



DRAFT CMS Implementation Guide for Quality Reporting Document Architecture Category I and Category III

Eligible Professional Programs and Hospital Quality Reporting (HQR)

Supplementary Implementation Guide for 2015

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Combined QRDA Guide Overview

1. Introduction

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 initiatives.

This combined QRDA guide contains the Centers for Medicare & Medicaid Services (CMS) supplemental implementation guides to the *HL7 Implementation Guide for CDA Release 2: Quality Reporting Document Architecture, Category I, DSTU Release 2, (US Realm), Draft Standard for Trial Use—July 2012* (and its December 2012 and July 2014¹ errata updates) and the *HL7 Implementation Guide for CDA Release 2: Quality Reporting Document Architecture, Category III, DSTU Release 1, November 2012* for the 2015 reporting year.

This guide combines business requirements and information from three previously published CMS guides and is updated for the 2015 reporting year:

- The 2014 CMS QRDA Implementation Guide for Eligible Hospital Clinical Quality Measures — *Hospital Quality Reporting (HQR) Quality Reporting Document Architecture Category I, Release 2, Supplementary Implementation Guide, Version 2.2* (4/21/2014).
- The 2014 CMS QRDA I Implementation Guides for Eligible Professionals Clinical Quality Measures — *CMS Eligible Professional Programs Quality Reporting Document Architecture Category I, DSTU Release 2, Supplementary Implementation Guide for 2014, Version 4.0* (4/18/2014).
- The 2014 CMS QRDA III Implementation Guides for Eligible Professionals Clinical Quality Measures — *CMS Eligible Professional Programs Quality Reporting Document Architecture Category III, Release 1, Implementation Guide for 2014, Version 2.0* (4/18/2014).

Combining the above three guides as a single document provides a single resource to implementers, which eliminates the need for having to locate the guides separately at different sources. However, most importantly, the goal of combining is to harmonize any unnecessary discrepancies among various CMS QRDA guides, especially between the QRDA-I guides for the Eligible Professional (EP) programs and Hospital Quality Reporting (HQR). Efforts were made during the harmonization process to align business requirements among various programs. Creating a combined QRDA guide is a step toward producing a single CMS QRDA guide that will be shared by various CMS programs, which contains minimum CMS specific constraints to the base HL7 QRDA standards.

¹ A new DSTU errata update to the *HL7 Implementation Guide for CDA Release 2: Quality Reporting Document Architecture, Category I, DSTU Release 2, (US Realm)* is currently under development and is expected to be released in July 2014.

1.2 Organization of the Guide

This preliminary portion contains introductory material that pertains to all three CMS QRDA standards.

- 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

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- Chapter 3: Overview
- Chapter 4: QRDA Category I Requirements — includes reporting requirements and information on succession management and value sets
- 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
 - Entry-level templates

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- Chapter 6: Overview
- Chapter 7: QRDA Category III Submission Rules — includes guidelines for submissions under the Comprehensive Primary Care (CPC) Initiative, the Electronic Health Record (EHR) Incentive Program (Meaningful Use), and the Physician Quality Reporting System (PQRS) Program.
- Chapter 8: QRDA Category III Validation — contains the formal definitions for the QRDA Category III Report for the CMS EP program:
 - Document-level template that defines the document type and header constraints specific to CMS reporting
 - Section-level templates that define measure reporting and reporting parameters
 - Entry-level templates that define entry templates

APPENDIX: Chapters 9-14 provide references and resources, including a list of all changes made to QRDA Category I base standard to produce the Supplementary Implementation Guide in Part A.

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

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 measureable. In HL7, a flavor of null, or `nullFlavor`, describes the reason for missing data.

