eCQM 101 - Getting Started with Electronic Clinical Quality Measures for Quality Reporting Programs Introduction

June 2024

eCQM 101 Overview

- What is an electronic clinical quality measure (eCQM)?
- Where do I find eCQMs?
- What is included in an eCQM specification?

What is an eCQM?

eCQMs

- eCQMs use data electronically extracted from electronic health records and/or health information technology systems to measure the quality of health care provided.

- CMS uses eCQMs in a variety of quality reporting and incentive programs.

- Eligible Clinicians (ECs), Eligible Hospitals (EHs), and Critical Access Hospitals (CAHs) report eCQMs to CMS.
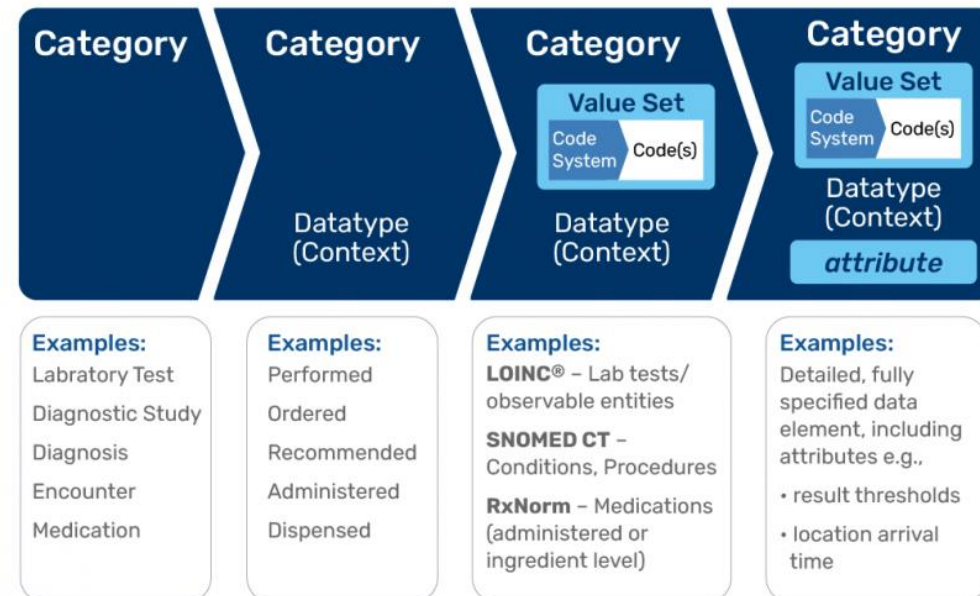
Building an eCQM

- Data Model - What data to look for in the patient's medical record to capture and report
- Expression Logic - How to calculate the results of the data captured to measure whether the 'right' care was provided
- Structure - metadata, numerator, denominator, exclusions, exceptions
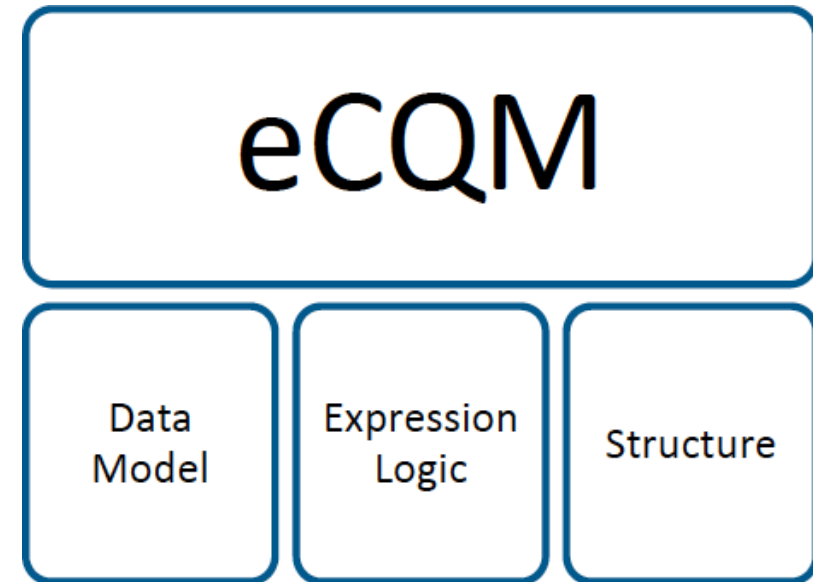
Data Model
Quality Data Model (QDM)

- The QDM is an information model that defines relationships between patients and clinical concepts in a standardized format to enable electronic quality performance measurement.

