



**CMS Implementation Guide for  
Quality Reporting Document Architecture  
Category I  
Hospital Quality Reporting  
Implementation Guide for 2027**

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# QRDA Guide Overview

## 1 Introduction

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### 1.1 Overview

The Health Level Seven International (HL7) Quality Reporting Document Architecture (QRDA) defines constraints on the HL7 Clinical Document Architecture Release 2 (CDA R2). QRDA is a standard document format for the exchange of electronic clinical quality measure (eCQM) data. QRDA reports contain data extracted from electronic health records (EHRs) and other information technology systems. The reports are used for the exchange of eCQM data between systems for quality measurement and reporting programs.

This QRDA guide contains the Centers for Medicare & Medicaid Services (CMS) implementation guide to the *HL7 Implementation Guide for CDA Release 2: Quality Reporting Document Architecture Category I, Release 1, Standard for Trial Use (STU) Release 5.3, US Realm*, and any subsequent errata update,<sup>1</sup> for the 2027 reporting period.

### 1.2 Organization of the Guide

Chapter 1 and Chapter 2 contain introductory material that pertains to this guide.

- Chapter 1: Introduction
- Chapter 2: Conformance Conventions Used in This Guide — describes the formal representation of templates and additional information necessary to understand and correctly implement the content found in this guide

Chapter 3 to Chapter 6 contain technical specifications for the QRDA I STU 5.3 CMS Implementation Guide for Hospital Quality Reporting

- Chapter 3: Overview
- Chapter 4: QRDA Category I Requirements — information on succession management, value sets, and time zones
- Chapter 5: QRDA Category I Validation — contains the formal definitions for the QRDA Category I Report:
  - Document-level template that defines the document type and header constraints specific to CMS reporting
  - Section-level templates that define measure reporting, reporting parameters, and patient data
  - Additional validations rules performed by the HQR system
- Chapter 6: Hybrid Measures/CCDE Submission — guidance on hybrid measures/core clinical data element submission.

#### APPENDIX

- Chapters 7-16 provide references and resources, including a change log of changes made to the QRDA Category I base standard to produce the CMS Implementation Guide, a change log for the 2027 CMS QRDA IG for HQR programs from the 2026 CMS

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<sup>1</sup> HL7 QRDA I R1 STU 5.3 and any subsequent errata update.

[http://www.hl7.org/implement/standards/product\\_brief.cfm?product\\_id=35](http://www.hl7.org/implement/standards/product_brief.cfm?product_id=35)

QRDA IG, and validation rules for data types, National Provider Identifier (NPI), and Tax Identification Number (TIN).

## 2 Conformance Conventions Used in This Guide

### 2.1 Conformance Verbs (Keywords)

The keywords **SHALL**, **SHOULD**, **MAY**, **NEED NOT**, **SHOULD NOT**, and **SHALL NOT** in this guide are to be interpreted as follows:

- **SHALL**: an absolute requirement for the particular element. Where a **SHALL** constraint is applied to an Extensible Markup Language (XML) element, that element must be present in an instance, but may have an exceptional value (i.e., may have a `nullFlavor`), unless explicitly precluded. Where a **SHALL** constraint is applied to an XML attribute, that attribute must be present, and must contain a conformant value.
- **SHALL NOT**: an absolute prohibition against inclusion.
- **SHOULD/SHOULD NOT**: best practice or recommendation. There may be valid reasons to ignore an item, but the full implications must be understood and carefully weighed before choosing a different course.
- **MAY/NEED NOT**: truly optional; can be included or omitted as the author decides with no implications.

### 2.2 Cardinality

The cardinality indicator (0..1, 1..1, 1..\*, etc.) specifies the allowable occurrences within a document instance. The cardinality indicators are interpreted with the following format "m...n" where m represents the least and n the most:

- 0..1 zero or one
- 1..1 exactly one
- 1..\* at least one
- 0..\* zero or more
- 1..n at least one and not more than n

When a constraint has subordinate clauses, the scope of the cardinality of the parent constraint must be clear. In Figure 1, the constraint says exactly one participant is to be present. The subordinate constraint specifies some additional characteristics of that participant.

**Figure 1: Constraints Format – only one allowed**

```
1. SHALL contain exactly one [1..1] participant (CONF:2777).
  a. This participant SHALL contain exactly one [1..1]
     @typeCode="LOC" (CodeSystem: 2.16.840.1.113883.5.90
     HL7ParticipationType) (CONF:2230).
```

In Figure 2, the constraint says only one participant “like this” is to be present. Other participant elements are not precluded by this constraint.

**Figure 2: Constraints Format – only one like this allowed**

```
1. SHALL contain exactly one [1..1] participant (CONF:2777) such that it
  a. SHALL contain exactly one [1..1] @typeCode="LOC" (CodeSystem:
     2.16.840.1.113883.5.90 HL7ParticipationType) (CONF:2230).
```

## 2.3 Null Flavor

Information technology solutions store and manage data, but sometimes data are not available; an item may be unknown, not relevant, or not computable or measurable. In HL7, a flavor of null, or `nullFlavor`, describes the reason for missing data. Please note that although `nullFlavor` may be allowed to be entered in a field, the absence of the actual data for data elements necessary for eCQM calculations may compromise calculation results.

**Figure 3: nullFlavor Example**

```
<raceCode nullFlavor="ASKU"/>
<!--coding a raceCode when the patient declined to specify his/her
race-->

<raceCode nullFlavor="UNK"/>
<!--coding a raceCode when the patient's race is unknown-->
```

Use null flavors for unknown, required, or optional attributes:

- **NI** No information. This is the most general and default null flavor.
- **NA** Not applicable. Known to have no proper value (e.g., last menstrual period for a male).
- **UNK** Unknown. A proper value is applicable, but is not known.
- **ASKU** Asked, but not known. Information was sought, but not found (e.g., the patient was asked but did not know).
- **NAV** Temporarily unavailable. The information is not available, but is expected to be available later.
- **NASK** Not asked. The patient was not asked.
- **MSK** There is information on this item available but it has not been provided by the sender due to security, privacy, or other reasons. There may be an alternate mechanism for gaining access to this information.
- **OTH** The actual value is not and will not be assigned a standard coded value. An example is the name or identifier of a clinical trial.

This list contains those null flavors that are commonly used in clinical documents. For the full list and descriptions, see the `nullFlavor` vocabulary domain in the HL7 standard, *Clinical Document Architecture, Release 2.0*.<sup>2</sup>

Any **SHALL** conformance statement may use `nullFlavor`, unless the attribute is required or the `nullFlavor` is explicitly disallowed. **SHOULD** and **MAY** conformance statements may also use `nullFlavor`.

<sup>2</sup> HL7 CDA Release 2.0 Normative Edition  
[https://www.hl7.org/implement/standards/product\\_brief.cfm?product\\_id=496](https://www.hl7.org/implement/standards/product_brief.cfm?product_id=496)

# QRDA I STU 5.3 CMS Implementation Guide for Hospital Quality Reporting

## 3 Overview

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### 3.1 Background

This guide is a CMS Quality Reporting Document Architecture Category I (QRDA I) implementation guide to the *HL7 Implementation Guide for CDA Release 2: Quality Reporting Document Architecture Category I, Release 1, STU Release 5.3*, and any subsequent errata update, referred to as the HL7 QRDA I STU 5.3 in this guide. This guide describes additional conformance statements and constraints for EHR data submissions that are required for reporting to CMS for the Hospital Inpatient Quality Reporting Program, Hospital Outpatient Quality Reporting Program, Rural Emergency Hospital Quality Reporting Program, and the Medicare Promoting Interoperability Program pertaining to the 2027 reporting period.

The purpose of this guide is to serve as a companion to the base HL7 QRDA I STU 5.3 for entities such as hospitals, critical access hospitals (CAHs), and vendors to submit QRDA I data for consumption by CMS systems including for Hospital Quality Reporting (HQR).

Each QRDA Category I report<sup>3</sup> contains quality data for one patient for one or more quality measures, where the data elements in the report are defined by the particular measure(s) being reported on. A QRDA Category I report contains raw applicable patient data. When pooled and analyzed, each report contributes the quality data necessary to calculate population measure metrics.

### 3.2 How to Read This QRDA I Guide

CMS will process QRDA I reports originating from EHR systems. Submitted QRDA I reports for HQR in the 2027 reporting period must meet the conformance statements specified in this guide in addition to the conformance statements specified in the HL7 QRDA I STU 5.3. Only reports that are valid against the CDA Release 2 schema enhanced to support the *urn:hl7-org:sdtc* namespace (CDA\_SDTC.xsd)<sup>4</sup> will be accepted for processing. Reports that are invalid against this rule will be rejected.

This guide is based on following rules:

1. The HL7 QRDA I STU 5.3 provides information about QRDA data elements with conformance numbers and constraints. Some of these existing conformance restrictions have been modified in accordance with CMS system requirements. The "CMS\_" prefix (e.g., CMS\_0001) indicates the new conformance statements. The "\_C01" postfix indicates that the conformance statement from the base HL7 QRDA I STU 5.3 standard is further constrained in this guide.
2. The original **SHALL/SHOULD/MAY** keywords along with conformance numbers from the HL7 QRDA I STU 5.3 for relevant data elements and attributes have been included in this guide for ease of reference. For brevity, the hierarchy of enclosing elements has not been shown.

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<sup>3</sup> Note that the terms QRDA I report and QRDA I file are used interchangeably in this guide.

<sup>4</sup> CDA\_SDTC.xsd is available at <https://github.com/HL7/cda-core-2.0>.

## 4 QRDA Category I Requirements

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### 4.1 QRDA Category I Reporting

The HL7 QRDA I STU 5.3 base standard allows either one or multiple measures to be reported in a QRDA I report. For HQR, there should be one QRDA I report per patient per facility CMS Certification Number (CCN) per program per EHR Submitter per reporting period.

### 4.2 eCQM, Hybrid Measure, and Value Set Specifications

The eCQM Specifications for Hospital Quality Reporting May 2026<sup>5</sup> and any applicable addenda, must be used for the HQR programs for the 2027 reporting period.

The eCQM Value Sets for Hospital Quality Reporting May 2026<sup>6</sup> and any applicable addenda, published at the Value Set Authority Center (VSAC) must be used for HQR programs for the 2027 reporting period.

For hybrid measures/core clinical data element (CCDE) submission, this guide must be used for reporting of 2027 - 2028 data (measurement period July 1, 2027 through June 30, 2028) and be submitted in 2028. The 2027 reporting period hybrid measure specifications must be used.<sup>7</sup>

### 4.3 Succession Management

This section describes the management of successive replacement files for QRDA I reports. For example, a submitter notices an error in an earlier submission and wants to replace it with a corrected version.

#### 4.3.1 QRDA I Report Document Succession Management for HQR

For HQR, the QRDA I *document/id* convention is not used for Document Succession Management. Rather, HQR allows file resubmission to update a previously submitted file. The most recently submitted and accepted production QRDA I file will overwrite the original file based on the exact match of five key elements identifying the file: CCN, CMS Program Name, EHR Patient ID, EHR Submitter ID,<sup>8</sup> and the reporting period specified in the Reporting Parameters Section. The new file must be cumulative and contain all the patient data for the same reporting period not only the corrected or new data. In the event that any of the five key identifiers are incorrect, the HQR system provides the user with the capability to delete a previously submitted file.

#### 4.3.2 Program Identifiers used in Succession Management

The CMS program name requirement for QRDA I submission is specified in [5.1.4 informationRecipient](#). Each QRDA I report **must** contain only one CMS program name, which

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<sup>5</sup> eCQI Resource Center, [Hospital - Inpatient eCQMs](#) web page or [Hospital - Outpatient eCQMs](#) web page. Then select 2027 reporting period.

<sup>6</sup> Value Set Authority Center, [VSAC Downloadable Resources](#) web page. Select 2027 Reporting/Performance Period of eCQM & Hybrid Measure Value Sets.

<sup>7</sup> eCQI Resource Center, [Hospital - Inpatient eCQMs](#) web page. Select 2027 reporting period and filter by Hybrid Measures.

<sup>8</sup> The EHR Submitter ID is the ID that is assigned by QualityNet to submitter entities upon registering into the system and will be used to upload QRDA I files. It is not submitted as an element in the QRDA I report. For vendors, the EHR Submitter ID is the Vendor ID; for hospitals, the EHR Submitter ID is the hospital's CCN.

shall be selected from the [QRDA I CMS Program Name value set \(2.16.840.1.113883.3.249.14.103\)](#) for the 2027 reporting period specified in this guide.

## 4.4 Value Sets

### 4.4.1 eCQM Specified Value Sets Take Precedence

There are some cases where the value sets specified in eCQMs for clinical quality data criteria do not align with the value sets of the corresponding data elements specified in the QRDA I standard, or they are subsets of the value sets that are specified in the QRDA I standard. In these cases, the value sets that are specified in eCQMs always take precedence. For example, the routeCode attribute is defined to be selected from the SPL Drug Route of Administration Terminology value set (2.16.840.1.113883.3.88.12.3221.8.7) in QRDA templates, but an eCQM criterion uses value set "Intravenous route" (2.16.840.1.113883.3.117.1.7.1.222). In this case, the "Intravenous route" (2.16.840.1.113883.3.117.1.7.1.222) value set shall take precedence over the "SPL Drug Route of Administration Terminology" (2.16.840.1.113883.3.88.12.3221.8.7) value set in constructing a QRDA I report.

### 4.4.2 Value Sets Codes Case Sensitive

Codes from some code systems contain alpha characters (e.g., the QRDA I CMS Program Name value set contains codes such as "HQR\_IQR"). Case of these alpha characters will be validated by the HQR systems. How codes are displayed in the Vocabulary file (voc.xml) and VSAC and in the VSAC exports will serve as the source of truth for conducting the case validations for value sets specified in eCQM specifications. For example, for a particular code, if alpha characters in this code were shown as upper case in VSAC or the Vocabulary file (voc.xml), then the validation will require them to be upper case.

## 4.5 Time Zone

Time comparisons or elapsed time calculations are frequently involved as part of determining measure population outcomes.

**Table 1: Time Zone Validation Rule**

CONF. #	Rules
CMS_0121	A Coordinated Universal Time (UTC time) offset should not be used anywhere in a QRDA Category I file or, if a UTC time offset is needed anywhere, then it <b>*must*</b> be specified <b>*everywhere*</b> a time field is provided.

This time zone validation rule (Table 1) is performed on the following elements:

- effectiveTime/@value
- effectiveTime/low/@value
- effectiveTime/high/@value
- time/@value
- time/low/@value
- time/high/@value

There are two exceptions to this validation rule:

- The effectiveTime element of the Reporting Parameters Act - CMS template (CONF:CMS\_0027 and CONF:CMS\_0028) will not be validated using this time zone validation rule:

```
act[@templateId="2.16.840.1.113883.10.20.17.3.8.1"][@extension="2016-03-01"]/effectiveTime/low
act[@templateId="2.16.840.1.113883.10.20.17.3.8.1"][@extension="2016-03-01"]/effectiveTime/high
```

- The time zone validation rule is not performed on `birthTime/@value`

**Figure 4: Time Zone Example**

```
<!-- This is an example when timezone offset is provided -->
<encounter>
  <text>Encounter Performed: Hospital Measures-Encounter
  Inpatient</text>
  ...
  <effectiveTime>
    <!-- Attribute: admission datetime -->
    <low value="202703250930-0500"/>
    <!-- Attribute: discharge datetime -->
    <high value="202703291052-0500"/>
  </effectiveTime>
  ...
</encounter>
```

#### 4.6 Submit eCQM Version Specific Measure Identifier ONLY

For the 2027 reporting period, only the eCQM Version Specific Measure Identifier is required to uniquely identify the version of an eCQM. The eCQM Version Specific Measure Identifier must be submitted in QRDA I.