Examples of nullFlavor for raceCode

```
<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 above 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*.

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`.

PART A — QRDA-I DSTU R2 Supplementary Implementation Guide for Eligible Professional Programs and Hospital Quality Reporting

3. Overview

3.1 Background

Part A of this guide is a CMS Quality Reporting Document Architecture Category I (QRDA-I) supplementary implementation guide to *the HL7 Implementation Guide for CDA Release 2: Quality Reporting Document Architecture, Category I, DSTU Release 2, (US Realm), Draft Standard for Trial Use—July 2012*, and its December 21, 2012 errata update and July, 2014 errata update (referred to as the *QRDA-I Implementation Guide* in this guide). This guide describes additional conformance statements and constraints for electronic health record (EHR) data submissions that are required for reporting information to the Centers for Medicare and Medicaid Services (CMS) EHR Incentive Program and the Hospital Inpatient Quality Reporting Program 2015 Reporting Year for both the Eligible Professional programs and the Hospital Quality Reporting.

The purpose of this Part A of the supplemental guide is to serve as a companion to the original *QRDA-I Implementation Guide* for entities such as Eligible Professional (EP), Group Practice Reporting Option (GPRO), Accountable Care Organizations (ACO), Hospital Quality Reporting, and Data Submission Vendors (DSV) to submit QRDA-I data for consumption by CMS systems including the Physician Quality Reporting System (PQRS).

Each QRDA Category I report 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 Clinical Quality Measure (CQM) QRDA-I documents originating from EHR systems. Submitted QRDA-I documents for EHR Incentive Program 2015 must meet the conformance statements specified in this guide in addition to the conformance statements specified in the *QRDA-I Implementation Guide*. Only documents that are valid against the Clinical Document Architecture (CDA) Release 2 schema enhanced to support the sdte namespace (CDA_SDTE.xsd) will be accepted for processing. Documents that are invalid against this rule will be rejected.

This guide is based on following rules:

1. The *QRDA-I Implementation Guide* 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 including those existing conformance statements that are further constrained in this guide.

2. The original **SHALL/SHOULD/MAY** keywords along with conformance numbers from the *QRDA-I Implementation Guide* 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.

4. QRDA Category I Requirements

4.1 QRDA Category I Reporting

A QRDA-I document should be submitted for each patient who meets the Initial Patient Population criteria of an eCQM. The QRDA-I base standard allows either one or multiple measures to be reported in a QRDA-I document. For group practice reporting, CMS requires only one QRDA-I report to be submitted per patient aggregated for the group's Tax Identification Number (TIN) for a reporting period. For individual provider reporting, there should be one QRDA-I report per patient for the eligible professional's unique National Provider Identification (NPI) and Tax Identification Number (TIN) combination. For hospital Quality Reporting, there should be one QRDA-I report per patient for the facility CMS Certification Number (CCN).

4.2 Succession Management

This section describes the succession management for QRDA-I. (For example, a submitter notices an error in the submission and wants to replace it with a corrected version.) The document that replaces a previous document will have a replacement relationship and will have a new unique QRDA-I document/id. The document/id of the previous QRDA-I will be referenced in the current document's `/ClinicalDocument/relatedDocument/parentDocument/id`.

Currently, references to the 'id' of a parentDocument are not consistently used. A more reliable means of determining the current version of a QRDA-I document is used by the receiving system at CMS. For group practice reporting, it is the submission timestamp, the EHR Patient ID, and the TIN number combination. For individual provider reporting, it is the submission timestamp, the EHR Patient ID, and the combination of NPI and TIN. For hospital quality reporting, it is the CMS Certification Number (CCN), the EHR Patient ID, admission date, discharge date, and eCQM version specific identifier.

4.3 Value Sets

There are some cases where the value sets specified in electronic Clinical Quality Measures (eCQMs) contradict the value sets specified in the QRDA-I standard. In these cases, the value sets that are specified in eCQMs take precedence. For example, the Tobacco Use (2.16.840.1.113883.10.20.22.4.85) QRDA-I template requires "Tobacco Use (2.16.840.1.113883.11.20.9.41)" value set, but an eCQM criterion uses "Tobacco User Grouping Value Set (2.16.840.1.113883.3.526.3.1170)", the "Tobacco User Grouping Value Set (2.16.840.1.113883.3.526.3.1170)" shall take precedence over the "Tobacco Use (2.16.840.1.113883.11.20.9.41)" value set in constructing a QRDA-I document. This precedence rule also applies to cases where a value set specified in an eCQM is a subset of the value set that is specified in the QRDA-I standard.

5. QRDA Category I Validation

5.1 Document-Level Template: QRDA Category I Report - CMS EP & HQR

This section defines the document-level templates in a QRDA-I document. All of the templates in the *QRDA-I Implementation Guide* are Clinical Document Architecture (CDA) templates.

5.1.1 General Header

This template describes header constraints that apply to the CMS Quality Reporting Document Architecture (QRDA) Category I document.

Parameter Name: XPath	Attribute/Element	Card.	Verb	CONF#	Fixed Value
Clinical Document Template Id: /ClinicalDocument/templateId/	@root	1..1	SHALL	CMS_0001 CMS_0002	2.16.840.1.1 13883.10.20 .24.1.3
Globally Unique Identifier (GUID): /ClinicalDocument/id/	@root	1..1	SHALL	5363 9991	n/a
Version Number: /ClinicalDocument/	version Number	0..1	MAY	5264 6387	n/a
Document Created Date: /ClinicalDocument/ effectiveTime/	@value	1..1	SHALL	5256 16865	n/a
CMS EHR Certification ID: /ClinicalDocument/participant/ associatedEntity/id [@root='2.16.840.1.113883.3. 2074.1']/	@extension	0..1	MAY	CMS_0003 CMS_0004 CMS_0005 CMS_0006	n/a

1. Conforms to QDM-Based QRDA template (2.16.840.1.113883.10.20.24.1.2).
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).
3. **SHALL** contain exactly one [1..1] **id** (CONF:5363).
 - a. This id **SHALL** be a globally unique identifier for the document (CONF:9991).
4. **MAY** contain zero or one [0..1] **versionNumber** (CONF:5264).
 - a. If versionNumber is present setId **SHALL** be present (CONF:6387).
5. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:5256).
 - a. The content **SHALL** be a conformant US Realm Date and Time

(DTM.US.FIELDDED) (2.16.840.1.113883.10.20.22.5.4) (CONF:16865).
6. **MAY** contain zero or more [0..*] **participant** (CONF:CMS_0003) such that it
 - a. **SHALL** contain exactly one [1..1] **associatedEntity** (CONF:CMS_0004)
 - b. This **associatedEntity** **MAY** contain zero or one [0..1] **id** (CONF:CMS_0005)

such that it

- i. **SHALL** contain exactly one [1..1]
 @root='2.16.840.1.113883.3.2074.1' CMS EHR Certification Number (formerly known as Office of the National Coordinator Certification Number) and the value of @extension is the Certification Number (CONF: CMS_0006).

5.1.2 Record Target

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

Parameter Name: XPath	Attribute/Element	Card.	Verb	CONF#	Fixed Value
Medicare HIC Number: /ClinicalDocument/recordTarget/patientRole/	id [@root='2.16.840.1.113883.4.572']/	0..1	SHOULD	16858	n/a
EHR Patient ID Root: /ClinicalDocument/recordTarget/patientRole/id/	@root	1..1	SHALL	CMS_0007	n/a
EHR Patient ID Extension: /ClinicalDocument/recordTarget/patientRole/id/	@extension	1..1	SHALL	CMS_0007	n/a
City: /ClinicalDocument/recordTarget/patientRole/addr/	city	1..1	SHALL	7292 10412	n/a
State: /ClinicalDocument/recordTarget/patientRole/addr/	state	0..1	SHOULD	7293 10024	2.16.840.1.113883.3.88.12.80.1 (State Value Set)
Patient Postal Code: /ClinicalDocument/recordTarget/patientRole/addr/	postalCode	0..1	SHOULD	5271 CMS_0008 10025	n/a
Country: /ClinicalDocument/recordTarget/patientRole/addr/	country	0..1	SHOULD	CMS_0009	n/a
Address: /ClinicalDocument/recordTarget/patientRole/addr/	street Address Line	1..4	SHALL	5271 10412 7291	n/a