- The QDM is the current structure for electronically representing quality measure concepts in eCQM development and reporting.

- QDM Data Element structure

- Find more information on the eCQI Resource Center QDM page.

Category	Category	Category	Category
		Value Set Code System — Code(s)	Value Set Code System — Code(s)
Datatype (Context)	Datatype (Context)	Datatype (Context)	Datatype (Context) attribute

Examples:	Examples:	Examples:	Examples:
Labratory Test	Performed	LOINC® – Lab tests/ observable entities	Detailed, fully specified data element, including attributes e.g.,
Diagnostic Study	Ordered	SNOMED CT – Conditions, Procedures	• result thresholds
Diagnosis	Recommended	RxNorm – Medications (administered or ingredient level)	• location arrival time
Encounter	Administered		
Medication	Dispensed		

LOINC® – Logical Observation Identifiers Names and Codes

eCQM Data Element

- QDM Category - Consists of a single clinical concept identified by a value set. A category is the highest level of definition for a QDM element. QDM versions 5.5 and 5.6 contain 22 categories.
  - Examples: Medication, Procedure, Condition/Diagnosis/Problem, and Encounter

- QDM Datatype - The context in which each category is used to describe a part of the clinical care process.
  - Examples: "Laboratory Test, Order", "Laboratory Test, Performed"

- QDM Attribute - Provides specific details about a QDM datatype. QDM attributes represent metadata, or information about each QDM datatype that might be used in eCQM expressions to provide necessary details for calculation.
  - Example: "Laboratory Test, Performed: (result)"

Health Quality Measure Format (HQMF) and Expression Logic Clinical Quality Language (CQL)

- The HQMF is the basic electronic specification for the measure. It provides the metadata and population structure. The QDM provides the data model and CQL represents the logic used in the HQMF.

- The HQMF header includes descriptions of the measure populations, any stratifications, the measure steward, measure type, identifiers, rationale, scoring, and other details. The HQMF body includes the population criteria and the data criteria.

- CQL is a Health Level Seven International® (HL7®) human-readable authoring language standard. CQL is the expression logic used with HQMF for eCQMs.

- Find more information on the eCQI Resource Center HQMF page.

Benefits of CQL

- Expresses measure in easily human-readable logic structured for processing a query electronically.

- Provides for sharing measure logic between measures.

- Harmonizes the standards used for eCQMs and Clinical Decision Support (CDS).

- Simplifies calculation engine implementation.

- Can be used with multiple information data models, e.g., QDM, Fast Healthcare Interoperability Resources® (FHIR®).

- Find more information on the eCQI Resource Center [CQL page](#).

Where do I find eCQMs?

eCQI Resource Center
https://ecqi.healthit.gov/

Different ways to get to eCQMs

https://ecqi.healthit.gov/

Example: Finding EH/CAH eCQM Resources

June 2024

https://ecqi.healthit.gov/eh-cah?qt-tabs_eh=ecqm-resources

Example: Finding EH/CAH eCQMs

https://ecqi.healthit.gov/eh-cah?qt-tabs_eh=eh-cah-ecqms

Example: Finding EH/CAH Individual eCQM Specifications – General Information

Anticoagulation Therapy for Atrial Fibrillation/Flutter

| Measure Information | Specifications and Data Elements | Release Notes |

Compare Versions of: "Anticoagulation Therapy for Atrial Fibrillation/Flutter"

The Compare function compares two years of the measure specifications found in the header of the measure's HTML. It does not include a comparison of any information in the body of the HTML, e.g., population criteria, Clinical Quality Language, or value sets.

Strikethrough text highlighted in red indicates information changed from the previous version.
Text highlighted in green indicates information updated in the new eCQM version.