It is recommended that eCQM Version Numbers not be included in QRDA submissions. This is due to a known data type mismatch issue between the HL7 QRDA and Health Quality Measure Format (HQMF) standards for the *versionNumber* attribute. The QRDA I standard is based on HL7 CDA R2, which is derived from the HL7 Reference Information Model (RIM) Version 2.07. In RIM 2.07, the *versionNumber* attribute is specified as INT data type. HQMF R1 Normative, however, is derived from HL7 RIM, Version 2.44, where *versionNumber* is specified as ST data type. The version numbers for eCQM Specifications for Hospital Quality Reporting for the 2027 reporting period generated by the Measure Authoring Development Integrated Environment (MADiE) are string values such as 3.1.000 instead of integers such as 3. If a version number such as 3.1.000 were submitted, the QRDA reports will fail the CDA\_SDTC.xsd schema validation and will be rejected by the receiving systems. If the *versionNumber* attribute is supplied as an INT value, the report will not be rejected, but the value will be ignored.

#### 4.7 Templates Versioning and Validations

Both the base HL7 QRDA I STU 5.3 and the CMS QRDA I implementation guide have versioned the templates by assigning a new date value to the `templateId` extension attribute if changes were made to the previous version of the template. Details about CDA templates versioning in general are described in 4.1.3 Template Versioning of the HL7 QRDA I STU 5.3. For example, in HL7 QRDA I STU 5.3, the previous *Procedure Performed (V6)* template is now *Procedure Performed (V7)*, and its template identifier is "2.16.840.1.113883.10.20.24.3.64:2021-08-01". Both the `@root` and `@extension` are required as specified in the IG.

- SHALL** contain exactly one [1..1] `templateId` (CONF:4509-11262) such that it
- SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.10.20.24.3.64"` (CONF:4509-11263).
  - SHALL** contain exactly one [1..1] `@extension="2021-08-01"` (CONF:4509-27129).

Correct template versions that are specified by both the base HL7 QRDA I STU 5.3 and the 2027 CMS QRDA I IG must be used for 2027 CMS QRDA I submissions. For instance, if a QRDA I report used `Procedure Performed (V6)` instead of `Procedure Performed (V7)`, this older version of the template will be ignored by the HQR System. Data submitted using template versions that are not specifically required by the base HL7 QRDA I STU 5.3 and the 2027 CMS QRDA I IG will not be processed by the CMS receiving system; this could lead to unexpected results in measure calculations. Submitters should ensure correct template versions are used and be aware of the consequences if wrong versions are used.

# 5 QRDA Category I Validation

## 5.1 Document-Level Template: QRDA Category I Report - CMS

This section defines the document-level templates in a QRDA I document. All of the templates in the HL7 QRDA I STU 5.3 are Clinical Document Architecture (CDA) templates.

### 5.1.1 General Header

This template describes header constraints that apply to the QRDA Category I report.

**Table 2: QRDA Category I Report - CMS (V10) Constraints Overview**  
 ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.1.3:2026-05-01)

XPath	Card.	Verb	CONF. #	Value
templateId	1..1	SHALL	<a href="#">CMS_0001</a>	
@root	1..1	SHALL	<a href="#">CMS_0002</a>	2.16.840.1.113883.10.20.24.1.3
@extension	1..1	SHALL	<a href="#">CMS_0003</a>	2026-05-01
id	1..1	SHALL	<a href="#">1198-5363</a> <a href="#">1198-9991</a>	
effectiveTime	1..1	SHALL	<a href="#">1198-5256</a>	US Realm Date and Time (DTM.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4)
languageCode	1..1	SHALL	<a href="#">1198-5372</a>	urn:oid:2.16.840.1.113883.1.11.11526 (Language)
@code	1..1	SHALL	<a href="#">CMS_0010</a>	en

1. Conforms to QDM-Based QRDA (V8) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.1.2:2021-08-01).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:CMS\_0001) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.1.3" (CONF:CMS\_0002).
  - b. **SHALL** contain exactly one [1..1] **@extension**="2026-05-01" (CONF:CMS\_0003).
3. **SHALL** contain exactly one [1..1] **id** (CONF:1198-5363).
  - a. This id **SHALL** be a globally unique identifier for the document (CONF:1198-9991).
4. **SHALL** contain exactly one [1..1] US Realm Date and Time (DTM.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:1198-5256).
5. **SHALL** contain exactly one [1..1] **languageCode**, which **SHALL** be selected from ValueSet Language urn:oid:2.16.840.1.113883.1.11.11526 **DYNAMIC** (CONF:1198-5372).
  - a. This languageCode **SHALL** contain exactly one [1..1] **@code**="en" (CONF:CMS\_0010).

**Figure 5: CMS 2027 QRDA I Document Header Example**

```
<ClinicalDocument>
  <realmCode code="US"/>
  <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
  <!-- US Realm Header (V3) -->
  <templateId root="2.16.840.1.113883.10.20.22.1.1"
extension="2015-08-01"/>
  <!-- QRDA Category I Framework (V4) -->
  <templateId root="2.16.840.1.113883.10.20.24.1.1"
extension="2017-08-01"/>
  <!-- QDM-based QRDA (V8) -->
  <templateId root="2.16.840.1.113883.10.20.24.1.2"
extension="2021-08-01"/>
  <!-- QRDA Category I Report - CMS (V10) -->
  <templateId root="2.16.840.1.113883.10.20.24.1.3"
extension="2026-05-01"/>
  <!-- This is the globally unique identifier for this QRDA I
report -->
  <id root="be8eeafc-86b2-4d1f-881d-971def0c74ec"/>
  <code code="55182-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Quality Measure Report"/>
  <title>Good Health QRDA I Report</title>
  <!-- This is the report creation time -->
  <effectiveTime value="20270201"/>
  <confidentialityCode code="N" codeSystem="2.16.840.1.113883.5.25"
codeSystemName="HL7Confidentiality"/>
  <languageCode code="en"/>
  ...
</ClinicalDocument>
```

### 5.1.2 recordTarget

The `recordTarget` records the patient whose health information is described by the clinical document; it must contain at least one `patientRole` element.

**Table 3: recordTarget Constraints Overview**  
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.1.3:2026-05-01)

XPath	Card.	Verb	CONF. #	Value
recordTarget	1..1	SHALL	<a href="#">4509-16598</a>	
patientRole	1..1	SHALL	<a href="#">4509-16856</a>	
id	0..1	SHOULD	<a href="#">4509-16857</a> C01	
@root	1..1	SHALL	<a href="#">4509-16858</a>	2.16.840.1.113883.4.572
id	1..1	SHALL	<a href="#">CMS 0009</a>	
@root	1..1	SHALL	<a href="#">CMS 0053</a>	
@extension	1..1	SHALL	<a href="#">CMS 0103</a>	
id	0..1	SHOULD	<a href="#">4509-28697</a> C01	

XPath	Card.	Verb	CONF. #	Value
@root	1..1	SHALL	<a href="#">4509-28698</a>	2.16.840.1.113883.4.927
addr	1..*	SHALL	<a href="#">1198-5271</a>	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	1..*	SHALL	<a href="#">1198-5280</a>	
@use	0..1	SHOULD	<a href="#">1198-5375</a>	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
telecom	0..*	SHOULD	<a href="#">CMS_0130</a>	
@value	1..1	SHALL	<a href="#">CMS_0131</a> <a href="#">CMS_0132</a>	
telecom	0..*	SHOULD	<a href="#">CMS_0133</a>	
@value	1..1	SHALL	<a href="#">CMS_0134</a> <a href="#">CMS_0135</a>	
patient	1..1	SHALL	<a href="#">4509-27570</a>	
name	1..1	SHALL	<a href="#">1198-5284_C01</a>	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
administrativeGenderCode	1..1	SHALL	<a href="#">CMS_0011</a> <a href="#">CMS_0125</a> <a href="#">CMS_0029</a>	
@nullFlavor	1..1	SHALL	<a href="#">CMS_0122</a>	
translation	0..1	SHOULD	<a href="#">CMS_0123</a>	
@code	1..1	SHALL	<a href="#">CMS_0124</a>	urn:oid:2.16.840.1.113762.1.4.1021.121 (Federal Administrative Sex)
birthTime	1..1	SHALL	<a href="#">1198-5298</a> <a href="#">1198-5300_C01</a> <a href="#">1198-32418</a>	
raceCode	1..1	SHALL	<a href="#">CMS_0013</a> <a href="#">CMS_0030</a> <a href="#">CMS_0031</a>	urn:oid:2.16.840.1.114222.4.11.836 (Race)
sdtc:raceCode	0..*	MAY	<a href="#">CMS_0014</a>	urn:oid:2.16.840.1.114222.4.11.836 (Race)

XPath	Card.	Verb	CONF. #	Value
ethnicGroupCode	1..1	SHALL	<a href="#">1198-5323</a> <a href="#">CMS_0032</a> <a href="#">CMS_0033</a>	urn:oid:2.16.840.1.114222.4.11.837 (Ethnicity)

6. **SHALL** contain exactly one [1..1] **recordTarget** (CONF:4509-16598).
- This **recordTarget SHALL** contain exactly one [1..1] **patientRole** (CONF:4509-16856).

**HQR:** Medicare Health Insurance Claim (HIC) Number (HICN) is not required for HQR but should be submitted if the payer is Medicare and the patient has an HIC number assigned.

Note that HICN is not required for hybrid measures submission.

- This **patientRole SHOULD** contain zero or one [0..1] **id** (CONF:4509-16857\_C01) such that it
  - SHALL** contain exactly one [1..1]
 

**@root="2.16.840.1.113883.4.572"** Medicare HIC number (CONF:4509-16858).

**HQR:** Patient Identification Number is required for HQR.

- This **patientRole SHALL** contain exactly one [1..1] **id** (CONF:CMS\_0009) such that it
  - SHALL** contain exactly one [1..1] **@root** (CONF:CMS\_0053).  
Note: This is the provider's organization OID or other non-null value different than the OID for the Medicare HIC Number (2.16.840.1.113883.4.572) and the OID for the Medicare Beneficiary Identifier (2.16.840.1.113883.4.927).
  - SHALL** contain exactly one [1..1] **@extension** (CONF:CMS\_0103).  
Note: The value of **@extension** is the Patient ID.

**HQR:** Medicare Beneficiary Identifier (MBI) is not required for HQR but should be submitted if the payer is Medicare and the patient has an MBI number assigned.

Note that for hybrid measures, the patient's MBI must be submitted for all patients.

- This **patientRole SHOULD** contain zero or one [0..1] **id** (CONF:4509-28697\_C01) such that it
  - SHALL** contain exactly one [1..1]
 

**@root="2.16.840.1.113883.4.927"** Medicare Beneficiary Identifier (MBI) (CONF:4509-28698).
- This **patientRole SHALL** contain at least one [1..\*] US Realm Address (AD.US.FIELDDED) (**identifier:** urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5271).
- This **patientRole SHALL** contain at least one [1..\*] **telecom** (CONF:1198-5280).
  - Such telecoms **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet **Telecom Use (US Realm Header)** (urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1198-5375)).
- This **patientRole SHOULD** contain zero or more [0..\*] **telecom** (CONF:CMS\_0130) such that it
  - SHALL** contain exactly one [1..1] **@value** (CONF:CMS\_0131).

- a. This value **SHALL** begin with "mailto:" which is the email address of the patient (CONF:CMS\_0132).
- vii. This patientRole **SHOULD** contain zero or more [0..\*] **telecom** (CONF:CMS\_0133) such that it
  - 1. **SHALL** contain exactly one [1..1] **@value** (CONF:CMS\_0134).
    - a. This value **SHALL** begin with "tel:" which is the telephone of the patient (CONF:CMS\_0135).
- viii. This patientRole **SHALL** contain exactly one [1..1] **patient** (CONF:4509-27570).
  - 1. This patient **SHALL** contain exactly one [1..1] US Realm Person Name (PN.US.FIELDDED) (**identifier**: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-5284\_C01).
  - 2. This patient **SHALL** contain exactly one [1..1] **administrativeGenderCode** (CONF:CMS\_0011).
    - a. This administrativeGenderCode **SHALL** contain exactly one [1..1] **@nullFlavor** (CONF:CMS\_0122).
    - b. This administrativeGenderCode **SHOULD** contain zero or one [0..1] **translation** (CONF:CMS\_0123).
      - i. The translation, if present, **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet Federal Administrative Sex urn:oid:2.16.840.1.113762.1.4.1021.121 **DYNAMIC** (CONF:CMS\_0124).
    - c. Patient sex **SHALL** be submitted using **@translation** and **nullFlavor="OTH"** (CONF:CMS\_0125).
    - d. If the patient's sex is unknown, **nullFlavor="UNK"** **SHALL** be submitted (CONF:CMS\_0029).
  - 3. This patient **SHALL** contain exactly one [1..1] **birthTime** (CONF:1198-5298).
    - a. **SHALL** be precise to day (CONF:1198-5300\_C01).

For cases where information about newborn's time of birth needs to be captured.

- b. **MAY** be precise to the minute (CONF:1198-32418).
- 4. This patient **SHALL** contain exactly one [1..1] **raceCode**, which **SHALL** be selected from ValueSet Race urn:oid:2.16.840.1.114222.4.11.836 **DYNAMIC** (CONF:CMS\_0013).
  - a. If the patient's race is unknown, **nullFlavor="UNK"** **SHALL** be submitted (CONF:CMS\_0030).
  - b. If the patient declined to specify his/her race, **nullFlavor="ASKU"** **SHALL** be submitted (CONF:CMS\_0031).
- 5. This patient **MAY** contain zero or more [0..\*] **sdtc:raceCode**, which **SHALL** be selected from ValueSet Race urn:oid:2.16.840.1.114222.4.11.836 **DYNAMIC** (CONF:CMS\_0014).
 

Note: If a patient has more than one race category, one race is reported in raceCode, and additional races are reported using sdtc:raceCode.

6. This patient **SHALL** contain exactly one [1..1] **ethnicGroupCode**, which **SHALL** be selected from ValueSet **Ethnicity** `urn:oid:2.16.840.1.114222.4.11.837` **DYNAMIC** (CONF:1198-5323).
  - a. If the patient's ethnicity is unknown, `nullFlavor="UNK"` **SHALL** be submitted (CONF:CMS\_0032).
  - b. If the patient declined to specify his/her ethnicity, `nullFlavor="ASKU"` **SHALL** be submitted (CONF:CMS\_0033).