Parameter Name: XPath	Attribute/Element	Card.	Verb	CONF#	Fixed Value
First Name: (Required ONLY for EP) /ClinicalDocument/record Target/patientRole/patient/ name/	given	1..1	SHALL	5283 5284 10411 CMS_0010	n/a
Last Name: /ClinicalDocument/record Target/patientRole/patient/ name/	family	1..1	SHALL	5284 10411 7159	n/a
Gender: /ClinicalDocument/record Target/patientRole/patient/	administrativeGenderCode	1..1	SHALL	CMS_0011	2.16.840.1.1137 62.1.4.1 (ONC Administrative Sex Value Set) or 2.16.840.1.1138 83.1.11.1 (Administrative Gender Value Set)
Birth Date: /ClinicalDocument/record Target/patientRole/patient/ birthTime/	@value	1..1	SHALL	5298 CMS_0012	n/a
Race: /ClinicalDocument/record Target/patientRole/patient/	raceCode	1..1	SHALL	CMS_0013	2.16.840.1.1142 22.4.11.836 (Race Value Set)
Race (if multiple race): /ClinicalDocument/record Target/patientRole/patient/	sdtc:raceCode	0..*	MAY	CMS_0014	2.16.840.1.1142 22.4.11.836 (Race Value Set)
Ethnicity: /ClinicalDocument/record Target/patientRole/patient/	ethnicGroupCode	1..1	SHALL	CMS_0015	2.16.840.1.1142 22.4.11.837 (Ethnicity Value Set)

1. **SHALL** contain exactly one [1..1] **recordTarget** (CONF:12913).
 - a. This recordTarget **SHALL** contain exactly one [1..1] **patientRole** (CONF:16856).
 - i. This patientRole **SHOULD** contain zero or one [0..1] **id** (CONF:16857)² such that it

² CONF:16857 and CONF:16858 are updated per the approved disposition for DSTU comment: http://www.hl7.org/dstucomments/showdetail_comment.cfm?commentid=282. This change is expected to be part of the new errata release.

1. **SHALL** contain exactly one [1..1]
`@root='2.16.840.1.113883.4.572'` Medicare HIC number³ (CONF:16858)
- ii. This patientRole **SHALL** contain exactly one [1..1] **id** such that it
 1. **SHALL** contain exactly one [1..1] Patient Identifier Number⁴ (CONF:CMS_0007)
- iii. This patientRole **SHALL** contain at least one [1..*] **addr** (CONF:5271).
 1. The content of **addr** **SHALL** be a conformant US Realm Address (AD.US.FIELDDED) (2.16.840.1.113883.10.20.22.5.2) (CONF:10412).
 - a. The content of **addr** **SHALL** contain exactly one [1..1] **city** (CONF:7292).
 - b. **SHOULD** contain zero or one [0..1] **state** (ValueSet: StateValueSet 2.16.840.1.113883.3.88.12.80.1 **DYNAMIC**) (CONF:7293).
 - i. State is required if the country is US. If country is not specified, it is assumed to be the US. If country is something other than US, the state **MAY** be present but **MAY** be bound to different vocabularies (CONF:10024).
 - c. **SHOULD** contain zero or one [0..1] **postalCode** (CONF:CMS_0008).
 - i. PostalCode is required if the country is US. If country is not specified, it is assumed to be the US. If country is something other than US, the postalCode **MAY** be present but **MAY** be bound to different vocabularies (CONF:10025).
 - d. **SHOULD** contain zero or one [0..1] **country** (CONF:CMS_0009).
 - e. contain at least one and not more than 4 **streetAddressLine** (CONF:7291).
2. This patientRole **SHALL** contain exactly one [1..1] **patient** (CONF:5283).
 - a. This patient **SHALL** contain exactly one [1..1] **name** (CONF:5284).
 - i. The content of **name** **SHALL** be a conformant US Realm Patient Name (PTN.US.FIELDDED) (2.16.840.1.113883.10.20.22.5.1) (CONF:10411).
 1. **SHALL** contain exactly one [1..1] **given** (CONF:CMS_0010).
 Note: CMS_0010 is only applicable to the EP programs. For HQR, it follows the CONF:7157, which allows [1..*] **given**.
 2. **SHALL** contain exactly one [1..1] **family** (CONF:7159).
 - b. This patient **SHALL** contain exactly one [1..1] **administrativeGenderCode**, which **SHALL** be selected from either ValueSet **ONC Administrative Sex** 2.16.840.1.113762.1.4.1 or ValueSet **Administrative Gender** (HL7 V3) 2.16.840.1.113883.1.11.1 **DYNAMIC** (CONF:CMS_0011).
 - c. This patient **SHALL** contain exactly one [1..1] **birthTime** (CONF:5298).
 - i. **SHALL** be precise to day (CONF:CMS_0012).

³ See Appendix 7.3 for Medicare HIC number validation rule.

⁴ A generic name “Patient Identifier Number” is used in this guide in lieu of “Medical Record Number”.

- d. This patient **SHALL** contain exactly one [1..1] **raceCode**, which **SHALL** be selected from ValueSet **Race 2.16.840.1.114222.4.11.836 DYNAMIC** (CONF:CMS_0013).
- e. This patient **MAY** contain zero or more [0..*] **sdctc:raceCode**, where the **@code** **SHALL** be selected from ValueSet **2.16.840.1.114222.4.11.836 DYNAMIC** (CONF:CMS_0014).
- f. This patient **SHALL** contain exactly one [1..1] **ethnicGroupCode**, which **SHALL** be selected from ValueSet **Ethnicity Value 2.16.840.1.114222.4.11.837 DYNAMIC** (CONF:CMS_0015).

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.

Parameter Name: XPath	Attribute/Element	Card.	Verb	CONF#	Fixed Value
CMS Certification Number (CCN) Root: (Required ONLY for HQR) /ClinicalDocument[templateId/@root='2.16.840.1.113883.10.20.24.1.3']/custodian/assignedCustodian/representedCustodianOrganization/	id [@root ='2.16.840.1.113883.4.336']/	1..1	SHALL	12914 12915 12916 12917 CMS_0016 26960	n/a
CMS Certification Number (CCN) Extension: (Required ONLY for HQR) /ClinicalDocument[templateId/@root='2.16.840.1.113883.10.20.24.1.3']/custodian/assignedCustodian/representedCustodianOrganization/id[@root ='2.16.840.1.113883.4.336']/	extension	1..1	SHALL	12914 12915 12916 12917 CMS_0016 26959	n/a

1. **SHALL** contain exactly one [1..1] **custodian** (CONF:12914).
 - a. This custodian **SHALL** contain exactly one [1..1] **assignedCustodian** (CONF:12915).
 - i. This assignedCustodian **SHALL** contain exactly one [1..1] **representedCustodianOrganization** (CONF:12916).
 1. This assignedCustodian **SHALL** represent the organization that owns and reports the data (CONF:12917).

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 only.

2. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **id** (CONF:CMS_0016)⁵ such that it
 - i. **SHALL** contain exactly one [1..1] **@root**='2.16.840.1.113883.4.336' CMS Certification Number (CONF:26960).
 - ii. **SHALL** contain exactly one [1..1] **@extension** (CONF:26959).⁶

5.1.4 documentationOf/serviceEvent

A `serviceEvent` represents the main act, such as a colonoscopy or a cardiac stress study, being documented.

Parameter Name: XPath	Attribute/Element	Card.	Verb	CONF#	Fixed Value
National Provider Identification (NPI) Number: /ClinicalDocument[templateId/@root='2.16.840.1.113883.10.20.24.1.3']/documentationOf/serviceEvent[@classCode="PCPR"]/performer[@typeCode="PRF"]/assignedEntity/	id [@root='2.16.840.1.113883.4.6']	1..1	SHALL	CMS_0018 16588	n/a
Provider Given Name: /ClinicalDocument[templateId/@root='2.16.840.1.113883.10.20.24.1.3']/documentationOf/serviceEvent[@classCode="PCPR"]/performer[@typeCode="PRF"]/assignedEntity/assignedPerson/name/	given	0..1	MAY	CMS_0019 CMS_0020	n/a
Provider Family Name: /ClinicalDocument[templateId/@root='2.16.840.1.113883.10.20.24.1.3']/documentationOf/serviceEvent[@classCode="PCPR"]/performer[@typeCode="PRF"]/assignedEntity/assignedPerson/name/	family	0..1	MAY	CMS_0019 CMS_0020	n/a
Tax Identification Number (TIN): /ClinicalDocument[templateId/@root='2.16.840.1.113883.10.20.24.1.3']/documentationOf/serviceEvent[@classCode="PCPR"]/performer[@typeCode="PRF"]/assignedEntity/representedOrganization/	id [@root='2.16.840.1.113883.4.2']	1..1	SHALL	16591 CMS_0021 16593	n/a

⁵ CONF:26958 (CMS_0016), CONF:26959, and CONF:26960 are updated per the approved disposition for DSTU comment: http://www.hl7.org/dstucomments/showdetail_comment.cfm?commentid=489. This change is expected to be part of the new errata release.

⁶ CMS Certification Number (CCN) is six characters in length. A fixed CCN value 800890 shall be used for HQR test submission when no hospital is associated with a submitted QRDA document.

Parameter Name: XPath	Attribute/Element	Card.	Verb	CONF#	Fixed Value
Clinic Name: /clinicalDocument[templateId/@root='2.16.840.1.113883.10.20.24.1.3']/documentationOf/serviceEvent[@classCode="PCPR"]/performer[@typeCode="PRF"]/assignedEntity/representedOrganization/	name	0..1	MAY	CMS_0022	n/a

1. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:CMS_0017) such that it
 - a. **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:16580).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] **@classCode="PCPR"** Care Provision (CONF:16581).
 - ii. This serviceEvent **SHALL** contain at least one [1..*] **performer** (CONF:16583).
 1. Such performers **SHALL** contain exactly one [1..1] **@typeCode="PRF"** Performer (CONF:16584).