COMPARE **2025** VERSION TO

[2024 ▾]   [Compare ›]   [Reset]

DOWNLOAD

[Download ▾]

Measure Information	2025 Reporting Period
Title	Anticoagulation Therapy for Atrial Fibrillation/Flutter
CMS eCQM ID	CMS71v14
Short Name	STK-3
CBE ID	Not Applicable
Measure Steward	The Joint Commission

https://ecqi.healthit.gov/ecqm/eh/2025/cms0071v14?qt-tabs_measure=measure-information

Example: Finding EH/CAH Individual eCQM Specifications, Data Element Repository and Value Set Links

https://ecqi.healthit.gov/ecqm/eh/2025/cms0071v14?qt-tabs_measure=specifications-and-data-elements

Hybrid Measures
In Use and Pre-Rulemaking

June 2024

https://ecqi.healthit.gov/eh-cah?qt-tabs_eh=eh-cah-ecqms&global_measure_group=eCQMs

Finding EC eCQMs

https://ecqi.healthit.gov/ep-ec?qt-tabs_ep=ec-ecqms&global_measure_group=eCQMs

Finding EC eCQMs (cont.)

https://ecqi.healthit.gov/ep-ec?qt-tabs_ep=ec-ecqms&global_measure_group=eCQMs

eCQM Data Element Repository (DERep)

Measure Collaboration (MC) Workspace

About   eCQM Concepts   eCQM Testing Opportunities   **eCQM Data Element Repository**

Electronic Clinical Quality Measure (eCQM) Data Element Repository (DERep)

The eCQM DERep provides clarification, definitions, and clinical focus for the data elements associated with eCQMs used in CMS quality reporting and incentive programs. Users can filter information by data element, eCQM, Quality Data Model (QDM) attribute, QDM category, QDM datatype, or QDM entities. See the MC Workspace User Guide (PDF) to learn more about how to use the MC Workspace eCQM DERep Module.

Information within the eCQM DERep is derived from the eCQM specifications, QDM, and the Value Set Authority Center (VSAC). Each eCQM data element includes information about the value set or the direct reference code (DRC), the QDM datatype, and the QDM attribute(s) used by that data element. The QDM information displayed for an eCQM reflects the version used in the development of the eCQM for a specific performance/reporting period.

Year	Select a Filter Option	Search	
2024	- Any -		**Apply**

- Any –
eCQM Data Elements
EC eCQMs
EH/CAH eCQMs
Hybrid Measures
OQR eCQMs
EC Program Candidate eCQMs
EH Program Candidate eCQMs
Hybrid Program Candidate Measures
OQR Program Candidate eCQMs
QDM Categories
QDM Datatypes
QDM Attributes
QDM Entities

Select a filter or search   er definitions are

eCQM Data Eleme

The eCQM Data Element   nts and coded QDM attributes used in eCQMs for the selected CMS quality reporting and performa   datatype with information about its value set or direct reference code, and a coded QDM attribute or   ement. The eCQM specification lists the QDM datatypes in its Data Criteria section and the coded QDM attr

Occasionally, more than   lthough their intended use may differ. To differentiate value sets with the same name, their object identi   t. Example: ["Diagnosis": "Pregnancy"] (2.16.840.1.113883.3.526.3.378)

eCQMs

The eCQMs filter currently provides a list of the Eligible Hospital/Critical Access Hospital, Eligible Clinician, Outpatient Quality Reporting, and Hybrid measures used in CMS quality reporting programs. The individual eCQM pages provide the eCQM rationale and a list of all the eCQM data elements associated with the eCQM and information about each data element.

The eCQM DERep provides all the data elements associated with published and tested eCQMs for use in CMS quality reporting programs including definitions and clinical focus for each data element.

https://ecqi.healthit.gov/mc-workspace-2/data-element-repository

Example: Individual eCQM - DERep

https://ecqi.healthit.gov/measure-data-elements/179611

Data Element and Details

2024 » Appropriate Treatment for Upper Respiratory Infection (URI) » Anti-depressant Medication Management »

["Diagnosis": "Hospice Diagnosis"] » ["Assessment, Performed": "Hospice care [Minimum Data Set]"] » ["Diagnosis": "Major Depression"]

DERep Home Page

["Diagnosis": "Major Depression"]

eCQM Data Element

Performance/Reporting Period: 2024
Value Set Description from VSAC

CLINICAL FOCUS: The purpose of this value set is to represent concepts for a diagnosis of major depression.

DATA ELEMENT SCOPE: This value set may use a model element related to Diagnosis.

INCLUSION CRITERIA: Includes concepts that represent a diagnosis of major depression including mild, moderate, and severe, with or without psychotic features. Includes major depression during pregnancy and major depression in partial remission.