**Figure 6: recordTarget Example, QRDA Category I Report - CMS (V10)**

```

<recordTarget>
  <patientRole>
    <!-- Patient Identifier Number. The root OID could be provider's
      organization OID or other value -->
    <id root="2.16.840.1.113883.123.123.1" extension="022354"/>
    <addr use="HP">
      <streetAddressLine>101 North Pole Lane</streetAddressLine>
      <city>Ames</city>
      <state>IA</state>
      <postalCode>50014</postalCode>
      <country>US</country>
    </addr>
    <telecom use="HP" value="tel:+1(781)271-3000"/>
    <telecom use="HP" value="mailto:me@email.com"/>
    <patient>
      <name>
        <given>Jane</given>
        <family>Doe</family>
      </name>
      <administrativeGenderCode nullFlavor="OTH">
        <translation code="248152002" displayName="Female (finding)"
          codeSystem="2.16.840.1.113883.6.96"
          codeSystemName="SNOMEDCT"/>
      </administrativeGenderCode>
      <!-- If the patient sex is unknown, use nullFlavor="UNK" -->
      <!-- <administrativeGenderCode nullFlavor="UNK"/> -->
      <birthTime value="19460102"/>
      <!-- raceCode "2131-1 (Other Race)" shall not be used for
        either raceCode or sdtc:raceCode -->
      <raceCode code="2106-3" codeSystem="2.16.840.1.113883.6.238"/>
      <!-- if the patient declined to specify his/her race, use
        nullFlavor="ASKU" -->
      <!-- <raceCode nullFlavor="ASKU"/> -->
      <!-- if the patient's race is unknown, use nullFlavor="UNK" -->
      <!-- <raceCode nullFlavor="UNK"/> -->
      <!-- Use sdtc:raceCode only if the patient has more than one
        race category -->
      <!-- <sdtc:raceCode code="2054-5"
        codeSystem="2.16.840.1.113883.6.238"/> -->
      <ethnicGroupCode code="2186-5"
        codeSystem="2.16.840.1.113883.6.238"/>
      <!-- if the patient declined to specify his/her ethnicity, use
        nullFlavor="ASKU" -->
      <!-- <ethnicGroupCode nullFlavor="ASKU"/> -->
      <!-- if the patient's ethnicity is unknown, use
        nullFlavor="UNK" -->
      <!-- <ethnicGroupCode nullFlavor="UNK"/> -->
    </patient>
  </patientRole>
</recordTarget>

```

### 5.1.3 Custodian

The **custodian** element represents the organization that is in charge of maintaining the document. The custodian is the steward that is entrusted with the care of the document.

**Table 4: Custodian Constraints Overview**  
 ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.1.3:2026-05-01)

XPath	Card.	Verb	CONF. #	Value
custodian	1..1	SHALL	<a href="#">4509-16600</a>	
assignedCustodian	1..1	SHALL	<a href="#">4509-28239</a>	
representedCustodianOrganization	1..1	SHALL	<a href="#">4509-28240</a>	
id	1..1	SHALL	<a href="#">4509-28241_C01</a>	
@root	1..1	SHALL	<a href="#">4509-28244</a>	2.16.840.1.113883.4.336
@extension	1..1	SHALL	<a href="#">4509-28245</a> <a href="#">CMS_0035</a>	

7. **SHALL** contain exactly one [1..1] `custodian` (CONF:4509-16600).
  - a. This custodian **SHALL** contain exactly one [1..1] `assignedCustodian` (CONF:4509-28239).
    - i. This assignedCustodian **SHALL** contain exactly one [1..1] `representedCustodianOrganization` (CONF:4509-28240).

**HQR:** This `representedCustodianOrganization id/@root='2.16.840.1.113883.4.336'` coupled with the `id/@extension` represents the organization's Facility CMS Certification Number (CCN). CCN is required for HQR.

1. This `representedCustodianOrganization` **SHALL** contain exactly one [1..1] `id` (CONF:4509-28241\_C01) such that it
  - a. **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.4.336"` CMS Certification Number (CONF:4509-28244).
  - b. **SHALL** contain exactly one [1..1] `@extension` (CONF:4509-28245).
 

Note: A fixed CCN value 800890 shall be used for HQR test submission when no hospital is associated with a submitted QRDA report.

    - i. CCN **SHALL** be six to ten characters in length (CONF:CMS\_0035).

**Figure 7: CCN as Custodian Example, QRDA Category I Report - CMS (V10)**

```

<!-- This is an example for QRDA I test submission to HQR.
CCN is required for HQR.-->
<custodian>
  <assignedCustodian>
    <representedCustodianOrganization>
      <!-- @extension attribute contains the submitter's CCN.
      @nullFlavor is not allowed. -->
      <id root="2.16.840.1.113883.4.336" extension="800890"/>
      <name>Good Health Hospital</name>
      <telecom value="tel:(555)555-1212" use="WP"/>
      <addr use="WP">
        <streetAddressLine>17 Daws Rd.</streetAddressLine>
        <city>Blue Bell</city>
        <state>MA</state>
        <postalCode>02368</postalCode>
        <country>US</country>
      </addr>
    </representedCustodianOrganization>
  </assignedCustodian>
</custodian>
    
```

**5.1.4 informationRecipient**

The `informationRecipient` element records the intended recipient of the information at the time the report is created.

**Table 5: informationRecipient Constraints Overview**

ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.1.3:2026-05-01)

XPath	Card.	Verb	CONF. #	Value
informationRecipient	1..1	SHALL	<a href="#">4509-16703_C01</a>	
intendedRecipient	1..1	SHALL	<a href="#">4509-16704</a>	
id	1..1	SHALL	<a href="#">4509-16705_C01</a>	
@root	1..1	SHALL	<a href="#">CMS_0025</a>	2.16.840.1.113883.3.249.7
@extension	1..1	SHALL	<a href="#">CMS_0026</a>	urn:oid:2.16.840.1.113883.3.249.14.103 (QRDA I CMS Program Name )

- 8. **SHALL** contain exactly one [1..1] `informationRecipient` (CONF:4509-16703\_C01).
  - a. This `informationRecipient` **SHALL** contain exactly one [1..1] `intendedRecipient` (CONF:4509-16704).
    - i. This `intendedRecipient` **SHALL** contain exactly one [1..1] `id` (CONF:4509-16705\_C01).
      - 1. This `id` **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.3.249.7"` (CONF:CMS\_0025).
      - 2. This `id` **SHALL** contain exactly one [1..1] `@extension`, which **SHALL** be selected from ValueSet QRDA I CMS Program Name `urn:oid:2.16.840.1.113883.3.249.14.103` **STATIC** 2026-05-

01 (CONF:CMS\_0026).

Note: The value of @extension is CMS Program Name.

**Table 6: QRDA I CMS Program Name**

Value Set: QRDA I CMS Program Name urn:oid:2.16.840.1.113883.3.249.14.103			
Specifies the CMS Program for QRDA I report submissions.			
Code	Code System	Code System OID	Print Name
HQR_PI	CMS Program	urn:oid:2.16.840.1.113883.3.249.7	Hospital Quality Reporting for the Medicare Promoting Interoperability Program
HQR_IQR	CMS Program	urn:oid:2.16.840.1.113883.3.249.7	Hospital Quality Reporting for the Inpatient Quality Reporting Program
HQR_PI_IQR	CMS Program	urn:oid:2.16.840.1.113883.3.249.7	Hospital Quality Reporting for the Medicare Promoting Interoperability Program and the Inpatient Quality Reporting Program
HQR_OQR	CMS Program	urn:oid:2.16.840.1.113883.3.249.7	Hospital Quality Reporting for the Outpatient Quality Reporting Program
HQR_REHQR	CMS Program	urn:oid:2.16.840.1.113883.3.249.7	Hospital Quality Reporting for the Rural Emergency Hospitals Quality Reporting Program

**Figure 8: informationRecipient Example, QRDA Category I Report - CMS (V10)**

```
<!-- This example shows the @extension attribute with a value of "HQR_PI", which indicates that this QRDA I report is submitted to the Hospital Quality Reporting for the Promoting Interoperability Program -->
<informationRecipient>
  <intendedRecipient>
    <!-- CMS Program Name is required. @nullFlavor is not allowed -->
    <id root="2.16.840.1.113883.3.249.7" extension="HQR_PI"/>
  </intendedRecipient>
</informationRecipient>
```

**5.1.5 Participant (CMS EHR Certification ID)**

The Certified Health IT Product List (CHPL) is the authoritative and comprehensive listing of health IT certified by the Office of the National Coordinator for Health Information Technology (ONC) Health IT Certification Program. A CMS EHR Certification ID is a number generated by the CHPL and used for reporting to CMS. It represents a single product or combination of products in the CHPL that meet 100% of the requirements for the Base Electronic Health Record (EHR) Definition. The hospital selects a certified product or combines multiple certified health IT products (Modules) in the CHPL to fulfill the requirements. Hospitals should also verify any additional CMS program requirements to make sure the CMS EHR Certification ID includes all necessary products. This may include additional Health IT Modules needed to meet certified

EHR technology (CEHRT) requirements as applicable, such as those necessary to report objectives and measures under the Promoting Interoperability program.<sup>9,10</sup>

The CMS EHR Certification ID is different from the CHPL product number (CHPL ID). In the CHPL, the CMS EHR Certification ID is generated for the suite of products that make up the hospital’s EHR solution.

A new CMS EHR Certification ID is required annually, even if the underlying product(s) do not change. The CMS EHR Certification ID is only unique to the product suite, not the individual reporter -- if two different hospitals use the same products, they will both have the same CMS EHR Certification ID. Note that when a product changes the corresponding CMS EHR Certification ID changes also.

**Table 7: Participant Constraints Overview**

ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.1.3:2026-05-01)

XPath	Card.	Verb	CONF. #	Value
participant	1..1	SHALL	<a href="#">1198-10003_C01</a>	
associatedEntity	1..1	SHALL	<a href="#">CMS_0004</a>	
id	1..1	SHALL	<a href="#">CMS_0005</a>	
@root	1..1	SHALL	<a href="#">CMS_0006</a>	2.16.840.1.113883.3.2074.1
@extension	1..1	SHALL	<a href="#">CMS_0008</a>	

9. **SHALL** contain exactly one [1..1] **participant** (CONF:1198-10003\_C01).

**HQR:** CMS EHR Certification Number is required for HQR.

- a. This participant **SHALL** contain exactly one [1..1] **associatedEntity** (CONF:CMS\_0004).
  - i. This associatedEntity **SHALL** contain exactly one [1..1] **id** (CONF:CMS\_0005).
    - 1. This id **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.3.2074.1" CMS EHR Certification ID (CONF:CMS\_0006).
    - 2. This id **SHALL** contain exactly one [1..1] **@extension** (CONF:CMS\_0008).  
Note: The value of @extension is the CMS EHR Certification ID.

<sup>9</sup> Certified Health IT Product List. <https://chpl.healthit.gov/>

<sup>10</sup> Base Electronic Health Record (EHR) Definition. <https://healthit.gov/certification-health-it/certification-criteria/base-electronic-health-record-definition/>

### 5.1.6 component

**Table 8: component Constraints Overview**  
 ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.1.3:2026-05-01)

XPath	Card.	Verb	CONF. #	Value
component	1..1	SHALL	<a href="#">4509-12973</a>	
structuredBody	1..1	SHALL	<a href="#">4509-17081</a>	
component	1..1	SHALL	<a href="#">CMS_0056</a>	
section	1..1	SHALL	<a href="#">CMS_0054</a>	<a href="#">Reporting Parameters Section - CMS (identifier: urn:hl7ii:2.16.840.1.113883.10.20.17.2.1.1:2016-03-01)</a>
component	1..1	SHALL	<a href="#">CMS_0057</a>	
section	1..1	SHALL	<a href="#">CMS_0055</a>	<a href="#">Patient Data Section QDM (V8) - CMS (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.2.1.1:2022-02-01)</a>
component	1..1	SHALL	<a href="#">4509-17082</a>	
section	1..1	SHALL	<a href="#">4509-17083</a>	Measure Section QDM (identifier: urn:oid:2.16.840.1.113883.10.20.24.2.3)

10. **SHALL** contain exactly one [1..1] **component** (CONF:4509-12973).
- a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:4509-17081).
    - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:CMS\_0056) such that it
      - 1. **SHALL** contain exactly one [1..1] [Reporting Parameters Section - CMS](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.17.2.1.1:2016-03-01) (CONF:CMS\_0054).
    - ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:CMS\_0057) such that it
      - 1. **SHALL** contain exactly one [1..1] [Patient Data Section QDM \(V8\) - CMS](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.2.1.1:2022-02-01) (CONF:CMS\_0055).
    - iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4509-17082) such that it
      - 1. **SHALL** contain exactly one [1..1] **Measure Section QDM** (identifier: urn:oid:2.16.840.1.113883.10.20.24.2.3) (CONF:4509-17083).

## 5.2 Section-Level Templates

### 5.2.1 Measure Section

This section contains information about the eCQM(s) being reported. It must contain entries with the identifiers of all the eCQMs so that corresponding QRDA Quality Data Model (QDM) data element entry templates to be instantiated in the Patient Data Section are identified. Each eCQM for which QRDA QDM data elements are being sent must reference eCQM version specific identifier (`QualityMeasureDocument/id`).

Only the list of conformance statements from the eCQM Reference QDM template (“eMeasure Reference QDM”, `urn:oid:2.16.840.1.113883.10.20.24.3.97`) that specifies how eCQM version specific measure identifier is referenced in the Measure Section are shown below. Please refer to the base HL7 QRDA I STU 5.3 standard for the full specification of Measure Section.

**Table 9: Measure Section (eCQM Reference QDM) Constraints Overview**  
organizer (identifier: `urn:oid:2.16.840.1.113883.10.20.24.3.97`)

XPath	Card.	Verb	CONF. #	Value
reference	1..1	SHALL	<a href="#">67-12808</a>	
@typeCode	1..1	SHALL	<a href="#">67-12809</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
externalDocument	1..1	SHALL	<a href="#">67-12810</a>	
@classCode	1..1	SHALL	<a href="#">67-27017</a>	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = DOC
id	1..1	SHALL	<a href="#">67-12811</a>	
@root	1..1	SHALL	<a href="#">67-12812</a>	2.16.840.1.113883.4.738
@extension	1..1	SHALL	<a href="#">67-12813</a>	

6. **SHALL** contain exactly one [1..1] **reference** (CONF:67-12808) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:67-12809).
  - b. **SHALL** contain exactly one [1..1] **externalDocument** (CONF:67-12810).
    - i. This externalDocument **SHALL** contain exactly one [1..1] **@classCode="DOC"** Document (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:67-27017).
    - ii. This externalDocument **SHALL** contain exactly one [1..1] **id** (CONF:67-12811) such that it
      1. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.4.738"** (CONF:67-12812).  
Note: This OID indicates that the **@extension** contains the version specific identifier for the eCQM.
      2. **SHALL** contain exactly one [1..1] **@extension** (CONF:67-12813).  
Note: This **@extension** SHALL equal the version specific identifier for eCQM (i.e., `QualityMeasureDocument/id`)

**Figure 9: Measure Section Example**

```

<section>
  <!-- This is the templateId for Measure Section -->
  <templateId root="2.16.840.1.113883.10.20.24.2.2"/>
  <!-- This is the templateId for Measure Section QDM -->
  <templateId root="2.16.840.1.113883.10.20.24.2.3"/>
  <code code="55186-1" codeSystem="2.16.840.1.113883.6.1"/>
  <title>Measure Section</title>
  <text>...</text>
  <!-- 1..* Organizers, each containing a reference to an
  eCQM -->
  <entry>
    <organizer classCode="CLUSTER" moodCode="EVN">
      <!-- This is the templateId for Measure Reference -->
      <templateId root="2.16.840.1.113883.10.20.24.3.98"/>
      <!-- This is the templateId for eMeasure Reference QDM -->
      <templateId root="2.16.840.1.113883.10.20.24.3.97"/>
      <statusCode code="completed"/>
      <reference typeCode="REFR">
        <externalDocument classCode="DOC" moodCode="EVN">
          <!-- This is the eCQM version specific identifier -->
          <id root="2.16.840.1.113883.4.738"
            extension="9ad22e75-28ce-4098-91eb-692efe7df4a4"/>
        </externalDocument>
      </reference>
    </organizer>
  </entry>
  <entry>
    <organizer>
      ...
    </organizer>
  </entry>
</section>

```

**5.2.2 Reporting Parameters Section – CMS**

The Reporting Parameters Section provides information about the reporting time interval, and may contain other information that provides context for the patient data being reported.

