set for ED encounter</li> </ul> <p>[Attributes expressed via CQL (location and location period), not directly in the HQMF]</p> <p>The portion of the QDM data element expressed in CQL:</p> <ul style="list-style-type: none"> <li>• Location: ED location</li> <li>• Uses SNOMED-CT value set for “ED location”</li> <li>• Location Period [identifies start (arrival time) through end (departure time) at the referenced location]</li> </ul> <p>QDM further allows the measure to differentiate admission time from arrival time. The Encounter attribute <i>relevant period</i>, by convention, indicates the time between the admission time (start) and the discharge time (end). A location period, by convention, indicates the time between arrival at a particular location (start) to the time the patient departs that same location (end).</p> <p>The following example shows how to indicate both length of stay (admission to discharge duration) and arrival time:</p> <p style="padding-left: 40px;">Encounter, Performed</p> <p style="padding-left: 40px;">Attributes expressed via CQL (i.e., relevant period for admission/discharge; location period for arrival/departure)</p> <p style="padding-left: 40px;">Location (location period in CQL)</p> <ul style="list-style-type: none"> <li>• Consistently provides arrival and departure times</li> </ul> <p style="padding-left: 40px;">Length of stay attribute (Relevant Period in CQL)</p> <ul style="list-style-type: none"> <li>• Equal to the number of days in the Encounter (discharge date minus admission date)</li> </ul> <p>Note: the “length of stay” attribute for Encounter, Performed is equivalent to indicating the time difference (in days) from Encounter, Performed relevant period start to Encounter, Performed relevant period end.</p>

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30 Minutes, Cont.	QDM 4.3 to QDM 5.3 Transition: <b>Example: Encounter, Performed,</b> Cont.	Floyd Eisenberg (ESAC), Cont.	<p><b>Discussion:</b>            Zahid Butt (MediSolv) – Location as an attribute is trying to get at the arrival indirectly by referencing a period. Is it more intuitive if the location arrival and location departure were direct attributes? A period means a period of time and not only arrival or departure. The relevant period is really the same as length of stay.</p> <p>ESAC noted that QDM 5.0 more clearly defined start and stop times compared with earlier versions. Prior to QDM 5.0, the timing definitions were more empiric. To simplify CQL logic, QDM datatypes expressing concepts that happen over time (i.e., are not referenced by a single point in time such as author time), indicate intervals (or periods as defined in HL7 FHIR). This change does represent a new way of thinking but it allows the CQL logic to relate data elements more easily – e.g., a lab test is performed before an encounter relevant period. Some time periods were developed by convention.</p> <p>When QDM was first developed, considerations were discussed with HL7 Workgroups to differentiate admission time from arrival time for encounters. The HL7 Reference Information Model (RIM) on which HQMF Clinical Document Architecture (CDA) are based allows one <i>low</i> and one <i>high</i> time for a concept – basically start and stop. Each (<i>high</i> and <i>low</i>) can not have two meanings. Note that QRDA is an implementation guide based on CDA. Thus, all measure structures had to have a standard way to address admission/discharge and arrival/departure. That was the reason for developing the convention of Encounter, Performed using admission/discharge and location using arrival/departure.</p> <p>In developing <i>periods</i> the QDM User Group agreed to identify reusable concepts wherever possible. That is the reason for <i>relevant period</i>, <i>prevalence period</i>, and now <i>location period</i>, thus avoiding a different <i>period</i> type for every datatype.</p> <p>ESAC suggested it might be useful to provide guidance to help developers understand this concept.</p> <p>Paul Denning (MITRE) – From a retrieval point of view, the EHR system may have many records with any given particular element that match the criteria. It would be best to avoid retrieving all records, and sorting out the ones you want, but rather retrieve just those of interest. If you simply look at the HQMF, this is unclear.</p> <p>ESAC clarified the retrieve <i>could</i> request all the metadata and then sort out what you want, but really the CQL is written to retrieve only those indicated. In the HDL example above, the CQL is only asking for the elevated results. The human readable of the HQMF will include the CQL.</p>

Time	Item	Presenter	Discussion/Options/Decisions
30 Minutes, Cont.	QDM 4.3 to QDM 5.3 Transition:  <b>Example: Encounter, Performed,</b>  Cont.	Floyd Eisenberg (ESAC),  Cont.	<p><b>Discussion, Cont.:</b></p> <p>ESAC will add guidance to help understand how this is implemented. Note that the ANA example identified a CQL issue. While QDM indicates results can be numerical, additional guidance should indicate the <i>number</i> can be a ratio. CQL does not allow ratios at present so a minor change may be needed in CQL to allow a ratio as a result (note the result value for ANA referenced the ratio as 1:80).</p> <p>Rob McClure (NLM Contractor) – Noted there is complexity in that some of the laboratory tests, where there may be more than one concept in the value set. When looking for a specific result, there is a need to guarantee that any of the tests/concepts in value set are expected to have the same type of result.</p> <p>ESAC noted that guidance is needed here. In some cases, the measure developer can reference an interpretation of a result. For example, SNOMED-CT value sets can be used to indicate <i>high</i>, <i>normal range</i>, or <i>low</i> when the specific thresholds for high or low may vary. Implementers of such measures need to interpret local results to retrieve appropriate data and report the performance results. In other cases, different lab tests in a value set may have different thresholds. In such cases, a specific value set or direct referenced code would need to address the desired threshold and the measure would need to reference a union of multiple laboratory test options.</p> <p><b>Action:</b></p> <p>ESAC will develop guidance with examples to address situations where similar laboratory tests or test components have different thresholds, and examples about requesting an interpretation. The guidance should provide examples and show what the CQL for these situations will look like.</p>
5 Minutes	QDM 5.3: Consideration for Guidance	Floyd Eisenberg (ESAC)	<p>ESAC proposed providing guidance for expression of the following:</p> <ul style="list-style-type: none"> <li>• Cumulative Medication Duration</li> <li>• Length of Stay (admission to discharge)</li> <li>• Encounter Locations (location period)</li> <li>• Assessment Components</li> <li>• Care Goal</li> <li>• Participation</li> </ul>