EXCLUSION CRITERIA: Excludes concepts that represent a diagnosis of major depression in remission or depression not specified as 'major depression.'
Constrained to codes in the Major Depression value set (2.16.840.1.113883.3.464.1003.105.12.1007) ↗

https://ecqi.healthit.gov/mcw/2024/ecqm-dataelement/diagnosismajordepression.html

Data Elements - Used By

Get to the same data element specifics including "eCQMs using this data element" by going directly to the data element.

["Diagnosis": "Upper Respiratory Infection"]

eCQM Data Element

Performance/Reporting Period: 2024

Value Set Description from VSAC

CLINICAL FOCUS: The purpose of this value set is to represent concepts for a diagnosis of an acute upper respiratory infection.

DATA ELEMENT SCOPE: This value set may use a model element related to Diagnosis.

INCLUSION CRITERIA: Includes concepts that represent a diagnosis of an acute upper respiratory infection.

EXCLUSION CRITERIA: No exclusions.

Constrained to codes in the Upper Respiratory Infection value set (2.16.840.1.113883.3.464.1003.102.12.1022) ↗

QDM Datatype and Definition

"Diagnosis"

Data elements that meet criteria using this datatype should document the Condition/Diagnosis/Problem and its corresponding value set. The *onset dateTime* corresponds to the implicit start dateTime of the datatype and the *abatement dateTime* corresponds to the implicit stop dateTime of the datatype. If the *abatement dateTime* is not present, then the diagnosis is considered to still be active. When this datatype is used with timing relationships, the criterion is looking for an active diagnosis for the time frame indicated by the timing relationships.

Timing: The *prevalencePeriod* references the time from the *onset date* to the a...

eCQMs using this data element

eCQMs using this data element:

CMS154v12 - Appropriate Treatment for Upper Respiratory Infection (URI)

What is included within an eCQM specification?

eCQM Components

- Human-readable HyperText Markup Language (HTML) file
- Machine readable
  - HQMF XML file
    - The header identifies and classifies the document and provides important metadata about the measure
    - The body contains eCQM sections (e.g., definitions, population criteria, supplemental data elements)
  - Shared CQL Libraries (.cql, .xml, .json)
    - CQL file provides the formal description of the computable content in the measure and organized into libraries for reusing or sharing between measures and other artifacts
    - Expression Logical Model (ELM) XML is the machine-readable representation of the eCQM's logic in XML.
    - ELM JavaScript Object Notation (JSON) file is the ELM file in JavaScript Notation, as opposed to XML.

Note: *Value sets and direct reference codes in the eCQM specifications are found in the [Value Set Authority Center](#) (VSAC) and require a free Unified Medical Language System (UMLS) [license](#) to access.*

Human Readable: Header
Background, Owner, Endorsement…

eCQM Title	Appropriate Treatment for Upper Respiratory Infection (URI)			
eCQM Identifier (Measure Authoring Tool)	154		eCQM Version Number	12.0.000
NQF Number	Not Applicable		GUID	e455fac0-f2cb-4074-a351-1e68a90fb7cf
Measurement Period	January 1, 20XX through December 31, 20XX			
Measure Steward	National Committee for Quality Assurance			
Measure Developer	National Committee for Quality Assurance			
Endorsed By	None			
Description	Percentage of episodes for patients 3 month that did not result in an antibiotic order			
Copyright	This Physician Performance Measure (Measu National Committee for Quality Assurance (N no representations, warranties, or endorsem performance measures and NCQA has no lia holds a copyright in the Measure. The Measu noncommercial purposes (e.g., use by healt approval from NCQA. Commercial use is defi gain, or incorporation of the Measure into a All commercial uses or requests for modifica discretion of NCQA. (C) 2012-2022 National Limited proprietary coding is contained in th sets should obtain all necessary licenses fro accuracy of any third-party codes contained CPT(R) codes, descriptions and other data a is a trademark of the American Medical Asso are included in CPT. The AMA assumes no liability for the data contained herein. Applicable FARS/DFARS restrictions apply to government use. LOINC(R) copyright 2004-2022 Regenstrief Institute, Inc. This material contains SNOMED Clinical Terms(R) (SNOMED CT[R]) copyright 2004-2022 International Health Terminology Standards Development Organisation. ICD-10 copyright 2022 World Health Organization. All Rights Reserved.			