**Table 10: Reporting Parameters Section – CMS Constraints Overview**  
 section (identifier: urn:oid:2.16.840.1.113883.10.20.17.2.1.1:2016-03-01)

XPath	Card.	Verb	CONF. #	Value
templateId	1..1	SHALL	<a href="#">CMS_0040</a>	
@root	1..1	SHALL	<a href="#">CMS_0041</a>	2.16.840.1.113883.10.20.17.2.1.1
@extension	1..1	SHALL	<a href="#">CMS_0042</a>	2016-03-01
entry	1..1	SHALL	<a href="#">CMS_0023</a>	
act	1..1	SHALL	<a href="#">CMS_0024</a>	<a href="#">Reporting Parameters Act - CMS (identifier: urn:hl7ii:2.16.840.1.113883.10.20.17.3.8.1:2016-03-01)</a>

1. **Conforms to Reporting Parameters Section template** (identifier: urn:oid:2.16.840.1.113883.10.20.17.2.1).

2. **SHALL** contain exactly one [1..1] `templateId` (CONF:CMS\_0040) such that it
  - a. **SHALL** contain exactly one [1..1]
    - `@root="2.16.840.1.113883.10.20.17.2.1.1"` (CONF:CMS\_0041).
  - b. **SHALL** contain exactly one [1..1] `@extension="2016-03-01"` (CONF:CMS\_0042).
3. **SHALL** contain exactly one [1..1] `entry` (CONF:CMS\_0023) such that it
  - a. **SHALL** contain exactly one [1..1] [Reporting Parameters Act - CMS](#) (identifier: urn:h17ii:2.16.840.1.113883.10.20.17.3.8.1:2016-03-01) (CONF:CMS\_0024).

### 5.2.2.1 Reporting Parameters Act – CMS

**Table 11: Reporting Parameters Act - CMS Constraints Overview**  
act (identifier: urn:oid:2.16.840.1.113883.10.20.17.3.8.1:2016-03-01)

XPath	Card.	Verb	CONF. #	Value
<code>templateId</code>	1..1	SHALL	<a href="#">CMS_0044</a>	
<code>@root</code>	1..1	SHALL	<a href="#">CMS_0045</a>	2.16.840.1.113883.10.20.17.3.8.1
<code>@extension</code>	1..1	SHALL	<a href="#">CMS_0046</a>	2016-03-01
<code>effectiveTime</code>	1..1	SHALL	<a href="#">23-3273</a>	
<code>low</code>	1..1	SHALL	<a href="#">23-3274</a>	
<code>@value</code>	1..1	SHALL	<a href="#">CMS_0048</a> <a href="#">CMS_0027</a>	
<code>high</code>	1..1	SHALL	<a href="#">23-3275</a>	
<code>@value</code>	1..1	SHALL	<a href="#">CMS_0050</a> <a href="#">CMS_0028</a>	

1. Conforms to Reporting Parameters Act `template` (identifier: urn:oid:2.16.840.1.113883.10.20.17.3.8).
2. **SHALL** contain exactly one [1..1] `templateId` (CONF:CMS\_0044) such that it
  - a. **SHALL** contain exactly one [1..1]
    - `@root="2.16.840.1.113883.10.20.17.3.8.1"` (CONF:CMS\_0045).
  - b. **SHALL** contain exactly one [1..1] `@extension="2016-03-01"` (CONF:CMS\_0046).
3. **SHALL** contain exactly one [1..1] `effectiveTime` (CONF:23-3273).
  - a. This `effectiveTime` **SHALL** contain exactly one [1..1] `low` (CONF:23-3274).
    - i. This `low` **SHALL** contain exactly one [1..1] `@value` (CONF:CMS\_0048).
    - ii. **SHALL** be precise to day (CONF:CMS\_0027)
  - b. This `effectiveTime` **SHALL** contain exactly one [1..1] `high` (CONF:23-3275).
    - i. This `high` **SHALL** contain exactly one [1..1] `@value` (CONF:CMS\_0050).
    - ii. **SHALL** be precise to day (CONF:CMS\_0028)

**Figure 10: Reporting Parameters Section - CMS and Reporting Parameters Act – CMS Example**

```
<section>
  <templateId root="2.16.840.1.113883.10.20.17.2.1"/>
  <templateId root="2.16.840.1.113883.10.20.17.2.1.1"
  extension="2016-03-01"/>
  <code code="55187-9" codeSystem="2.16.840.1.113883.6.1"/>
  <title>Reporting Parameters</title>
  <text>
    ...
    <list>
      <item>Reporting period: 01 Jan 2027 - 31 March 2027</item>
    </list>
    ...
  </text>
  <entry typeCode="DRIV">
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.17.3.8"/>
      <templateId root="2.16.840.1.113883.10.20.17.3.8.1"
      extension="2016-03-01"/>
      <id root="67e84480-1f84-4d04-9be3-cc3e8c2c6933"/>
      <code code="252116004" codeSystem="2.16.840.1.113883.6.96"
      displayName="Observation Parameters"/>
      <effectiveTime>
        <low value="20270101"/>
        <high value="20270331"/>
      </effectiveTime>
    </act>
  </entry>
</section>
```

**5.2.3 Patient Data Section QDM (V8) - CMS**

The Patient Data Section QDM (V8) - CMS contains entries that conform to the QDM approach to QRDA. The four supplemental data elements (Federal Administrative Sex, Race, Ethnicity, and Payer) specified in the eQMs are required to be reported to CMS. While the Federal Administrative sex, race, and ethnicity data are sent in the document header, the payer supplemental data element is submitted using the Patient Characteristic Payer template contained in the patient data section. Therefore, the Patient Data Section QDM (V8) - CMS shall contain at least one Patient Characteristic Payer template and at least one entry template that is other than the Patient Characteristic Payer template. As for what entry templates and how many entry templates should be included in the patient data section for the referenced eQMs, it should adhere to the "smoking gun" philosophy described in the QRDA I standard. This guide follows the specifications of entry templates as defined in the base HL7 QRDA I STU 5.3 standard with errata.

**Table 12: Patient Data Section QDM (V8) – CMS Constraints Overview**  
 section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.2.1.1:2022-02-01)

XPath	Card.	Verb	CONF. #	Value
templateId	1..1	SHALL	<a href="#">CMS_0036</a>	
@root	1..1	SHALL	<a href="#">CMS_0037</a>	2.16.840.1.113883.10.20.24.2.1.1
@extension	1..1	SHALL	<a href="#">CMS_0038</a>	2022-02-01

XPath	Card.	Verb	CONF. #	Value
entry	1..*	SHALL	<a href="#">CMS_0051</a> <a href="#">CMS_0039</a>	
entry	1..*	SHALL	<a href="#">4509-14430_C01</a>	
observation	1..1	SHALL	<a href="#">4509-14431</a>	Patient Characteristic Payer (identifier: urn:oid:2.16.840.1.113883.10.20.24.3.55)

1. **Conforms to Patient Data Section QDM (V8) template** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.2.1:2021-08-01).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:CMS\_0036) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.2.1.1" (CONF:CMS\_0037).
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-02-01" (CONF:CMS\_0038).
3. **SHALL** contain at least one [1..\*] **entry** (CONF:CMS\_0051) such that it
  - a. **SHALL** contain exactly one [1..1] entry template that is other than the Patient Characteristic Payer (identifier: urn:oid:2.16.840.1.113883.10.20.24.3.55) (CONF:CMS\_0039).
4. **SHALL** contain at least one [1..\*] **entry** (CONF:4509-14430\_C01) such that it
  - a. **SHALL** contain exactly one [1..1] Patient Characteristic Payer (identifier: urn:oid:2.16.840.1.113883.10.20.24.3.55) (CONF:4509-14431).

**Figure 11: Patient Data Section QDM (V8) – CMS Example**

```

<section>
  <!-- Patient Data Section -->
  <templateId root="2.16.840.1.113883.10.20.17.2.4" />
  <!-- Patient Data Section QDM (V8) -->
  <templateId root="2.16.840.1.113883.10.20.24.2.1"
    extension="2021-08-01"/>
  <!-- Patient Data Section QDM (V8) - CMS-->
  <templateId root="2.16.840.1.113883.10.20.24.2.1.1"
    extension="2022-02-01"/>
  <code code="55188-7" codeSystem="2.16.840.1.113883.6.1"
    displayName="Patient Data"/>
  <title>Patient Data</title>
  <text>...</text>
  <entry typeCode="DRIV">
    ...
  </entry>
  <entry typeCode="DRIV">
    ...
  </entry>
  <!--supplemental data elements-->
  <!-- payer-->
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.55"/>
      <id root="a83777f2-0753-4638-9bb4-9d0d4a559a52"/>
      <code code="48768-6" codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC" displayName="Payment source"/>
      <statusCode code="completed" />
      <effectiveTime>
        <low value="20270101"/>
        <high value="20271231"/>
      </effectiveTime>
      <value xsi:type="CD" code="1"
        codeSystem="2.16.840.1.113883.3.221.5"
        codeSystemName="Source of Payment Typology"
        displayName="Medicare"/>
    </observation>
  </entry>
  ...
</section>

```

### 5.2.3.1 “Not Done” with a Reason

To report a QDM data element that is not done (when `negationInd="true"`) with a reason, such as "Medication Not Administered" with negation rationale attribute indicating it is due to patient reason, the following steps must be followed:

1. Must set the attribute `negataionInd="true"`
2. If QDM in eCQM specification is defined using a value set, for example, ["Medication, Not Ordered": "Warfarin"]:
  - Must provide `code/[@nullFlavor="NA"]`
  - Must provide the value set OID instead of a specific code from the value set. Set the code attribute `code/sdtc:valueSet="[VSAC value set OID]"`
    - Use `code/originalText` for the text description of the concept in the pattern "None of value set: [value set name]"

3. If QDM element in eCQM specification is defined using direct referenced code:
  - Must not provide code/[@nullFlavor="NA"]
  - Must provide the direct referenced code. Set the code attribute code="[The Direct Referenced Code]"
4. Must provide the reason for negation, such as a medical reason or a patient reason
  - Provide an **entryRelationship** to a Reason (V3) (templateId: 2.16.840.1.113883.10.20.24.3.88:2017-08-01") with an actRelationship type of "RSON" is required. See Reason Template Placement When Specifying "Not Done" with a Reason for more details.

**Figure 12: Not Done Example for QDM Element Defined with Value Set**

```

<!--Medication not administered, patient refusal: Drug declined by
patient - reason unknown. No "Low Dose Unfractionated Heparin for VTE
Prophylaxis" were administered -->
<substanceAdministration classCode="SBADM" moodCode="EVN"
negationInd="true">
  <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-
06-09"/>
  <templateId root="2.16.840.1.113883.10.20.24.3.42" extension="2022-
08-01"/>
  <id root="48cb49dc-2bf7-43e9-9824-8538665158f8" />
  <statusCode code="completed"/>
  ...
  <consumable>
    <manufacturedProduct classCode="MANU">
      <templateId root="2.16.840.1.113883.10.20.22.4.23"
extension="2014-06-09"/>
      <manufacturedMaterial>
        <code nullFlavor="NA"
sdtc:valueSet="2.16.840.1.113883.3.464.1003.196.12.1001">
          <originalText>None of the value set: Antibiotic Medications
for Pharyngitis</originalText>
        </code>
      </manufacturedMaterial>
    </manufacturedProduct>
  </consumable>
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.24.3.88"
extension="2017-08-01" />
      <code code="77301-0"
codeSystem="2.16.840.1.113883.6.1"
displayName="Reason care action performed or not"
codeSystemName="LOINC" />
      <value xsi:type="CD" code="182897004"
codeSystem="2.16.840.1.113883.6.96"
displayName="Drug declined by patient - side effects
(situation)"
codeSystemName="SNOMED CT"/>
    </observation>
  </entryRelationship>
</substanceAdministration>

```

### 5.2.3.2 Reporting "unit" for Result Value

If eCQM definition uses the "unit" in the measure logic for the "result" criteria, the patient QRDA report must report the result with the exact appropriate/required unit specified in the eCQM. For example, in the measure logic for maximum LDL-c result of less than 70 mg/dL, Unified Code

for Units of Measure (UCUM) code “mg/dL” is specified as “unit” by the eCQM definition.<sup>11</sup> If the LDL-c result value is provided without the unit or with a different unit than specified by the eCQM, depending on the system processing the data, the case might not meet the measure’s requirement and fail the “result” logic.

If eCQM definition does not specify the “unit” in the measure logic for the “result” criteria, for example, ["Laboratory Test, Performed": "INR"] INRLabTest where INRLabTest.result > 3.0, then the laboratory test performed result must be reported using one of the two options:

- 1) represent INR result using data type REAL or Interval REAL (xsi:type="REAL" or xsi:type="IVL\_REAL") for results such as INR=2.4 or INR>=4.5;
- 2) represent INR result using data type PQ and PQ.unit should be using UCUM annotations {ratio} or {INR}.

For guidance on reporting result value “unit” for hybrid measures, please see [6 Hybrid Measures/CCDE Submission](#).

### 5.2.3.3 Reporting “result as type”

CQL supports Choice type, which is defined by a list of component types. In cases where result values are cast as a specific type in measure specification, such as “result as Integer”, “result as Quantity”, and “result as DateTime”, result values shall also be cast to their corresponding HL7 V3 data types when reporting in QRDA to ensure appropriate evaluation.

For example, the following definition specified in CMS334 has result cast as Integer:

```
Last(["Assessment, Performed": "[#] Births.preterm"] PretermBirth
  where Global."EarliestOf"(PretermBirth.relevantDatetime,
  PretermBirth.relevantPeriod) 42 weeks or less before
  PCMaternal."LastTimeOfDelivery"(Encounter)
  and PretermBirth.result is not null
  sort by Global."EarliestOf"(relevantDatetime, relevantPeriod)
).result as Integer
```

In this case, when reporting an Assessment Performed result in QRDA, observation/value shall be cast to the INT data type.