 2. Such performers **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:16586).

This assignedEntity id/@root='2.16.840.1.113883.4.6' coupled with the id/@extension represents the individual provider's National Provider Identification number (NPI).

For the Eligible Professional (EP) programs, NPI is required except for the Group Practice Reporting Option (GPRO). For GPRO, id/@root='2.16.840.1.113883.4.6' is coupled with @nullFlavor="NA", and @extension SHALL be omitted.

For the Hospital Quality Reporting (HQR), NPI is optional and MAY be submitted. If no NPI is submitted for HQR, id/@root='2.16.840.1.113883.4.6' is coupled with @nullFlavor="NA", and @extension SHALL be omitted.

3. This assignedEntity **SHALL** contain exactly one [1..1] **id** (CONF:CMS_0018)⁷ such that it
 - a. **SHALL** contain exactly one [1..1] **@root='2.16.840.1.113883.4.6'** National Provider ID (CONF:16588).
4. This assignedEntity **MAY** contain zero or one [0..1] **assignedPerson** (CONF:CMS_0019)
 - a. This assignedPerson **MAY** contain zero or one [0..1] **name** (CONF:CMS_0020)

This representedOrganization id/@root='2.16.840.1.113883.4.2' coupled with the id/@extension represents the organization's Tax Identification Number (TIN).

For the EP programs, TIN is required.

For the HQR, TIN is optional and SHOULD be submitted. If no TIN is submitted for HQR, id/@root='2.16.840.1.113883.4.2' is coupled with @nullFlavor="NA", and @extension SHALL be omitted.

⁷ CONF:16587 and CONF:1658 are updated per the approved disposition for DSTU comment: http://www.hl7.org/dstucomments/showdetail_comment.cfm?commentid=282. This change is expected to be part of the new errata release.

5. This assignedEntity **SHALL** contain exactly one [1..1] **representedOrganization** (CONF:16591).
 - a. This representedOrganization **SHALL** contain exactly one [1..1] **id** (CONF:CMS_0021) such that it
 - i. **SHALL** contain exactly one [1..1] **@root='2.16.840.1.113883.4.2'** Tax ID Number (CONF:16593).
 - b. This representedOrganization **MAY** contain zero or one [0..1] **name** (CONF:CMS_0022)

5.1.5 informationRecipient

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

Parameter Name: XPath	Attribute/Element	Card.	Verb	CONF#	Fixed Value
CMS Program Name: /ClinicalDocument/informationRecipient/intendedRecipient/id[root='2.16.840.1.113883.3.249.7']/	@extension	1..1	SHALL	CMS_0023 16704 CMS_0024 CMS_0025 CMS_0026	n/a

1. **SHALL** contain exactly one [1..1] **informationRecipient** (CONF:CMS_0023).
 - a. The informationRecipient, if present, **SHALL** contain exactly one [1..1] **intendedRecipient** (CONF:16704).
 - b. This intendedRecipient **SHALL** contain exactly one [1..1] **id** (CONF:CMS_0024)
 - i. It **SHALL** contain exactly one [1..1] **@root='2.16.840.1.113883.3.249.7'** (CONF:CMS_0025)
 - ii. It **SHALL** contain exactly one [1..1] **@extension**, the value of **@extension** is CMS Program Name (CONF:CMS_0026).

CMS Program Name	Description
PQRS_MU_INDIVIDUAL	PQRS Meaningful Use Individual
PQRS_MU_GROUP	PQRS Meaningful Use Group
PIONEER_ACO	Pioneer ACO
HQR_EHR	Hospital Quality Reporting for the EHR Incentive Program
HQR_IQR	Hospital Quality Reporting for the Inpatient Quality Reporting Program
HQR_EHR_IQR	Hospital Quality Reporting for the EHR Incentive Program and the IQR Program

5.2 Section-Level Templates

5.2.1 Measure Section

This section contains information about the eMeasure or eMeasures being reported. (An eMeasure is called an "eCQM" in the Meaningful Use program.) It must contain entries with the identifiers of all the eMeasures so that corresponding QRDA Quality Data Model (QDM) data element entry templates to be instantiated in the Patient Data Section are identified. Each eMeasure for which QRDA QDM data elements are being sent must reference eMeasure version specific identifier (QualityMeasureDocument/id).

Parameter Name: XPath	Attribute/Element	Card.	Verb	CONF#	Fixed Value
Measure Version specific identifier: //section[templateId/@root='2.16.840.1.113883.10.20.24.2.3']/entry/organizer[templateId/@root='2.16.840.1.113883.10.20.24.3.97']/reference[@typeCode="REFR"]/externalDocument[@classCode="DOC"][@moodCode="EVN"]/id/	@root	1..1	SHALL	12808 12809 12810 12811 12812 12813	n/a

1. **SHALL** contain exactly one [1..1] **reference** (CONF:12808) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="REFR" refers to (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:12809).
 - b. **SHALL** contain exactly one [1..1] **externalDocument**="DOC" Document (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:12810).
 - i. This externalDocument **SHALL** contain exactly one [1..1] **id** (CONF:12811) such that it
 1. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.4.738" (CONF:12812)⁸.
Note: This OID indicates that the @extension contains the version specific identifier for the eMeasure.
 2. **SHALL** contain exactly one [1..1] @extension (CONF:12813).
Note: This @extension SHALL equal the version specific identifier for eMeasure (i.e. QualityMeasureDocument/id)

5.2.2 Reporting Parameter Section

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.

⁸ CONF:12812 and CONF:12813 are updated per the approved disposition for DSTU comment: http://www.hl7.org/dstu/comments/showdetail_comment.cfm?commentid=432. This change is expected to be part of the new errata release.

Parameter Name: XPath	Attribute/Element	Card.	Verb	CONF#	Fixed Value
Reporting Period Effective Start Date: //act[templateId/@root='2.16.840.1.113883.10.20.17.3.8']/effectiveTime/low/	@value	1..1	SHALL	3273 3274	n/a
Reporting Period Effective End Date: //act[templateId/@root='2.16.840.1.113883.10.20.17.3.8']/effectiveTime/high/	@value	1..1	SHALL	3273 3275	n/a

1. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:3273).
 - a. This **effectiveTime** **SHALL** contain exactly one [1..1] **low** (CONF:3274).
 - b. This **effectiveTime** **SHALL** contain exactly one [1..1] **high** (CONF:3275).

5.2.3 Patient Data Section

The Patient Data Section QDM contains entries that conform to the QDM approach to QRDA.

Parameter Name: XPath	Attribute/Element	Card.	Verb	CONF#	Fixed Value
QDM-based QRDA Entries: //section[templateId/@root='2.16.840.1.113883.10.20.24.2.1']/	entry	1..*	SHALL	CMS_0027 16573	n/a

1. **SHALL** contain at least one [1..*] **entry** (CONF:CMS_0027)
 - a. Where the clinical statement codes **SHALL** contain the @sdct:valueSet extension to reference the value set from which the supplied code was drawn (CONF:16573).
Note: For PQRS program, validation for the generic constraint CONF:16573 is applied at an individual data element constraint level where applicable.

5.3 Entry-Level Templates

This guide follows the specifications of entry templates as defined in the base HL7 *QRDA-I Implementation Guide*.

For a QDM data element that is not done (when negationInd="true") with a reason, such as "Medication, Order not done: Medical Reason", an **entryRelationship** to a **Reason** (templateId: 2.16.840.1.113883.10.20.24.2.1") with an **actRelationship** type of "RSON" is required. This is specified in the Section 1.11.8 Asserting an Act Did Not Occur with a Reason in the base HL7 *QRDA-I Implementation Guide*.

PART B — QRDA-III DSTU R1 Supplementary Implementation Guide for Eligible Professional Programs

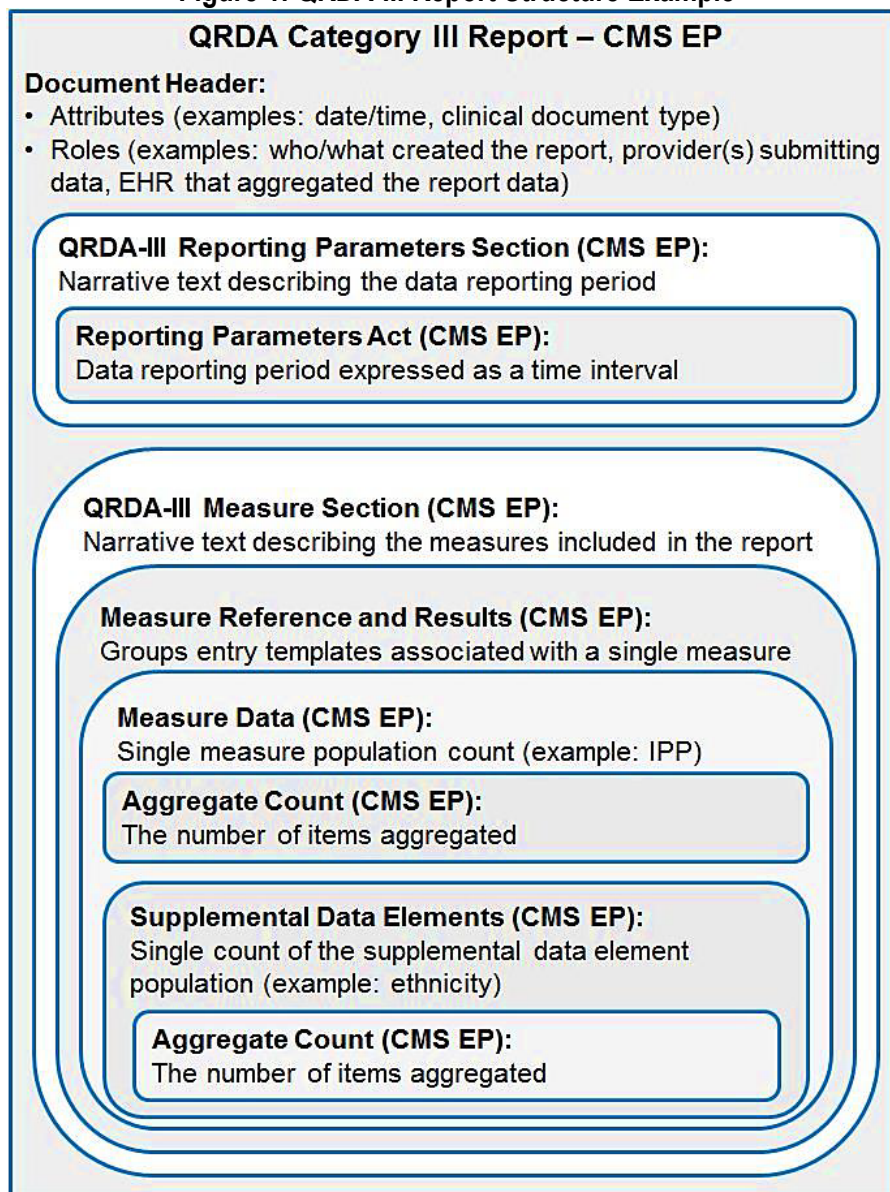
6. Overview

6.1 Background

Part B of this guide is a CMS Quality Reporting Document Architecture Category III (QRDA-III) supplementary implementation guide to the *HL7 Implementation Guide for CDA Release 2: Quality Reporting Document Architecture, Category III, DSTU Release 1 (US Realm), Draft Standard for Trial Use—November 2012* (referred to as the *QRDA-III Implementation Guide* in this guide). Templates defined in this implementation guide are conformant with the base HL7 *QRDA-III Implementation Guide*. CMS EP Programs QRDA-III templates address aggregate reporting requirements for:

- Comprehensive Primary Care (CPC) initiative
- Electronic Health Record (EHR) Incentive program (Meaningful Use)
- Physician Quality Reporting System (PQRS)

A QRDA-III report is an aggregate quality report using data collected in patient-level QRDA-I reports. Each QRDA-III report contains calculated summary data for one or more measures for a specified population of patients within a particular health system over a specific period of time. Summary data in the QRDA-III report are defined in the HL7 Health Quality Measures Format (HQMF), which standardizes the representation of a health quality measure as an electronic document. The structure of a QRDA-III report is depicted in Figure 1.