The measure header in the human readable file includes:
- Measure Developer
- Measure Steward
- Description of the Measure
- Rationale and Evidence for the Measure
- Relevant Clinical Guidelines
- Copyright Restrictions
- Measure Type
- How the Measure is Scored
- Who has Endorsed the Measure
- Any Additional Guidance
- Summary of the Different Fields/Criteria

Snipet from the eCQM's HTML https://ecqi.healthit.gov/sites/default/files/ecqm/measures/CMS154v12.html

Human Readable: Body- Population Criteria

Population Criteria

⊿ **Initial Population**

    "Encounter with Upper Respiratory Infection" EncounterWithURI
     where AgeInMonthsAt(date from start of "Measurement Period")>= 3
     return EncounterWithURI

⊿ **Denominator**

    "Initial Population"

⊿ **Denominator Exclusions**

    "Encounters and Assessments with Hospice Patient"
    union "Encounter with Comorbid Condition for Upper R
    union "Encounter with Upper Respiratory Infection and
    union "Encounter with Competing Diagnosis for Upper Respiratory Infection"

> Think of the measure logic as an equation - it relates different pieces of information together and calculates a measure result.

⊿ **Numerator**

    "Encounter with Upper Respiratory Infection" EncounterWithURI
     without ["Medication, Order": "Antibiotic Medications for Upper Respiratory Infection"] OrderedAntibiotic
      such that OrderedAntibiotic.authorDatetime 3 days or less on or after start of EncounterWithURI.relevantPeriod
     return EncounterWithURI

⊿ **Numerator Exclusions**

    None

⊿ **Denominator Exceptions**

    None

https://ecqi.healthit.gov/sites/default/files/ecqm/measures/CMS154v12.html

Human Readable: Body- Definitions Snippet

Definitions

◢ Denominator

"Initial Population"

◢ Denominator Exclusions

"Encounters and Assessments with Hospice Patient"
  union "Encounter with Comorbid Condition for Upper Respiratory Infection Prior"
  union "Encounter with Upper Respiratory Infection and Antibiotics Active In 30 Days Prior to the Episode Date"
  union "Encounter with Competing Diagnosis for Upper Respiratory Infection"

◢ Encounter with Comorbid Condition for Upper Respiratory Infection Prior

("Encounter with Upper Respiratory Infection" EncounterWithURI
  with ["Diagnosis": "Comorbid Conditions for Respiratory Conditions"] ComorbidCondition
    such that start of ComorbidCondition.prevalencePeriod in day of Interval[start of EncounterWithURI.relevantPeriod - 1 year, start
  return EncounterWithURI
)

◢ Encounter with Competing Diagnosis for Upper Respiratory Infection

("Encounter with Upper Respiratory Infection" EncounterWithURI
  with ["Diagnosis": "Competing Conditions for Respiratory Conditions"] CompetingCondition
    such that CompetingCondition.prevalencePeriod starts 3 days or less on or after day of start of EncounterWithURI.relevantPeriod
  return EncounterWithURI
)

◢ Encounter with Upper Respiratory Infection

from
  "Qualifying Encounters" QualifyingEncounters,
  ["Diagnosis": "Upper Respiratory Infection"] URI
  where URI.prevalencePeriod starts during day of QualifyingEncounters.relevantPeriod
   or URI.prevalencePeriod overlaps before QualifyingEncounters.relevantPeriod
  return QualifyingEncounters

Human Readable: Body- Functions and Terminology

Functions

▲ **Global.NormalizeInterval(pointInTime DateTime, period Interval<DateTime>)**

    if pointInTime is not null then Interval[pointInTime, pointInTime]
      else if period is not null then period
      else null as Interval<DateTime>