When reporting a result as Quantity and as DateTime, they shall be submitted using the PQ and TS data types respectively.

## 5.3 HQR Validations

This section details additional validation rules specified by CMS for HQR. Submissions that do not conform to these constraints will result in files being rejected by the HQR System.

### 5.3.1 Validation Rules for Encounter Performed

The effectiveTime low value (effectiveTime/low/@value) represents the Encounter Performed admission time and the effectiveTime high value (effectiveTime/high/@value) represents the Encounter Performed discharge time.

---

<sup>11</sup> The Clinical Quality Language (CQL) specification defines a number of built-in units for timing, such as “week”, “weeks”, and “year”. CQL logic for eCQMs uses these built-in units. Note that the receiving system will accept these representations as well as the corresponding UCUM representation “wk”.

The following are additional Encounter Performed validation rules for HQR QRDA I submissions.

- i. The system **SHALL** reject QRDA I files if the Encounter Performed Discharge Date is null (CONF: CMS\_0060).
- ii. The system **SHALL** reject QRDA I files if the Encounter Performed Discharge Date (effectiveTime/high value) is after the upload date (discharge date is in the future) (CONF: CMS\_0061).
- iii. The system **SHALL** reject QRDA I files if the Encounter Performed Admission Date (effectiveTime/low value) is after the Encounter Performed Discharge Date (effectiveTime/high value) (CONF: CMS\_0062).

When there are multiple diagnoses for an Encounter Performed, only one diagnosis shall be identified as principal diagnosis. The following validation rule from the QRDA I STU 5.3 is used to enforce that only one Encounter Diagnosis Quality Data Model (QDM) template with a rank attribute equal to 1, to indicate the principal diagnosis, within an Encounter Performed template.

If **entryRelationship to Encounter Diagnosis QDM (V2)** is present, **SHALL** contain at most one **Encounter Diagnosis QDM (V2)** of rank 1, as principal diagnosis (CONF:4509-32546).

### 5.3.2 Validation Rules for Diagnostic Study Performed

The effectiveTime low value (effectiveTime/low/@value) represents the Diagnostic Study Performed start time and the effectiveTime high value (effectiveTime/high/@value) represents the Diagnostic Study Performed end time.

The following are additional Diagnostic Study Performed validation rules for HQR QRDA I submissions.

- i. The system **SHALL** reject QRDA I files if either the Diagnostic Study Performed Start (effectiveTime/low value) or End Date (effectiveTime/high value) is after the upload date (dates are in the future) (CONF: CMS\_0091).
- ii. The system **SHALL** reject QRDA I files if the Diagnostic Study Performed Start Date (effectiveTime/low value) is after the Diagnostic Study Performed End Date (effectiveTime/high value) (CONF: CMS\_0092).
- iii. The system **SHALL** reject QRDA I files if the Diagnostic Study Performed relevant dateTime (effectiveTime value) is after the upload date (date is in the future) (CONF: CMS\_0093).

### 5.3.3 Other HQR Validations

**Table 13: Other Validation Rules for HQR Programs**

CONF. #	Validation Performed	Description of Error Message and File Rejection
CMS_0066	CCN (NULL) cannot be validated.	CCN value does not appear in HQR lookup of valid CCNs. CCN is Null, resulting in this message.
CMS_0067	Submitter ( %s ) is not authorized to submit for this provider ( %s ).	Lookup performed and found that the Submitter (vendor) has not been authorized to submit data on behalf of the hospital (using the CCN in the QRDA I file).

CONF. #	Validation Performed	Description of Error Message and File Rejection
CMS_0068	Provider is not allowed to use dummy CCN number (800890) for submissions.	Only vendors can use the dummy CCN.
CMS_0069	Dummy CCN (800890) cannot be used for production submissions.	Dummy CCN can only be used for Test Data submissions.
CMS_0070	Submission date is not within the submission period.	The validation process compares the upload date with the Production Date Range values stored in internal table. If the upload date is outside the acceptable range(s), which for the 2027 Reporting Period is yet to be finalized, this message is returned.
CMS_0071	Data submitted is not a well formed QRDA XML.	File violates syntax rule in the XML specification, e.g., missing start/end tag or prime elements missing or not properly nested or not properly written. <u>Processing stops immediately on file.</u>
CMS_0072	QRDA file does not pass XML schema validation (CDA_SDTC.xsd).	QRDA structure does not pass CDA_SDTC.XSD schema check. <u>Processing continues</u> on file to identify other Errors/Warnings.
CMS_0073	The document does not conform to QRDA document formats accepted by CMS.	<p>File is not in QRDA Category I STU Release 5.3 format -- does not contain all four of the required header templatedIds including both of the R5.3 templatedIds and extensions:</p> <p>HL7 R5.3:</p> <pre>&lt;templatedId root="2.16.840.1.113883.10.20.22.1.1" extension="2015-08-01"/&gt;</pre> <pre>&lt;templatedId root="2.16.840.1.113883.10.20.24.1.1" extension="2017-08-01"/&gt;</pre> <pre>&lt;templatedId root="2.16.840.1.113883.10.20.24.1.2" extension="2021-08-01"/&gt;</pre> <pre>&lt;templatedId root="2.16.840.1.113883.10.20.24.1.3" extension="2026-05-01"/&gt;</pre> <p>This error is also produced for empty file or other non-XML file type (e.g., PDF). <u>Processing stops immediately on file.</u></p>
CMS_0074	The Version Specific Measure Identifier is not valid for the Reporting Period and/or CMS Program Name.	<p>The Version Specific Measure Identifier is a required element in the QRDA file (XPath is QualityMeasureDocument/id/@root)</p> <p>The HQR System will only accept the correct version of eQMs/CCDEs/linking variables for the current reporting period. Each inpatient eQCM, outpatient eQCM, Rural Emergency Hospitals eQCM, and inpatient Hybrid measure has an associated Version Specific Measure Identifier for the current reporting period.</p> <p>The QRDA file must have at least one Version Specific Measure Identifier for the current reporting</p>

CONF. #	Validation Performed	Description of Error Message and File Rejection
		<p>period and must be supported by the CMS Program Name.</p> <p>If the QRDA file does not contain at least one Version Specific Measure Identifier for the CMS Program Name and/or reporting period, it will be rejected.</p> <p>If the QRDA file does contain at least one Version Specific Measure Identifier for the CMS Program Name and reporting period, Version Specific Measure Identifiers not associated with the CMS Program Name and /or reporting period within the same file will be ignored.</p>
CMS_0075	Admission Date is not properly formatted.	Fails validation check for Encounter Performed Admission Date (effectiveTime/low value) as specified in Table 15: Valid Date/Time Format for HQR.
CMS_0076	Discharge Date is not properly formatted.	Fails validation check for Encounter Performed Discharge Date (effectiveTime/high value) as specified in Table 15: Valid Date/Time Format for HQR.
CMS_0077	Reporting Period Start Date (low value) is after the End Date (high value).	Fails validation check. Reporting Parameters Act effectiveTime low (Reporting Period Start Date) is after effectiveTime high (Reporting Period End Date).
CMS_0078	QRDA file size exceeds (10) MB.	QRDA file size exceeds 10 MB.
CMS_0079	Reporting Period Effective Date Range does not match one of the Program's calendar year Discharge Quarters.	The Reporting Parameter Section effective date range must exactly match one of the HQR allowable calendar year discharge quarters.
CMS_0082	CMS EHR Certification ID does not meet year/version criteria.	The EHR system needs to be certified to the ONC Certification Criteria for Health IT. The CMS EHR Certification ID must start with "2027C".
CMS_0083	CMS Certification ID format is not valid.	CMS EHR Certification ID must be 15 alpha numeric characters in length.
CMS_0084	The Patient MBI is required for hybrid measure/Core Clinical Data Elements (CCDE) submissions.	QRDA files for hybrid measure/CCDE submissions must contain a MBI.
CMS_0087	Low date is after high date.	Fails validation check. Low dates are after high dates.
CMS_0088	Invalid DateTime has been provided.	Fails validation check for low and high date time format.

CONF. #	Validation Performed	Description of Error Message and File Rejection
CMS_0089	CMS Program Name conflicts with the file upload location.	CMS program name for inpatient Hybrid measures/CCDE submissions must be HQR_IQR. CMS program name for inpatient eCQM submissions must be HQR_IQR, HQR_PI_IQR or HQR_PI. CMS program name for outpatient eCQM submissions must be HQR_OQR. CMS program name for Rural Emergency Hospitals eCQM submissions must be HQR_REHQR.
CMS_0090	Facility is closed.	The facility is closed within the HQR system and file submissions will not be accepted.

### 5.3.4 Feedback Message

**Table 14: HQR Feedback Message**

Feedback Message	Description
File Accepted but no outcomes for submitted measures	The submitted QRDA file did not produce outcomes for any of the specified measures.

### 5.3.5 Date and Time Validation

**Table 15: Valid Date/Time Format for HQR**

Attribute	Date and Time Format Validation Rules	Examples
<Encounter> <EffectiveTime> <low>(Admission Date) <high>(Discharge Date)	Valid Date/Time Format: YYYYMMDDHHMM YYYYMMDDHHMMSS YYYYMMDDHHMMSSxUUUU where YYYY - year - range 1900 to 9999 MM - month - range 01 to 12 DD - day - range 01 to 31 (note: true to month and leap years) HH - hour - range 0 to 23 MM - minutes - range 0-59 SS - seconds - range 0-59 x - plus or minus sign UUUU - UTC time shift -1200 thru+1400	For example, 202701301130

Attribute	Date and Time Format Validation Rules	Examples
BirthTime	Valid Date/Time Format: YYYYMMDD YYYYMMDDHHMM YYYYMMDDHHMMSS where YYYY - year - range 1900 to 9999 MM - month - range 01 to 12 DD - day - range 01 to 31 (note: true to month and leap years) HH - hour - range 0 to 23 MM - minutes - range 0-59 SS - seconds - range 0-59	For example, 19910428 202704202115 (newborn)
Reporting Period <EffectiveTime> <low>(Start Date) <high>(End Date)	Valid Date/Time Format: YYYYMMDD where YYYY - year - range 1900 to 9999 MM - month - range 01 to 12 DD - day - range 01 to 31 (note: true to month and leap years)	For example, partial date/time such as 2027 or 202703 are not allowed.
EffectiveTime (US Realm Header)	Valid Date/Time Format: YYYYMMDDHHMMSSxUUUU YYYYMMDDHHMMxUUUU YYYYMMDDHHxUUUU YYYYMMDDxUUUU YYYYMMDD YYYYMMDDHH YYYYMMDDHHMM YYYYMMDDHHMMSS where YYYY - year - range 1900 to 9999 MM - month - range 01 to 12 DD - day - range 01 to 31 (note: true to month and leap years) x - plus or minus sign UUUU - UTC time shift -1200 thru+1400	For example, 20270130 is valid.
NA	Leap year calculation is validated.	For example, 20240229 is valid, because 2024 is a leap year.

Attribute	Date and Time Format Validation Rules	Examples
NA	The UTC time shift range is -1200 thru +1400. Time shifts outside this range are invalid. The last two digits are 'minutes' so they must be in the range of 00 to 59.	For example, -1262 is invalid because 62 is outside the range of 00 to 59.

### 5.3.6 Validation XPath

**Table 16: Validation XPath**

Validation Item	CONF. #	CDA Template Name and CDA Element XPath
Admission Date	CMS_0062 CMS_0075	Encounter Performed /..encounter/effectiveTime/low
Discharge Date	CMS_0060 CMS_0061 CMS_0062 CMS_0076	Encounter Performed /..encounter/effectiveTime/high
Reporting Period Start Date	CMS_0077 CMS_0027	/ClinicalDocument/component/structuredBody/component/section[@templateId="2.16.840.1.113883.10.20.17.2.1"]/entry/act[@templateId="2.16.840.1.113883.10.20.17.3.8.1"]/effectiveTime/low
Reporting Period End Date	CMS_0079 CMS_0028	/ClinicalDocument/component/structuredBody/component/section[@templateId="2.16.840.1.113883.10.20.17.2.1"]/entry/act[@templateId="2.16.840.1.113883.10.20.17.3.8.1"]/effectiveTime/high
Version Specific Measure Identifier	CMS_0074	/ClinicalDocument/component/structuredBody/component/section[@templateId="2.16.840.1.113883.10.20.24.2.2"]/entry/organizer[@templateId="2.16.840.1.113883.10.20.24.3.97"]/reference/externalDocument/id[@root="2.16.840.1.113883.4.738"]/@extension
Birth Time	1198-5300_C01 1198-32418	/ClinicalDocument/recordTarget/patientRole/patient/birthTime
effectiveTime (US Realm Header)	1198-5256	/ClinicalDocument/effectiveTime
effectiveTime (Applies to all effectiveTime except Admission Date, Discharge Date, and Reporting Period Start and End Date)	CMS_0087 CMS_0088	../effectiveTime/high ../effectiveTime/low
	CMS_0088	../effectiveTime/value ../time/value

Validation Item	CONF. #	CDA Template Name and CDA Element XPath
CMS Program Name	CMS_0089	/ClinicalDocument/informationRecipient/intendedRecipient/id/@extension
HICN	4509-16857_C01 4509-16858	/ClinicalDocument/recordTarget/patientRole/id[@root="2.16.840.1.113883.4.572"]/@value
MBI	4509-28697_C01 4509-28698	/ClinicalDocument/recordTarget/patientRole/id[@root="2.16.840.1.113883.4.927"]/@value

## 6 Hybrid Measures/CCDE Submission

Hybrid Measures/CCDE submissions SHALL use the CMS Program Name HQR\_IQR.

The hybrid measures available for submission are listed in Table 17.

**Table 17: Hybrid Measures for Submission**

eCQM CMS#	eCQM Title	Short Name	Measurement Period
CMS529v7	Core Clinical Data Elements for the Hybrid Hospital-Wide Readmission (HWR) Measure with Claims and Electronic Health Record Data.	Hybrid HWR	July 1, 2027 through June 30, 2028
CMS844v7	Core Clinical Data Elements for the Hybrid Hospital-Wide (All-Condition, All-Procedure) Risk-Standardized Mortality Measure (HWM)	Hybrid HWM	July 1, 2027 through June 30, 2028

For each core clinical data element specified in the Hybrid HWM and Hybrid HWR measures, it is recommended to report values using one of the appropriate UCUM units of measurement listed in Table 18 for result “unit”.