Figure 1: QRDA-III Report Structure Example

6.2 How to Read This QRDA-III Guide

This guide includes the formal template definitions and submission criteria for submitting QRDA-III documents to CPC Initiative, EHR Incentive Program (Meaningful Use), and PQRS for Eligible Professionals. Some of the conformance statements in the *HL7 CDA Release 2: QRDA Category III (QRDA-III), DSTU Release 1* have been further constrained to meet the specific requirements from these CMS EP programs. This guide shows all parent template definitions from the base *QRDA-III Implementation Guide* together with the CMS specific constraints.

7. QRDA Category III Submission Rules

CMS will process CQM QRDA-III documents originating from EHR systems. Submitted QRDA-III documents for EPs in 2015 must meet the conformance statements specified in Chapter 8 QRDA Category III Validation of this implementation guide.

7.1 Comprehensive Primary Care (CPC) Initiative Submissions

CPC QRDA-III submissions for the 2015 Measurement Year must contain all data for all measures recorded by a CPC practice site. Each CPC practice site is a single, physical (brick and mortar) location.

For CPC measures, the CQM population is inclusive of all patients seen at the CPC practice site location as follows:

- 1) If the CPC practice site is a solo-practitioner site, the CQM population includes all patients who had one or more visits at the CPC practice site location in the Measurement Year and who meet the initial patient population criteria of the CQM.
- 2) If the CPC practice site includes multiple practitioners, the CQM population must include all patients who had one or more visits at the CPC practice site in the Measurement Year and who meet the initial patient population criteria of the CQM.
- 3) If the CPC practice site is part of a larger group practice that includes non-CPC practitioners, the CQM population of the CPC practice site must include all patients who had one or more visits at the CPC practice site location **only**.
 - a) The aggregate numbers must be a representation of those patients seen at the CPC practice site location only.
 - i) If a patient was seen at both a CPC practice site and a non-participating practice site within the same larger group practice, the aggregate CQM report for the CPC practice site includes this patient if the patient had one or more visits in the Measurement Year at the CPC practice site location and meets the initial patient population criteria for the measure.
 - ii) If a patient is only seen at a non-participating practice site, but the data reside within the larger group practice's certified EHR, the patient is excluded from any CPC practice aggregate CQM report.
 - b) Note that CPC practice sites on a shared EHR system with a non-CPC practice site may count quality criteria that were performed at the non-CPC practice site if the data are contained within the CPC practice site's certified EHR and the patient had one or more visits in the Measurement Year at the CPC practice site location and meets the initial patient population criteria for the measure.
- 4) For CPC reporting, the **same TIN** (Tax Identification Number) has to be reported for all of the National Provider Identification (NPI) numbers listed for the CPC practice site. Therefore each CPC practice site can only report one TIN for CPC. This TIN will be used for the PQRS aligned reporting option if the PQRS waiver is selected by the CPC practice site.
- 5) CPC practice sites are required to submit 12 months of data for all measures.

The measurement period for the CPC program begins on January 1, 2015 and ends on December 31, 2015. Data collected during the measurement period should be submitted from January 1, 2016 through February 28, 2016.

7.2 EHR Incentive Program (Meaningful Use) Submissions

EHR Incentive Program submissions must contain nine of the 64 EP CQMs outlined for reporting as part of the EHR Incentive Program (Meaningful Use). The nine CQMs selected for submission must cover at least three of the six National Quality Strategy domains. QRDA-III submissions for the EHR Incentive Program will contain June 2014 versions of EP CQMs.

The EHR Incentive Program CQM populations include all patients seen by the EP during the reporting period, which is one full year (January 1, 2015 – December 31, 2015) or a calendar quarter within the calendar year (i.e., January 1, 2015 – March 31, 2015). EPs who are in their first year of participation in the EHR Incentive Program can also use any 90-day period within the calendar year 2015 as the data reporting period. Data collected during the reporting period may then be submitted January 1, 2016 through February 28, 2016. Please note that EPs who are in their first year of participation in the EHR Incentive Program must submit their CQMs via attestation by October 1, 2015 in order to avoid the EHR Incentive Program payment adjustment in the subsequent year..

7.3 Physician Quality Reporting System (PQRS) Submissions

PQRS QRDA-III submissions must contain nine of the 64 EP CQMs outlined for reporting as part of the EHR Incentive Program (Meaningful Use). The nine CQMs selected for submission must cover at least three of the six National Quality Strategy domains. QRDA-III submissions for PQRS reporting programs will contain June 2014 versions of EP CQMs.

For PQRS Group Practice Reporting Option (GPRO) QRDA-III submissions, a "group practice" consists of a physician group practice defined by a single TIN with two or more individual EPs who have reassigned billing rights to the TIN. If the EP also reports through a different TIN that is not participating as a GRPO, then the EP may also report individually through that alternate TIN.

For the PQRS individual EP reporting, CQM populations include all Medicare patients seen by the EP during the reporting period, which is one full year (January 1, 2015 - December 31, 2015). For PQRS GPRO reporting, CQM populations include all unique Medicare patients from all practice sites in the group practice seen by the group during the reporting period (January 1, 2015 - December 31, 2015). Data for both individual EPs and GPROs is then submitted January 1, 2016 through February 2, 2016.

7.4 Identifiers

For all CMS EP program reporting, certain identifiers are **mandatory**, meaning that they must be present in the QRDA-III report and no nulls are allowed. Exceptions and considerations are noted where applicable. Mandatory identifiers for CMS EP program reporting include:

- National Provider Identifier (NPI)
 - Optional for PQRS GPRO reporting
- Tax Identification Number (TIN)
 - For a practice site with a single provider, the TIN is an organizationID

- When a provider has more than one TIN, the provider is recorded for each NPI/TIN combination
Note: The CPC program requires each CPC practice site, use only one TIN and this TIN shall be the **same** for all CPC Practice Site practitioners (NPIs) who are eligible professionals at that CPC practice site ID location.(See section 2.1 above)

- Each measure included in the QRDA-III report must reference the Version Specific ID.

7.5 Succession Management

This section describes the succession management for QRDA-III reports. (For example, a submitter notices an error in the submission and wants to replace it with a corrected version.) The document that replaces a previous document will have a replacement relationship and will have a new unique QRDA-III document/id. The document/id of the previous QRDA-III will be referenced in the current document's /ClinicalDocument/relatedDocument/parentDocument/id.

Currently, references to the 'id' of a parentDocument are not consistently used. A more reliable means of determining the current version of a QRDA-III document is used by the receiving system at CMS. For group practice reporting (except for the CPC program), it is the submission timestamp, the CMS program name, and the TIN combination. For individual reporting (except for the CPC program), it is the submission timestamp, the CMS program name, the NPI number, and the TIN combination. For QRDA-III documents that are submitted to the CPC program, it is the submission timestamp, the CMS program name, and the CPC practice site ID combination.

8. QRDA Category III Validation

8.1 Document-Level Template: QRDA Category III Report - CMS EP