Terminology

- code "Discharge to healthcare facility for hospice care (procedure)" ("SNOMEDCT Code (428371000124100)")
- code "Discharge to home for hospice care (procedure)" ("SNOMEDCT Code (428361000124107)")
- code "Hospice care [Minimum Data Set]" ("LOINC Code (45755-6)")
- code "Unlisted preventive medicine service" ("CPT Code (99429)")
- code "Yes (qualifier value)" ("SNOMEDCT Code (373066001)")
- valueset "Antibiotic Medications for Upper Respiratory Infection" (2.16.840.1.113883.3.464.1003.1190)
- valueset "Comorbid Conditions for Respiratory Conditions" (2.16.840.1.113883.3.464.1003.102.12.1025)
- valueset "Competing Conditions for Respiratory Conditions" (2.16.840.1.113883.3.464.1003.102.12.1017)
- valueset "Emergency Department Evaluation and Management Visit" (2.16.840.1.113883.3.464.1003.101.12.1010)
- valueset "Encounter Inpatient" (2.16.840.1.113883.3.666.5.307)
- valueset "Ethnicity" (2.16.840.1.114222.4.11.837)
- valueset "Home Healthcare Services" (2.16.840.1.113883.3.464.1003.101.12.1016)
- valueset "Hospice Care Ambulatory" (2.16.840.1.113883.3.526.3.1584)
- valueset "Hospice Diagnosis" (2.16.840.1.113883.3.464.1003.1165)
- valueset "Hospice Encounter" (2.16.840.1.113883.3.464.1003.1003)
- valueset "Initial Hospital Observation Care" (2.16.840.1.113883.3.464.1003.101.12.1002)
- valueset "Medical Disability Exam" (2.16.840.1.113883.3.464.1003.101.12.1073)
- valueset "Observation" (2.16.840.1.113883.3.464.1003.101.12.1086)
- valueset "Office Visit" (2.16.840.1.113883.3.464.1003.101.12.1001)
- valueset "ONC Administrative Sex" (2.16.840.1.113762.1.4.1)
- valueset "Online Assessments" (2.16.840.1.113883.3.464.1003.101.12.1089)
- valueset "Outpatient Consultation" (2.16.840.1.113883.3.464.1003.101.12.1008)
- valueset "Payer" (2.16.840.1.114222.4.11.3591)
- valueset "Preventive Care Services Established Office Visit, 18 and Up" (2.16.840.1.113883.3.464.1003.101.12.1025)
- valueset "Preventive Care Services Group Counseling" (2.16.840.1.113883.3.464.1003.101.12.1027)
- valueset "Preventive Care Services Individual Counseling" (2.16.840.1.113883.3.464.1003.101.12.1026)
- valueset "Preventive Care Services Initial Office Visit, 18 and Up" (2.16.840.1.113883.3.464.1003.101.12.1023)
- valueset "Preventive Care Services, Initial Office Visit, 0 to 17" (2.16.840.1.113883.3.464.1003.101.12.1022)
- valueset "Preventive Care, Established Office Visit, 0 to 17" (2.16.840.1.113883.3.464.1003.101.12.1024)
- valueset "Race" (2.16.840.1.114222.4.11.836)
- valueset "Telephone Visits" (2.16.840.1.113883.3.464.1003.101.12.1080)
- valueset "Upper Respiratory Infection" (2.16.840.1.113883.3.464.1003.102.12.1022)

Human Readable: Body- Data Criteria

Data Criteria (QDM Data Elements)

- "Assessment, Performed: Hospice care [Minimum Data Set]" using "Hospice care [Minimum Data Set] (LOINC Code 45755-6)"
- "Diagnosis: Comorbid Conditions for Respiratory Conditions" using "Comorbid Conditions for Respiratory Conditions (2.16.840.1.113883.3.464.1003.102.12.1025)"
- "Diagnosis: Competing Conditions for Respiratory Conditions" using "Competing Conditions for Respiratory Conditions (2.16.840.1.113883.3.464.1003.102.12.1017)"
- "Diagnosis: Hospice Diagnosis" using "Hospice Diagnosis (2.16.840.1.113883.3.464.1003.1165)"
- "Diagnosis: Upper Respiratory Infection" using "Upper Respiratory Infection (2.16.840.1.113883.3.464.1003.102.12.1022)"
- "Encounter, Performed: Emergency Department Evaluation and Management Visit" using "Emergency Department Evaluation and Management Visit (2.16.840.1.113883.3.464.1003.101.12.1010)"
- "Encounter, Performed: Encounter Inpatient" using "Encounter Inpatient (2.16.840.1.113883.3.666.5.307)"
- "Encounter, Performed: Home Healthcare Services" using "Home Healthcare Services (2.16.840.1.113883.3.464.1003.101.12.1016)"
- "Encounter, Performed: Hospice Encounter" using "Hospice Encounter (2.16.840.1.113883.3.464.1003.1003)"
- "Encounter, Performed: Initial Hospital Observation Care" using "Initial Hospital Observation Care (2.16.840.1.113883.3.464.1003.101.12.1002)"
- "Encounter, Performed: Medical Disability Exam" using "Medical Disability Exam (2.16.840.1.113883.3.464.1003.101.12.1073)"
- "Encounter, Performed: Observation" using "Observation (2.16.840.1.113883.3.464.1003.101.12.1086)"
- "Encounter, Performed: Office Visit" using "Office Visit (2.16.840.1.113883.3.464.1003.101.12.1001)"
- "Encounter, Performed: Online Assessments" using "Online Assessments (2.16.840.1.113883.3.464.1003.101.12.1089)"
- "Encounter, Performed: Outpatient Consultation" using "Outpatient Consultation (2.16.840.1.113883.3.464.1003.101.12.1008)"
- "Encounter, Performed: Preventive Care Services Established Office Visit, 18 and Up" using "Preventive Care Services Established Office Visit, 18 and Up (2.16.840.1.113883.3.464.1003.101.12.1025)"
- "Encounter, Performed: Preventive Care Services Group Counseling" using "Preventive Care Services Group Counseling (2.16.840.1.113883.3.464.1003.101.12.1027)"