**Table 18: Hybrid HWM and Hybrid HWR UCUM Codes**

Core Clinical Data Element	UCUM Unit – Hybrid HWM	UCUM Unit – Hybrid HWR
Bicarbonate	meq/L mmol/L	meq/L mmol/L
Creatinine	mg/dL umol/L	mg/dL umol/L
Glucose	<i>Not applicable</i>	mg/dL mmol/L
Heart rate	{Beats}/min	{Beats}/min
Hematocrit	%	%
Oxygen saturation	%	%
Platelet	10 <sup>3</sup> /uL 10 <sup>9</sup> /L /mm <sup>3</sup>	<i>Not applicable</i>
Potassium	<i>Not applicable</i>	meq/L mmol/L
Respiratory rate	<i>Not applicable</i>	{Breaths}/min
Sodium	meq/L mmol/L	meq/L mmol/L
Systolic blood pressure	mm[Hg]	mm[Hg]
Temperature	Cel [degF]	Cel [degF]

Core Clinical Data Element	UCUM Unit – Hybrid HWM	UCUM Unit – Hybrid HWR
Weight	<i>Not applicable</i>	kg [lb_av] g
White blood cell count	{Cells}/uL 10*3/uL 10*9/L /mm3	{Cells}/uL 10*3/uL 10*9/L /mm3

# APPENDIX

## 7 Troubleshooting and Support

### 7.1 Resources

The following provide additional information:

- **eCQI Resource Center** is the one-stop shop for the most current resources to support electronic clinical quality improvement: <https://ecqi.healthit.gov/>
- **National Library of Medicine (NLM) Value Set Authority Center (VSAC)** contains the official versions of the value sets used for eCQMs and hybrid measures: <https://vsac.nlm.nih.gov/>
- **The ONC Project Tracking System** is a tool offered by CMS and ONC for implementers to submit issues and request guidance on measure logic, specifications, and certification: <https://oncprojecttracking.healthit.gov/>

### 7.2 Support

Table 19: Support Contact Information

Contact	Org.	Phone	Email	URL	Role	Responsibility
CCSQ Service Center	CMS	866-288-8912	QNetSupport@cms.hhs.gov	<a href="https://cmsqualitysupport.servicenow.com/qnet_qa">https://cmsqualitysupport.servicenow.com/qnet_qa</a>	Help desk support	1 <sup>st</sup> level user support & problem reporting

### 7.3 Errata or Enhancement Requests

Table 20: Errata or Enhancement Request Location

Contact	Organization	URL	Purpose
HL7 Jira Tracker	HL7	<a href="https://jira.hl7.org">https://jira.hl7.org</a>	Document errors or enhancement request to the HL7 standard.  Create a Jira tracker by selecting project “CDA Specification Feedback” and specification “Quality Reporting Document Architecture Category I”.

## 8 Null Flavor Validation Rules for Data Types

CDA, Release 2 uses the HL7 V3 Data Types, Release 1 abstract and XML-specific specification. Every data element either has a proper value or it is considered NULL. If and only if it is NULL, a "null flavor" provides more detail on why or in what way no proper value is

supplied. The table below provides clarifications to proper nullFlavor use for a list of common data types used by this guide.

**Table 21: Null Flavor Validation Rules for Data Types**

Data Type	CONF. #	Rules
Boolean (BL)	CMS_0105	Data types of BL SHALL have either @value or @nullFlavor but SHALL NOT have both @value and @nullFlavor (CONF:CMS_0105).
Coded Simple (CS)	CMS_0106	Data types of CS SHALL have either @code or @nullFlavor but SHALL NOT have both @code and @nullFlavor (CONF:CMS_0106).
Coded Descriptor (CD) Coded With Equivalents (CE)	CMS_0107	Data types of CD or CE SHALL have either @code or @nullFlavor but SHALL NOT have both @code and @nullFlavor (CONF:CMS_0107).
Instance Identifier (II)	CMS_0108	Data types of II SHALL have either @root or @nullFlavor or (@root and @nullFlavor) or (@root and @extension) but SHALL NOT have all three of (@root and @extension and @nullFlavor) (CONF:CMS_0108).
Integer Number (INT)	CMS_0109	Data types of INT SHALL NOT have both @value and @nullFlavor (CONF:CMS_0109).
Physical Quantity (PQ)	CMS_0110	Data types of PQ SHALL have either @value or @nullFlavor but SHALL NOT have both @value and @nullFlavor. If @value is present then @unit SHALL be present but @unit SHALL NOT be present if @value is not present (CONF:CMS_0110).
Real Number (REAL)	CMS_0111	Data types of REAL SHALL NOT have both @value and @nullFlavor (CONF:CMS_0111).
String (ST)	CMS_0112	Data types of ST SHALL either not be empty or have @nullFlavor (CONF:CMS_0112).
Point in Time (TS)	CMS_0113	Data types of TS SHALL have either @value or @nullFlavor but SHALL NOT have @value and @nullFlavor (CONF:CMS_0113).
Universal Resource Locator (URL)	CMS_0114	Data types of URL SHALL have either @value or @nullFlavor but SHALL NOT have both @value and @nullFlavor (CONF:CMS_0114).

## 9 NPI and TIN Validation Rules

Table 22: NPI Validation Rules and Table 23: TIN Validation Rules list the validation rules performed on the NPI and TIN.

**Table 22: NPI Validation Rules**

CONF. #	Rules
CMS_0115	The NPI should have 10 digits.
CMS_0116	The NPI should be composed of all digits.
CMS_0117	The NPI should have a correct checksum, using the Luhn algorithm.
CMS_0118	The NPI should have @extension or @nullFlavor, but not both.

**Table 23: TIN Validation Rules**

CONF. #	Rules
CMS_0119	When a Tax Identification Number is used, the provided TIN must be in valid format (9 decimal digits).
CMS_0120	The TIN SHALL have either @extension or @nullFlavor, but not both.

## 10 Reason Template Placement When Specifying “Not Done” with a Reason

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The Processing Consideration section in Volume 1 of the HL7 QRDA I STU 5.3 provides guidance on the placement of the Reason (V3) template when specify the reason for “Not Done”.

In summary, the Reason (V3) template will be nested directly within the element containing the **negationInd** attribute. When a parent template and a child template both allow negation, then the parent template must be negated and contain the Reason (V3) template. For example, for “Medication, Not Discharged”, the parent Discharge Medication (V6) template (2.16.840.1.113883.10.20.24.3.105:2021-08-01) must have **negationInd="true"** and contain the Reason (V3) template indicating reason for negation.

The table below provides detailed guidance for the location of the Reason (V3) template for each negated QDM data element that were used by the eCQM specifications for Hospital Quality Reporting for the 2027 reporting period.

**Table 24: Placement of Reason (V3) Template for Negated QDM Data Element**

Negated QDM Data Element	QRDA Template(s)	Guidance
<p>Device, Not Ordered</p>	<p>Device Order Act (V4) (2.16.840.1.11388.3.10.20.24.3.130:2021-08-01)</p> <p>Device Order (V6) (2.16.840.1.11388.10.20.24.3.9:2021-08-01)</p> <p>Note: Reason (V3) for not done is contained directly within the Device Order Act (V4) template</p>	<p>XPath for “Device, Not Ordered” Reason Code:</p> <pre> ./act[templateId/@root="2.16.840.1.113883.10.20.24.3.130"][templateId/@extension="2021-08-01"][@negationInd="true"]/entryRelationship[@typeCode="RSON"]/observation[templateId/@root="2.16.840.1.113883.10.20.24.3.88"][templateId/@extension="2017-08-01"]/value[@xsi:type="CD"]/                     </pre> <pre> &lt;!-- Device Order Act (V4) --&gt; &lt;act classCode="ACT" moodCode="EVN" negationInd="true"&gt;   &lt;templateId     root="2.16.840.1.113883.10.20.24.3.130"     extension="2021-08-01"/&gt;   &lt;code code="SPLY"     codeSystem="2.16.840.1.1.113883.5.6"     displayName="Supply"/&gt;   &lt;!-- Device Order (V6) --&gt;   &lt;entryRelationship typeCode="SUBJ"&gt;     &lt;supply classCode="SPLY" moodCode="RQO"&gt;       &lt;templateId         root="2.16.840.1.113883.10.20.22.4.43"         extension="2014-06-09"/&gt;       &lt;templateId         root="2.16.840.1.113883.10.20.24.3.9"         extension="2021-08-01"/&gt;       ...     &lt;/supply&gt;   &lt;/entryRelationship&gt;   &lt;!-- Reason (V3) for device not ordered--&gt;   &lt;entryRelationship typeCode="RSON"&gt;     &lt;observation classCode="OBS"       moodCode="EVN"&gt;       &lt;templateId         root="2.16.840.1.113883.10.20.24.3.88"         extension="2017-08-01"/&gt;       ...     &lt;/observation&gt;   &lt;/entryRelationship&gt; &lt;/act&gt;                     </pre>

Negated QDM Data Element	QRDA Template(s)	Guidance
Medication, Not Administered	Medication Administered (V6) (2.16.840.1.113883.10.20.24.3.42:2021-08-01)	<p>XPath for "Medication, Not Administered" Reason Code:</p> <pre> ./substanceAdministration[templateId/@root="2.16.840.1.113883.10.20.24.3.42"][templateId/@extension="2021-08-01"][@negationInd="true"]/entryRelationship[@typeCode="RSON"]/observation[templateId/@root="2.16.840.1.113883.10.20.24.3.88"][templateId/@extension="2017-08-01"]/value[@xsi:type="CD"/&gt;                     </pre> <p><b>&lt;!-- Medication Administered(V6) --&gt;</b>                      &lt;substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="true" &gt;                        &lt;templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09"/&gt;                        &lt;templateId root="2.16.840.1.113883.10.20.24.3.42" extension="2021-08-01"/&gt;                        ...  <b>&lt;!-- Reason(V3) for medication not administered --&gt;</b>                      &lt;entryRelationship typeCode="RSON"&gt;                        &lt;observation classCode="OBS" moodCode="EVN"&gt;                          &lt;templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-01"/&gt;                          &lt;code code="77301-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Reason care action performed or not"/&gt;                          &lt;value xsi:type="CD" code="397745006" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" displayName="Medical contraindication (finding)"/&gt;                        &lt;/observation&gt;                      &lt;/entryRelationship&gt;                      &lt;/substanceAdministration&gt;                  </p>

Negated QDM Data Element	QRDA Template(s)	Guidance
<p>Medication, Not Discharged</p>	<p>Discharge Medication (V6) (2.16.840.1.11388 3.10.20.24.3.105:2 021-08-01)</p> <p>Note: Reason (V3) for not done is contained directly within the Discharge Medication (V6) template</p>	<p>XPath for "Medication, Not Discharged" Reason Code:</p> <pre> ./act[templateId/@root="2.16.840.1.113883.10.20.24.3.105"] [templateId/@extension="2021-08-01"] [@negationInd="true"] /entryRelationship[@typeCode="RSON"] /observation[templateId/@root="2.16.840.1.113883.10.20.24.3.88"] [templateId/@extension="2017-08-01"] /value[@xsi:type="CD"] /                     </pre> <p><b>&lt;!-- Discharge Medication (V6) --&gt;</b></p> <pre> &lt;act classCode="ACT" moodCode="RQO" negationInd="true"&gt;   &lt;templateId root="2.16.840.1.113883.10.20.24.3.105" extension="2021-08-01"/&gt;   &lt;code code="75311-1" codeSystem="2.16.840.1.1.113883.6.1" displayName="Discharge medications"/&gt;   &lt;!-- Medication Activity (V2) --&gt;   &lt;entryRelationship typeCode="SUBJ"&gt;     &lt;substanceAdministration classCode="SBADM" moodCode="EVN"&gt;       &lt;templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09"/&gt;       &lt;id root="f8a9729a-ba09-4dc6-a430-bde2c6137d3c"/&gt;       ...     &lt;/substanceAdministration &gt;   &lt;/entryRelationship&gt;   &lt;!-- Reason (V3) for medication not discharged --&gt;   &lt;entryRelationship typeCode="RSON"&gt;     &lt;observation classCode="OBS" moodCode="EVN"&gt;       &lt;templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-01"/&gt;       ...     &lt;/observation&gt;   &lt;/entryRelationship&gt; &lt;/act&gt;                     </pre>

Negated QDM Data Element	QRDA Template(s)	Guidance
Medication, Not Ordered	Medication Order (V7) (2.16.840.1.113883.10.20.24.3.47:2021-08-01)	<p>XPath for "Medication, Not Ordered" Reason Code:</p> <pre> ./substanceAdministration [templateId/@root="2.16.840.1.113883.10.20.24.3.47"] [templateId/@extension="2021-08-01"] [@negationInd="true"]/entryRelationship [@typeCode="RSON"]/observation [templateId/@root="2.16.840.1.113883.10.20.24.3.88"] [templateId/@extension="2017-08-01"] /value[@xsi:type="CD"]/                     </pre> <p><b>&lt;!-- Medication Order (V7) --&gt;</b>  &lt;substanceAdministration classCode="SBADM" moodCode="RQO" negationInd="true"&gt;    &lt;templateId root="2.16.840.1.113883.10.20.22.4.42" extension="2014-06-09"/&gt;    &lt;templateId root="2.16.840.1.113883.10.20.24.3.47" extension="2021-08-01"/&gt;    <b>&lt;!-- Reason (V3) for medication not ordered --&gt;</b>  &lt;entryRelationship typeCode="RSON"&gt;    &lt;observation classCode="OBS" moodCode="EVN"&gt;      &lt;templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-01"/&gt;      ...    &lt;/observation&gt;  &lt;/entryRelationship&gt;  &lt;/substanceAdministration&gt;                     </p>

Negated QDM Data Element	QRDA Template(s)	Guidance
<p>Procedure, Not Performed</p>	<p>Procedure Performed (V7) (2.16.840.1.113883.10.20.24.3.64:2021-08-01)</p>	<p>XPath for "Procedure, Not Performed" Reason Code:</p> <pre> ./procedure [templateId/@root="2.16.840.1.113883.10.20.24.3.64"][templateId/@extension="2021-08-01"][@negationInd="true"]/entryRelationship[@typeCode="RSON"]/observation[templateId/@root="2.16.840.1.113883.10.20.24.3.88"][templateId/@extension="2017-08-01"]/value[@xsi:type="CD"]/ </pre> <p><b>&lt;!-- Procedure Performed (V7) --&gt;</b>  &lt;procedure classCode="PROC" moodCode="EVN" negationInd="true"&gt;    &lt;templateId root="2.16.840.1.113883.10.20.22.4.14" extension="2014-06-09"/&gt;    &lt;templateId root="2.16.840.1.113883.10.20.24.3.64" extension="2021-08-01"/&gt;    <b>&lt;!-- Reason (V3) for procedure not performed --&gt;</b>  &lt;entryRelationship typeCode="RSON"&gt;    &lt;observation classCode="OBS" moodCode="EVN"&gt;      &lt;templateId root="2.16.840.1.113883.10.20.24.3.88" extension="2017-08-01"/&gt;      ...    &lt;/observation&gt;  &lt;/entryRelationship&gt;  &lt;/procedure&gt;</p>

# 11 Ensuring Data Uniqueness

The presence of duplicated data in a QRDA I file not only could potentially lead to increased data processing time, but most importantly, might cause incorrect processing and therefore produce unexpected measure results when calculated by other entities. The Processing Consideration section in Volume 1 of the HL7 QRDA I STU 5.3 provides guidance for ensuring data uniqueness in a QRDA I file. Submitted QRDA I files for HQR in the 2027 reporting period should follow the ensuring data uniqueness guidance specified in the base standard.