```
[ClinicalDocument: templateId 2.16.840.1.113883.10.20.27.1.2
(open)]
```

Table 1: QRDA Category III Report - CMS EP Contexts

Contained By	Contains
	QRDA Category III Measure Section (CMS EP) QRDA Category III Reporting Parameters Section (CMS EP)

This template describes constraints that apply to the Quality Reporting Document Architecture (QRDA) Document Category III Report for CMS Eligible Professionals (EP) Programs including the Comprehensive Primary Care (CPC) initiative, EHR Incentive Program (Meaningful Use), and Physician Quality Reporting System (PQRS).

Document-level templates describe the rules for constructing a conforming CDA document. They include constraints on the CDA header and identify contained section-level templates. The document-level template contains the following information:

- Description and explanatory narrative
- Template metadata (e.g., templateId, etc.)
- Header constraints
- Required section-level templates

1. Conforms to QRDA Category III Report template (2.16.840.1.113883.10.20.27.1.1).
2. **SHALL** contain exactly one [1..1] **realmCode** (CONF:17226).
 - a. This realmCode **SHALL** contain exactly one [1..1] **@code="US"** (CONF:17227).
3. **SHALL** contain exactly one [1..1] **typeId** (CONF:18186).
 - a. This typeId **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.1.3"** (CONF:18187).
 - b. This typeId **SHALL** contain exactly one [1..1] **@extension="POCD_HD000040"** (CONF:18188).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:17208) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.27.1.1"** (CONF:17209).
Note: QRDA Category III Report (QRDA III)
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:711280) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.27.1.2"** (CONF:711281).
6. **SHALL** contain exactly one [1..1] **id** (CONF:17236).
 - a. This id **SHALL** be a globally unique identifier for the document (CONF:17242).
7. **SHALL** contain exactly one [1..1] **code** (CodeSystem: LOINC 2.16.840.1.113883.6.1 **STATIC**) (CONF:17210).
 - a. This code **SHALL** contain exactly one [1..1] **@code="55184-6"** Quality Reporting Document Architecture Calculated Summary Report (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:19549).
8. **SHALL** contain exactly one [1..1] **title** (CONF:17211).
9. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:17237).
 - a. The content **SHALL** be a conformant US Realm Date and Time (DTM.US.FIELDDED) (2.16.840.1.113883.10.20.22.5.4) (CONF:18189).
10. **SHALL** contain exactly one [1..1] **confidentialityCode** (CONF:711174).
 - a. This confidentialityCode **SHALL** contain exactly one [1..1] **@code="N"** Normal (CodeSystem: ConfidentialityCode 2.16.840.1.113883.5.25 **STATIC**) (CONF:711246).
11. **SHALL** contain exactly one [1..1] **languageCode** (CONF:711173).
 - a. This languageCode **SHALL** contain exactly one [1..1] **@code="en"** English (CodeSystem: Language 2.16.840.1.113883.6.121) (CONF:711247).

8.1.1 recordTarget

QRDA III is an aggregate summary report. Therefore CDA's required recordTarget/id is nulled. The recordTarget element is designed for single patient data and is required in all CDA documents. In this case, the document does not contain results for a single patient, but rather for groups of patients, and thus the recordTarget ID in QRDA Category III documents contains a nullFlavor attribute (is nulled).

12. **SHALL** contain exactly one [1..1] **recordTarget** (CONF:17212).
 - a. This recordTarget **SHALL** contain exactly one [1..1] **patientRole** (CONF:17232) such that it
 - i. **SHALL** contain exactly one [1..1] **id** (CONF:17233).
 1. This id **SHALL** contain exactly one [1..1] **@nullFlavor="NA"** (CONF:17234).

Figure 1: RecordTarget Example