Human Readable: Body- Supplemental Data Elements

Supplemental Data Elements

◢ SDE Ethnicity

["Patient Characteristic Ethnicity": "Ethnicity"]

◢ SDE Payer

["Patient Characteristic Payer": "Payer"]

◢ SDE Race

["Patient Characteristic Race": "Race"]

◢ SDE Sex

["Patient Characteristic Sex": "ONC Administrative Sex"]

Machine Readable XML: Measure Header and Logic - Snippet


```
▼<QualityMeasureDocument xmlns="urn:hl7-org:v3" xmlns:cql-ext="urn:hhs-cql:hqmf-n1-extensions:v1"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <!--
            ********************************************************
            Measure Details Section
            ********************************************************
        -->
  <typeId extension="POQM_HD000001UV02" root="2.16.840.1.113883.1.3"/>
  ▼<templateId>
     <item extension="2021-02-01" root="2.16.840.1.113883.10.20.28.1.2"/>
  </templateId>
  <id root="2c928084-8389-524e-0183-c8d7a6700f02"/>
  ▼<code code="57024-2" codeSystem="2.16.840.1.113883.6.1">
     <displayName value="Health Quality Measure Document"/>
  </code>
  <title value="Appropriate Treatment for Upper Respiratory Infection (URI)"/>
  <text value="Percentage of episodes for patients 3 months of age and older with
  not result in an antibiotic order"/>
  <statusCode code="COMPLETED"/>
  <setId root="e455fac0-f2cb-4074-a351-1e68a90fb7cf"/>
  <versionNumber value="12.0.000"/>
  ▼<author>
    ▼<responsibleParty classCode="ASSIGNED">
      ▼<representedResponsibleOrganization classCode="ORG" determinerCode="INSTANCE
        ▼<id>
           <item root="2.16.840.1.113883.3.464"/>
        </id>
        ▼<name>
          ▼<item>
             <part value="National Committee for Quality Assurance"/>
          </item>
        </name>
      </representedResponsibleOrganization>
    </responsibleParty>
  </author>
```

The HQMF is an xml-based standard that shows the measure content, both machine-readable logic and header, in a way that a machine can parse the content into sections and perform calculations.

While it does take some investment to create a tool that "reads" the HQMF, it can be used to import the measure and generate the measure results automatically.

Snipet from the eCQM Specification on the eCQI Resource Center:
https://ecqi.healthit.gov/sites/default/files/ecqm/measures/CMS154v12.zip

Companion eCQM 101 Presentations

- Find additional eCQM presentations on the eCQM Resources page of the eCQI Resource Center

- Email the eCQI Resource Center to ask questions or provide website feedback

Acronyms

Acronym	Definition
CAH	Critical Access Hospital
CDS	Clinical Decision Support
CQL	Clinical Quality Language
DERep	Data Element Repository
eCQM	Electronic Clinical Quality Measure
EH	Eligible Hospital
ELM	Expression Logical Model
FHIR	Fast Healthcare Interoperability Resources
HL7	Health Level Seven International
HQMF	Health Quality Reporting Format
HTML	Hyper Text Markup Language
JSON	JavaScript Object Notation
LOINC	Logical Observation Identifiers, Names, and Codes
QDM	Quality Data Model
UMLS	Unified Medical Language System
VSAC	Value Set Authority Center
XML	eXtensible Markup Language