- Each reported QDM data element contains all of the attributes (e.g., discharge status, facility location, etc.) required by all measures, which are reported in the file, in the same QRDA template for the same instance.
- Not to duplicate QDM data element by including `sdtc:valueSet`. (Note that `sdtc:valueSet` is still required for Not Done events where attribute `negationInd="true"` and should only be used when submitting a Not Done event.)

Table 25 lists the key elements for determining data uniqueness.

**Table 25: Key Elements for Determining Data Uniqueness**

QDM Data Type	Key Elements
Data types except Encounter	<p>Precondition: same QRDA template</p> <ul style="list-style-type: none"> <li>• Id element—combination of <code>@root</code> and <code>@extension</code> (if <code>@extension</code> is present) <ul style="list-style-type: none"> <li>o <code>act/id</code></li> <li>o <code>observation/id</code></li> <li>o <code>procedure/id</code></li> <li>o <code>substanceAdministration/id</code></li> <li>o <code>supply/id</code></li> </ul> </li> </ul>
Encounter, Performed	<p>Precondition: same QRDA template</p> <ul style="list-style-type: none"> <li>• Encounter id element (<code>encounter/id</code>)— combination of <code>@root</code> and <code>@extension</code> (if <code>@extension</code> is present)</li> <li>• Encounter code (<code>encounter/code</code>)</li> <li>• Admission date time (<code>encounter/effectiveTime/low</code>)</li> <li>• Discharge date time (<code>encounter/effectiveTime/high</code>)</li> </ul> <p>Each episode of care (EOC) shall have one unique inpatient encounter id and if there are other types of encounters present (e.g., ED) during the same episode of care, they shall have their own unique encounter ids. If there is data for multiple episodes of care within the same QRDA Category I file, then each episode of care shall have its own unique inpatient encounter id. Should there be another reference to an encounter/EOC in a QRDA Category I file, then users should reference the previously reported encounter id of that inpatient encounter instance or EOC.</p>

# 12 CMS QRDA I Implementation Guide Changes to QRDA I STU 5.3 Base Standard

This table lists all changes made to the base HL7 QRDA I STU 5.3 contained in this implementation guide. The "Base Standard" is the *HL7 Implementation Guide for CDA Release 2: Quality Report Document Architecture, Category I, STU Release 5.3* and any subsequent errata update.

**Table 26: Changes Made to the QRDA I STU 5.3 Base Standard**

CONF. #	Section	Base Standard	Changed To
n/a	5.1.1	n/a	Conforms to QDM-Based QRDA (V8) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.1.2:2021-08-01).
CMS_0001 CMS_0002 CMS_0003	5.1.1	n/a	SHALL contain exactly one [1..1] templateId (CONF:CMS_0001) such that it  SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.24.1.3" (CONF:CMS_0002).  SHALL contain exactly one [1..1] @extension="2025-03-01" (CONF:CMS_0003).
CMS_0010	5.1.1	n/a	This languageCode SHALL contain exactly one [1..1] @code="en" (CONF:CMS_0010).
4509-16857_C01	5.1.2	This patientRole MAY contain zero or one [0..1] id (CONF:4509-16857) such that it  SHALL contain exactly one [1..1] @root="2.16.840.1.113883.4.572" Medicare HIC number (CONF:4509-16858).	This patientRole SHOULD contain zero or one [0..1] id (CONF:4509-16857_C01) such that it  SHALL contain exactly one [1..1] @root="2.16.840.1.113883.4.572" Medicare HIC number (CONF:4509-16858).

CONF. #	Section	Base Standard	Changed To
<p>CMS_0009 CMS_0053 CMS_0103</p>	<p>5.1.2</p>	<p>n/a</p>	<p>This patientRole SHALL contain exactly one [1..1] id (CONF:CMS_0009) such that it</p> <p>SHALL contain exactly one [1..1] @root (CONF:CMS_0053). Note: This is the provider's organization OID or other non-null value different from the OID for the Medicare HIC Number (2.16.840.1.113883.4.572) and the OID for the Medicare Beneficiary Identifier (2.16.840.1.113883.4.927).</p> <p>SHALL contain exactly one [1..1] @extension (CONF:CMS_0103). Note: The value of @extension is the Patient ID.</p>
<p>4509-28697_C01</p>	<p>5.1.2</p>	<p>This patientRole MAY contain zero or one [0..1] id (CONF:4509-28697) such that it</p> <p>SHALL contain exactly one [1..1] @root="2.16.840.1.113883.4.927" Medicare Beneficiary Identifier (MBI) (CONF:4509-28698).</p>	<p>HQR: Medicare Beneficiary Identifier (MBI) is not required for HQR but should be submitted if the payer is Medicare and the patient has an MBI number assigned.</p> <p>Note that for hybrid measures, the patient's MBI must be submitted for all patients.</p> <p>This patientRole SHOULD contain zero or one [0..1] id (CONF:4509-28697_C01) such that it</p> <p>SHALL contain exactly one [1..1] @root="2.16.840.1.113883.4.927" Medicare Beneficiary Identifier (MBI) (CONF:4509-28698).</p>
<p>CMS_0130 CMS_0131 CMS_0132</p>	<p>5.1.2</p>	<p>n/a</p>	<p>This patientRole SHOULD contain zero or more [0..*] telecom (CONF:CMS_0130) such that it</p> <p>SHALL contain exactly one [1..1] @value (CONF:CMS_0131).</p> <p>This value SHALL begin with "mailto:" which is the email address of the patient (CONF:CMS_0132).</p>
<p>CMS_0133 CMS_0134 CMS_0135</p>	<p>5.1.2</p>	<p>n/a</p>	<p>This patientRole SHOULD contain zero or more [0..*] telecom (CONF:CMS_0133) such that it</p> <p>SHALL contain exactly one [1..1] @value (CONF:CMS_0134).</p> <p>This value SHALL begin with "tel:" which is the telephone of the patient (CONF:CMS_0135).</p>

CONF. #	Section	Base Standard	Changed To
1198-5284_C01	5.1.2	This patient SHALL contain at least one [1..*] US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-5284).	This patient SHALL contain exactly one [1..1] US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-5284_C01).
CMS_0011 CMS_0122 CMS_0123 CMS_0124 CMS_0125 CMS_0029	5.1.2	This patient SHALL contain exactly one [1..1] administrativeGenderCode, which SHALL be selected from ValueSet Administrative Gender (HL7 V3) urn:oid:2.16.840.1.113883.1.11.1 DYNAMIC (CONF:1198-6394).	<p>This patient SHALL contain exactly one [1..1] administrativeGenderCode (CONF:CMS_0011).</p> <p>This administrativeGenderCode SHALL contain exactly one [1..1] @nullFlavor (CONF:CMS_0122).</p> <p>This administrativeGenderCode SHOULD contain zero or one [0..1] translation (CONF:CMS_0123).</p> <p>The translation, if present, SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet Federal Administrative Sex urn:oid:2.16.840.1.113762.1.4.1021.121 DYNAMIC (CONF:CMS_0124).</p> <p>Patient sex SHALL be submitted using @translation and nullFlavor="OTH" (CONF:CMS_0125).</p> <p>If the patient's sex is unknown, nullFlavor="UNK" SHALL be submitted (CONF:CMS_0029).</p>
1198-5300_C01	5.1.2	<p>This patient SHALL contain exactly one [1..1] birthTime (CONF:1198-5298).</p> <p>SHOULD be precise to day (CONF:1198-5300).</p> <p>For cases where information about newborn's time of birth needs to be captured.</p> <p>MAY be precise to the minute (CONF:1198-32418).</p>	<p>This patient SHALL contain exactly one [1..1] birthTime (CONF:1198-5298).</p> <p>SHALL be precise to day (CONF:1198-5300_C01).</p> <p>For cases where information about newborn's time of birth needs to be captured.</p> <p>MAY be precise to the minute (CONF:1198-32418).</p>

CONF. #	Section	Base Standard	Changed To
CMS_0013 CMS_0030 CMS_0031	5.1.2	This patient SHALL contain exactly one [1..1] raceCode, which SHALL be selected from ValueSet Race Category Excluding Nulls urn:oid:2.16.840.1.113883.3.2074.1.1.3 DYNAMIC (CONF:1198-5322).	This patient SHALL contain exactly one [1..1] raceCode, which SHALL be selected from ValueSet Race urn:oid:2.16.840.1.114222.4.11.836 DYNAMIC (CONF:CMS_0013).  If the patient's race is unknown, nullFlavor="UNK" SHALL be submitted (CONF:CMS_0030).  If the patient declined to specify his/her race, nullFlavor="ASKU" SHALL be submitted (CONF:CMS_0031).
CMS_0014	5.1.2	This patient MAY contain zero or more [0..*] sdtc:raceCode, which SHALL be selected from ValueSet Race urn:oid:2.16.840.1.113883.1.11.1491 4 DYNAMIC (CONF:1198-7263).	This patient MAY contain zero or more [0..*] sdtc:raceCode, which SHALL be selected from ValueSet Race urn:oid:2.16.840.1.114222.4.11.836 DYNAMIC (CONF:CMS_0014).  Note: If a patient has more than one race category, one race is reported in raceCode, and additional races are reported using sdtc:raceCode.
CMS_0032 CMS_0033	5.1.2	This patient SHALL contain exactly one [1..1] ethnicGroupCode, which SHALL be selected from ValueSet Ethnicity urn:oid:2.16.840.1.114222.4.11.837 DYNAMIC (CONF:1198-5323).	This patient SHALL contain exactly one [1..1] ethnicGroupCode, which SHALL be selected from ValueSet Ethnicity urn:oid:2.16.840.1.114222.4.11.837 DYNAMIC (CONF:1198-5323).  If the patient's ethnicity is unknown, nullFlavor="UNK" SHALL be submitted (CONF:CMS_0032).  If the patient declined to specify his/her ethnicity, nullFlavor="ASKU" SHALL be submitted (CONF:CMS_0033).
4509-28241_C01	5.1.3	This representedCustodianOrganization SHOULD contain zero or one [0..1] id (CONF:4509-28241) such that it SHALL contain exactly one [1..1] @root="2.16.840.1.113883.4.336" CMS Certification Number (CONF:4509-28244).	This representedCustodianOrganization SHALL contain exactly one [1..1] id (CONF:4509-28241_C01) such that it SHALL contain exactly one [1..1] @root="2.16.840.1.113883.4.336" CMS Certification Number (CONF:4509-28244).
CMS_0035	5.1.3	n/a	CCN SHALL be six to ten characters in length (CONF:CMS_0035).
4509-16703_C01	5.1.4	MAY contain zero or more [0..*] informationRecipient (CONF:4509-16703).	SHALL contain exactly one [1..1] informationRecipient (CONF:4509-16703_C01).

CONF. #	Section	Base Standard	Changed To
4509-16705_C01 CMS_0025 CMS_0026	5.1.4	This intendedRecipient SHALL contain at least one [1..*] id (CONF:4509-16705).	This intendedRecipient SHALL contain exactly one [1..1] id (CONF:4509-16705_C01).  This id SHALL contain exactly one [1..1] @root="2.16.840.1.113883.3.249.7" (CONF:CMS_0025).  This id SHALL contain exactly one [1..1] @extension, which SHALL be selected from ValueSet QRDA I CMS Program Name urn:oid:2.16.840.1.113883.3.249.14.103 STATIC 2022-02-01 (CONF:CMS_0026). Note: The value of @extension is CMS Program Name.
1198-10003_C01 CMS_0004 CMS_0005 CMS_0006 CMS_0008	5.1.5	MAY contain zero or more [0..*] participant (CONF:1198-10003) such that it	SHALL contain exactly one [1..1] participant (CONF:1198-10003_C01). HQR: CMS EHR Certification ID is required for HQR.  The participant SHALL contain exactly one [1..1] associatedEntity (CONF:CMS_0004).  This associatedEntity SHALL contain exactly one [1..1] id (CONF:CMS_0005) such that it  This id SHALL contain exactly one [1..1] @root="2.16.840.1.113883.3.2074.1" CMS EHR Certification ID (CONF:CMS_0006).  This id SHALL contain exactly one [1..1] @extension (CONF:CMS_0008). Note: The value of @extension is the CMS EHR Certification ID.
CMS_0056 CMS_0054	5.1.6	n/a	This structuredBody SHALL contain exactly one [1..1] component (CONF:CMS_0056) such that it  SHALL contain exactly one [1..1] Reporting Parameters Section - CMS (identifier: urn:hl7ii:2.16.840.1.113883.10.20.17.2.1.1:2016-03-01) (CONF:CMS_0054).

CONF. #	Section	Base Standard	Changed To
<p>CMS_0057 CMS_0055</p>	<p>5.1.6</p>	<p>n/a</p>	<p>This structuredBody SHALL contain exactly one [1..1] component (CONF:CMS_0057) such that it</p> <p>SHALL contain exactly one [1..1] Patient Data Section QDM (V8) - CMS (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.2.1.1:2022-02-01) (CONF:CMS_0055).</p>
<p>CMS_0040 CMS_0041 CMS_0042 CMS_0023 CMS_0024</p>	<p>5.2.2</p>	<p>n/a</p>	<p>Conforms to Reporting Parameters Section template (identifier: urn:oid:2.16.840.1.113883.10.20.17.2.1).</p> <p>SHALL contain exactly one [1..1] templateId (CONF:CMS_0040) such that it</p> <p>SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.17.2.1.1" (CONF:CMS_0041).</p> <p>SHALL contain exactly one [1..1] @extension="2016-03-01" (CONF:CMS_0042).</p> <p>SHALL contain exactly one [1..1] entry (CONF:CMS_0023) such that it</p> <p>SHALL contain exactly one [1..1] Reporting Parameters Act - CMS (identifier: urn:hl7ii:2.16.840.1.113883.10.20.17.3.8.1:2016-03-01) (CONF:CMS_0024).</p>
<p>CMS_0044 CMS_0045 CMS_0046</p>	<p>5.2.2.1</p>	<p>n/a</p>	<p>Conforms to Reporting Parameters Act template (identifier: urn:oid:2.16.840.1.113883.10.20.17.3.8).</p> <p>SHALL contain exactly one [1..1] templateId (CONF:CMS_0044) such that it</p> <p>SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.17.3.8" (CONF:CMS_0045).</p> <p>SHALL contain exactly one [1..1] @extension="2016-03-01" (CONF:CMS_0046).</p>

CONF. #	Section	Base Standard	Changed To
CMS_0048 CMS_0027 CMS_0050 CMS_0028	5.2.2.1	SHALL contain exactly one [1..1] effectiveTime (CONF:23-3273).  This effectiveTime SHALL contain exactly one [1..1] low (CONF:23-3274).  This effectiveTime SHALL contain exactly one [1..1] high (CONF:23-3275).	SHALL contain exactly one [1..1] effectiveTime (CONF:23-3273).  This effectiveTime SHALL contain exactly one [1..1] low (CONF:23-3274).  This low SHALL contain exactly one [1..1] @value (CONF:CMS_0048).  SHALL be precise to day (CONF:CMS_0027)  This effectiveTime SHALL contain exactly one [1..1] high (CONF:23-3275).  This high SHALL contain exactly one [1..1] @value (CONF:CMS_0050).  SHALL be precise to day (CONF:CMS_0028)
CMS_0036 CMS_0037 CMS_0038	5.2.3	n/a	Conforms to Patient Data Section QDM (V8) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.2.1:2021-08-01).  SHALL contain exactly one [1..1] templateId (CONF:CMS_0036) such that it  SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.24.2.1.1" (CONF:CMS_0037).  SHALL contain exactly one [1..1] @extension="2022-02-01" (CONF:CMS_0038).
CMS_0051 CMS_0039	5.2.3	n/a	SHALL contain at least one [1..*] entry (CONF:CMS_0051) such that it  SHALL contain exactly one [1..1] entry template that is other than the Patient Characteristic Payer (identifier: urn:oid:2.16.840.1.113883.10.20.24.3.55) (CONF:CMS_0039).
4509-14430_C01	5.2.3	MAY contain zero or more [0..*] entry (CONF:4509-14430) such that it	SHALL contain at least one [1..*] entry (CONF:4509-14430_C01) such that it  SHALL contain at least one [1..*] Patient Characteristic Payer (identifier: urn:oid:2.16.840.1.113883.10.20.24.3.55) (CONF:4509_14431).