```
<recordTarget>
  <patientRole>
    <id nullFlavor="NA"/>
  </patientRole>
</recordTarget>
```

8.1.2 author

The CDA standard requires an author with an identifier to represent a person or device that have created document content. For a given document, there may be multiple authoring individuals and/or devices. Authors may also be described in other header elements, depending on roles.

13. **SHALL** contain at least one [1..*] **author** (CONF:18156) such that it The author/time value represents the time when the document was last edited. When there are multiple authors, the first author time usually correlates with the effectiveTime of the document, which is when the document was generated.

- a. **SHALL** contain exactly one [1..1] **time** (CONF:18158).
- b. **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:18157).
 - i. This assignedAuthor **SHALL** contain exactly one [1..1] **id** (CONF:711240).
 - ii. This assignedAuthor **MAY** contain zero or one [0..1] **assignedPerson** (CONF:18368).
 - iii. This assignedAuthor **MAY** contain zero or one [0..1] **assignedAuthoringDevice** (CONF:18162).
 1. The assignedAuthoringDevice, if present, **SHALL** contain exactly one [1..1] **softwareName** (CONF:18262).
 - iv. This assignedAuthor **SHALL** contain exactly one [1..1] **representedOrganization** (CONF:18163).
 1. This representedOrganization **SHALL** contain at least one [1..*] **name** (CONF:18265).
- c. There **SHALL** be exactly one assignedAuthor/assignedPerson or exactly one assignedAuthor/assignedAuthoringDevice (CONF:19667).

Figure 2: Device Author Example