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5 Minutes, Cont.	QDM 5.3: Consideration for Guidance, Cont.	Floyd Eisenberg (ESAC), Cont.	<p><b>Discussion:</b></p> <p>Zahid Butt (MediSolv) – Noted that the QDM 5.3 the Diagnosis datatype still references active diagnosis in the description even though the active diagnosis attribute was removed. Suggested adding guidance regarding these nuances to the Diagnosis category.</p> <p>Paul Denning (MITRE) – Regarding the example where the results were a ratio, this is not listed as a type of result in QDM 5.3. ESAC confirmed the “numeric” result could be a ratio, and that this will be added to the guidance.</p> <p><b>Action:</b></p> <p>ESAC will add the suggestions noted above to the guidance.</p>
5 Minutes	Next Meeting	Chana West (ESAC)	<p><b>Agenda items for next QDM user group meeting</b></p> <ul style="list-style-type: none"> <li>– Contact us at <a href="mailto:qdm@esacinc.com">qdm@esacinc.com</a></li> <li>– Or start a discussion: <a href="mailto:qdm-user-group-list@esacinc.com">qdm-user-group-list@esacinc.com</a></li> </ul> <p><b>Next user group meeting</b></p> <ul style="list-style-type: none"> <li>– Regularly Scheduled Meeting – July 19, 2017 from 2:30 to 4:30 PM ET</li> </ul>

**Action Items:**

Assignee	Topic	Action Item Details
ESAC	Develop Guidance with examples for QDM v5.3	<ul style="list-style-type: none"> <li>• Address situations where similar laboratory tests or test components have different thresholds, and examples about requesting an interpretation. The guidance should provide examples and show what the CQL for these situations will look like.</li> <li>• Address nuances to Diagnosis category (e.g., Diagnosis datatype still references active diagnosis in the description even though the active diagnosis attribute was removed)</li> <li>• Address that “numeric” result could be a ratio</li> </ul>

**Attendees:**

	<b>Name</b>	<b>Organization</b>
	Alex Lui	Epic
X	Angela Flanagan	Lantana
	Anna Bentler	The Joint Commission
x	Anne Coultas	McKesson
	Anne Smith	NCQA
	Balu Balasubramanyam	MITRE
	Ben Hamlin	NCQA
	Brian Blaufeux	Northern Westchester Hospital
	Bryn Rhodes	ESAC
X	Chana West	ESAC
	Chandra Bartleman	Telligen
	Chris Moesel	MITRE
	Cindy Lamb	Telligen
	Cynthia Barton	Lantana
	Dalana Ostile	Providence Health Systems
	Dave Wade	Apprio
	Debbie Hall	University of Maryland
X	Doug Goldstein	Epic
X	Floyd Eisenberg	ESAC
X	Howard Bregman	Epic
X	Jamie Jouza	PCPI
	Jean Fajen	Telligen
X	Jenny Brush	ESAC
	Jenna Williams-Bader	NCQA
	John Carroll	The Joint Commission
	Jessica Smails	Caradigm
X	Joseph Kunisch	Memorial Hermann
	Jorge Belmonte	PCPI
	Julia Skapik	ONC
	Julie Koscuizska	Nyack Hospital
	Juliet Rubini	Mathematica
	Justin Schirle	Epic
X	Jay Frails	Meditech
	Khadija Mohammed	ESAC
	Kendra Hanley	HSAG
	Kimberly Smuk	HSAG
	KP Sethi	Lantana

	<b>Name</b>	<b>Organization</b>
	Latasha Archer	NCQA
	Laura Pearlman	Midwest Center for Women's Healthcare
	Laurie Wissell	Allscripts
	Lisa Anderson	The Joint Commission
	Lizzie Charboneau	MITRE
X	Lynn Perrine	Lantana
	Marc Hadley	MITRE
X	Margaret Dobson	Zepf Center
	Marilyn Parenzan	The Joint Commission
	Michelle Dardis	The Joint Commission
	Michelle Hinterberg	MediSolv
	Mike Shoemaker	Telligen
	Mukesh Allu	Epic
X	Pamela Mahan-Rudolph	Memorial Hermann
	Patty McKay	FMQAI
X	Paul Denning	MITRE
X	Rayna Scott	PCPI
X	Rose Almonte	MITRE
X	Rob McClure	NLM Contractor
	Rukma Joshi	ESAC
	Rute Martins	MITRE
	Ruth Gatiba	Battelle
	Ryan Clark	Xcenda
	Sethuraman Ramanan	Cognizant
	Stan Rankins	Telligen
	Susan Wisnieski	Meditech
	Sweta Ladwa	ESAC
	Syed Zeeshan	eDaptive Systems
X	Tammy Kuschel	McKesson
	Tom Dunn	Telligen
	Vaspaan Patel	NCQA
	Wendy Wise	Lantana
X	Yan Heras	ESAC
	Yanyan Hu	The Joint Commission
X	Yvette Apura	PCPI
X	Zahid Butt	MediSolv
	Zach May	ESAC