# 13 Change Log for 2027 CMS QRDA I Implementation Guide from the 2026 CMS QRDA Implementation Guide

Table 27 summarizes the changes made in this 2027 CMS QRDA I Implementation Guide since the release of 2026 CMS QRDA I Implementation Guide, Version 1.0.

**Table 27: Changes Made for 2027 CMS QRDA I IG from 2026 CMS QRDA I IG**

Section Heading	2027 CMS QRDA I IG (Version 1.0)	2026 CMS QRDA I IG (Version 1.0)
Base Standard	No change to the base standard. HL7 Implementation Guide for CDA Release 2: Quality Reporting Document Architecture Category I, Release 1, Standard for Trial Use (STU) Release 5.3, US Realm, and any subsequent errata update.	HL7 Implementation Guide for CDA Release 2: Quality Reporting Document Architecture Category I, Release 1, Standard for Trial Use (STU) Release 5.3, US Realm, and any subsequent errata update.
1 Introduction	Updated to 2027 reporting period.	2026 reporting period.
3 Overview	Updated to 2027 reporting period. This guide describes additional conformance statements and constraints for EHR data submissions that are required for reporting to CMS for the Hospital Inpatient Quality Reporting Program, Hospital Outpatient Quality Reporting Program, Rural Emergency Hospital Quality Reporting Program, and the Medicare Promoting Interoperability Program pertaining to the 2027 reporting period.	2026 reporting period. This guide describes additional conformance statements and constraints for EHR data submissions that are required for reporting to CMS for the Hospital Inpatient Quality Reporting Program, Hospital Outpatient Quality Reporting Program, and the Medicare Promoting Interoperability Program pertaining to the 2026 reporting period.
4 QRDA Category I Requirements	Updated to 2027 reporting period.	2026 reporting period.
5.1.1 General Header	Updated to QRDA Category I Report – CMS (V10) with an updated templateId extension.  SHALL contain exactly one [1..1] templateId (CONF:CMS_0001) such that it  SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.24.1.3" (CONF:CMS_0002).  SHALL contain exactly one [1..1] @extension="2026-05-01" (CONF:CMS_0003).	QRDA Category I Report – CMS (V9)  SHALL contain exactly one [1..1] templateId (CONF:CMS_0001) such that it  SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.24.1.3" (CONF:CMS_0002).  SHALL contain exactly one [1..1] @extension="2025-03-01" (CONF:CMS_0003).

Section Heading	2027 CMS QRDA I IG (Version 1.0)	2026 CMS QRDA I IG (Version 1.0)
5.1.1 General Header	<p>Updated Figure 5: CMS 2027 QRDA I Document Header Example.</p> <pre>&lt;!-- QRDA Category I Report – CMS (V10) --&gt; &lt;templateId root="2.16.840.1.113883.10.20.24.1.3" extension="2026-05-01"/&gt;</pre>	<p>Figure 5: CMS 2026 QRDA I Document Header Example</p> <pre>&lt;!-- QRDA Category I Report – CMS (V9) --&gt; &lt;templateId root="2.16.840.1.113883.10.20.24.1.3" extension="2025-03-01"/&gt;</pre>
5.1.2 recordTarget	<p>Updated Figure 6: recordTarget Example, QRDA Category I Report – CMS (V10).</p> <pre>&lt;administrativeGenderCode nullFlavor="OTH"&gt;   &lt;translation code="248152002" displayName="Female (finding)" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/&gt; &lt;/administrativeGenderCode&gt;</pre>	<p>Figure 6: recordTarget Example, QRDA Category I Report – CMS (V9)</p> <pre>&lt;administrativeGenderCode nullFlavor="OTH"&gt;   &lt;translation code="248152002" codeSystem="2.16.840.1.113883.6.96"/&gt; &lt;/administrativeGenderCode&gt;</pre>
5.1.3 Custodian	<p>Updated Figure 7: CCN as Custodian Example, QRDA Category I Report - CMS (V10)</p>	<p>Figure 7: CCN as Custodian Example, QRDA Category I Report - CMS (V9)</p>
5.1.4 informationRecipient	<p>Updated Table 6: QRDA I CMS Program Name</p> <p>Added code HQR_REHQR for Hospital Quality Reporting for the Rural Emergency Hospitals Quality Reporting Program</p>	<p>Table 6: QRDA I CMS Program Name</p>
5.1.4 informationRecipient	<p>Updated Figure 8: informationRecipient Example, QRDA Category I Report - CMS (V10)</p>	<p>Figure 8: informationRecipient Example, QRDA Category I Report - CMS (V9)</p>
5.2.1 Measure Section	<p>Figure 9: Measure Section Example</p> <p>Updated to use a 2027 reporting period eCQM version specific UUID as an example.</p>	<p>Figure 9: Measure Section Example</p> <p>Example used is a 2026 reporting period eCQM version specific UUID.</p>
5.2.2.1 Reporting Parameters Act – CMS	<p>Figure 10: Reporting Parameters Section – CMS and Reporting Parameters Act – CMS Example</p> <p>Updated the example reporting period to 01 Jan 2027 – 31 March 2027</p>	<p>Figure 10: Reporting Parameters Section – CMS and Reporting Parameters Act – CMS Example</p> <p>The example used reporting period to 01 Jan 2026 – 31 March 2026</p>
5.2.3 Patient Data Section (V8) - CMS	<p>Figure 11: Patient Data Section QDM (V8) – CMS Example</p> <p>Updated the example effectiveTime value</p>	<p>Figure 11: Patient Data Section QDM (V8) – CMS Example</p>

Section Heading	2027 CMS QRDA I IG (Version 1.0)	2026 CMS QRDA I IG (Version 1.0)
5.2.3.3 Reporting “result as type”	Updated to CMS334 as example	Used CMS334v7 as example
5.3.3 Other HQR Validations	<p>Table 13: Other Validation Rules for HQR Programs</p> <p>Updated Error Message and File Rejection for CMS_0070</p> <p>The validation process compares the upload date with the Production Date Range values stored in internal table. If the upload date is outside the acceptable range(s), which for the 2027 Reporting Period is yet to be finalized, this message is returned.</p>	<p>Table 13: Other Validation Rules for HQR Programs</p> <p>Error Message and File Rejection for CMS_0070</p> <p>The validation process compares the upload date with the Production Date Range values stored in internal table. If the upload date is outside the acceptable range(s), which for the 2026 Reporting Period is yet to be finalized, this message is returned.</p>
5.3.3 Other HQR Validations	<p>Table 13: Other Validation Rules for HQR Programs</p> <p>Updated Error Message and File Rejection for CMS_0073 to use the updated version of the QRDA Category I Report – CMS (V10).</p> <p>&lt;templateId root="2.16.840.1.113883.10.20.24.1.3" extension="2026-05-01"/&gt;</p>	<p>Table 13: Other Validation Rules for HQR Programs</p> <p>Error Message and File Rejection for CMS_0073 referenced QRDA Category I Report – CMS (V9):</p> <p>&lt;templateId root="2.16.840.1.113883.10.20.24.1.3" extension="2025-03-01"/&gt;</p>
5.3.3 Other HQR Validations	<p>Table 13: Other Validation Rules for HQR Programs</p> <p>Updated Error Message and File Rejection for CMS_0082</p> <p>The EHR system needs to be certified to the ONC Certification Criteria for Health IT for CY2026. The CMS EHR Certification ID must start with “2027C”.</p>	<p>Table 13: Other Validation Rules for HQR Programs</p> <p>Error Message and File Rejection for CMS_0082</p> <p>The EHR system needs to be certified to the ONC Certification Criteria for Health IT. The CMS EHR Certification ID must start with “2026C”.</p>
5.3.3 Other HQR Validations	<p>Table 13: Other Validation Rules for HQR Programs</p> <p>Updated Error Message and File Rejection for CMS_0089</p> <p>CMS program name for inpatient Hybrid measures/CCDE submissions must be HQR_IQR. CMS program name for inpatient eCQM submissions must be HQR_IQR, HQR_PI_IQR or HQR_PI. CMS program name for outpatient eCQM submissions must be HQR_OQR. CMS program name for Rural Emergency Hospitals eCQM submissions must be HQR_REHQR.</p>	<p>Table 13: Other Validation Rules for HQR Programs</p> <p>Error Message and File Rejection for CMS_0089</p> <p>CMS program name for inpatient Hybrid measures/CCDE submissions must be HQR_IQR. CMS program name for inpatient eCQM submissions must be HQR_IQR, HQR_PI_IQR or HQR_PI. CMS program name for outpatient eCQM submissions must be HQR_OQR.</p>

Section Heading	2027 CMS QRDA I IG (Version 1.0)	2026 CMS QRDA I IG (Version 1.0)
6 Hybrid Measures/CCDE Submission	Updated Table 17. Hybrid Measures for Submission CMS529v7: Measurement Period: July 1, 2027 through June 30, 2028 CMS844v7: Measurement Period: July 1, 2027 through June 30, 2028	Table 17. Hybrid Measures for Submission CMS529v6: Measurement Period: July 1, 2026 through June 30, 2027 CMS844v6 : Measurement Period: July 1, 2026 through June 30, 2027
6 Hybrid Measures/CCDE Submission	Updated Table 18: Hybrid HWM and Hybrid HWR UCUM Codes Core Clinical Data Element: Oxygen saturation UCUM Unit – Hybrid HWM: % UCUM Unit – Hybrid HWR: %	Table 18: Hybrid HWM and Hybrid HWR UCUM Codes Core Clinical Data Element: Oxygen saturation UCUM Unit – Hybrid HWM: % UCUM Unit – Hybrid HWR: %
14. Acronyms	Added REHQR Removed ASTP	n/a ASTP/ONC
16. References	Updated the name to ONC Project Tracking System (Jira).	ASTP/ONC Project Tracking System (Jira).

# 14 Acronyms

The table below contains acronyms used in this guide.

**Table 28: Acronyms**

Acronym	Literal Translation
ASKU	Asked, but not known
ONC	Office of the National Coordinator for Health Information Technology
CCDE	Core Clinical Data Element
CCN	CMS Certification Number
CCSQ	Center for Clinical Standards & Quality
CDA	Clinical Document Architecture
CEHRT	Certified EHR technology
CMS	Centers for Medicare & Medicaid Services
CONF	conformance
STU	Standard for Trial Use
eCQI	electronic Clinical Quality Improvement
eCQM	electronic clinical quality measure
EHR	Electronic Health Record
FAP	Final Action Processing
HIC	Health Insurance Claim
HICN	Health Insurance Claim (HIC) Number
HL7	Health Level Seven
HL7 V3	Health Level 7 Version 3
HWM	Core Clinical Data Elements for the Hybrid Hospital-Wide (All-Condition, All-Procedure) Risk-Standardized Mortality Measure (HWM)
HWR	Core Clinical Data Elements for the Hybrid Hospital-Wide Readmission (HWR) Measure with Claims and Electronic Health Record Data
HQMF	Health Quality Measure Format
HQR	Hospital Quality Reporting
ID	identifier

Acronym	Literal Translation
IQR	Inpatient Quality Reporting
IT	Information technology
LOINC	Logical Observation Identifiers Names and Codes
MADiE	Measure Authoring Development Integrated Environment
MBI	Medicare Beneficiary Identification Number
n/a	not applicable
NA	Not applicable
NLM	National Library of Medicine
NPI	National Provider Identification Number
OID	Object Identifier
ONC	Office of the National Coordinator for Health Information Technology
OQR	Outpatient Quality Reporting
PI	Promoting Interoperability
QDM	Quality Data Model
QRDA	Quality Reporting Document Architecture
QRDA I	Quality Reporting Document Architecture Category I
REHQR	Rural Emergency Hospitals Quality Reporting Program
TIN	Tax Identification Number
UCUM	Unified Code for Units of Measure
UNK	Unknown
UTC	Coordinated Universal Time
VSAC	Value Set Authority Center
XML	Extensible Markup Language

# 15 Glossary

Term	Definition
Electronic health record (EHR)	Electronic Health Record (EHR) is also known as the electronic patient record, electronic medical record, or computerized patient record. As defined by Healthcare Information Management and Systems Society, “the electronic health record (EHR) is a longitudinal electronic record of patient health information generated by one or more encounters in any care delivery setting. Included in this information are patient demographics, progress notes, problems, medications, vital signs, past medical history, immunizations, laboratory data, and imaging reports.”
Electronic Clinical Quality Measure (eCQM)	An electronic clinical quality measure (eCQM) is a measure specified in a standard electronic format that uses data electronically extracted from electronic health records (EHR) and/or health information technology (IT) systems to measure the quality of health care provided.
Hybrid measure	A hybrid measure is a quality measure that uses more than one source of data for measure calculation. Current hybrid measures use claims data and electronic clinical data from EHRs to calculate measure results.
XML Path Language (XPath)	This notation provides a mechanism that will be familiar to developers for identifying parts of an XML document. XPath syntax selects nodes from an XML document using a path containing the context of the node(s). The path is constructed from node names and attribute names (prefixed by an '@') and concatenated with a '/' symbol.

# 16 References

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Certified Health IT Product List. <https://chpl.healthit.gov/>

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

HL7 Implementation Guide for CDA Release 2: Quality Reporting Document Architecture, Category I, Release 1, Standard for Trial Use Release 5.3 (QRDA I STU 5.3), and subsequent errata update. [http://www.hl7.org/implement/standards/product\\_brief.cfm?product\\_id=35](http://www.hl7.org/implement/standards/product_brief.cfm?product_id=35)

HL7 Clinical Document Architecture (CDA) Release 2.0 Normative Edition.  
[https://www.hl7.org/implement/standards/product\\_brief.cfm?product\\_id=496](https://www.hl7.org/implement/standards/product_brief.cfm?product_id=496)

HL7 Jira Tracker system. <https://jira.hl7.org>

ONC Project Tracking System (Jira). <https://oncprojecttracking.healthit.gov/>

U.S. National Library of Medicine, Value Set Authority Center. <https://vsac.nlm.nih.gov>