```
<author>
  <time value="20150311061231-0500"/>
  <assignedAuthor>
    <id root="3d0a32f3-5164-4a6f-8922-de3badf83ddd"/>
    <assignedAuthoringDevice>
      <softwareName>SOME Data Aggregator Transform Tool
        AS00016dev</softwareName>
    </assignedAuthoringDevice>
    <representedOrganization>
      <id root="2.16.840.1.113883.19.5" extension="223344"/>
      <name>Good Health Clinic</name>
    </representedOrganization>
  </assignedAuthor>
</author>
```

Figure 3: Person Author Example

```

<author>
  <time value="20150312114411-0500"/>
  <assignedAuthor>
    <id root="2.16.840.1.113883.4.6" extension="111111112"
      assigningAuthorityName="NPI"/>
    <assignedPerson>
      <name>
        <given>Trevor</given>
        <family>Philips</family>
      </name>
    </assignedPerson>
    <representedOrganization>
      <id root="2.16.840.1.113883.19.5" extension="223344"/>
      <name>Good Health Clinic</name>
    </representedOrganization>
  </assignedAuthor>
</author>

```

8.1.3 custodian

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

14. **SHALL** contain exactly one [1..1] **custodian** (CONF:17213).
 - a. This custodian **SHALL** contain exactly one [1..1] **assignedCustodian** (CONF:17214).
 - i. This assignedCustodian **SHALL** contain exactly one [1..1] **representedCustodianOrganization** (CONF:17215).
 1. This representedCustodianOrganization **SHALL** contain at least one [1..*] **id** (CONF:18165).
 2. This representedCustodianOrganization **SHOULD** contain zero or one [0..1] **name** (CONF:18166).
 - b. This assignedCustodian **SHALL** represent the organization that owns and reports the data (CONF:18246).

Figure 4: Custodian Example

```

<custodian>
  <assignedCustodian>
    <representedCustodianOrganization>
      <id root="2.16.840.1.113883.19.5" extension="223344"/>
      <name>Good Health Clinic</name>
    </representedCustodianOrganization>
  </assignedCustodian>
</custodian>

```

8.1.4 informationRecipient

The informationRecipient represents the CMS EP program the report is being submitted to.

15. **SHALL** contain exactly one [1..1] **informationRecipient** (CONF:711158).
 - a. This informationRecipient **SHALL** contain exactly one [1..1] **intendedRecipient** (CONF:711159).
 - i. This intendedRecipient **SHALL** contain exactly one [1..1] **id** (CONF:711160).

The id/@root specifies that this identifier represents a CMS Program.

1. This id **SHALL** contain exactly one [1..1]
@root="2.16.840.1.113883.3.249.7" CMS Program
(CONF:711161).

The id/@extension contains the CMS Program the report is being submitted to.

2. This id **SHALL** contain exactly one [1..1] @extension, which **SHALL** be selected from ValueSet [CMS Program Name](#) 2.16.840.1.113883.3.249.14.101 **STATIC** (CONF:711162).
 - a. If ClinicalDocument/informationRecipient/intendedRecipient/id/@extension="CPC", then ClinicalDocument/participant/@typeCode="LOC" **SHALL** be present (CONF:711248).

Table 2: CMS Program Name

Value Set: CMS Program Name 2.16.840.1.113883.3.249.14.101 Specifies the CMS Program for QRDA-III report submissions.			
Code	Code System	Code System OID	Print Name
CPC	CMS Program	2.16.840.1.113883.3.249.7	CPC
PQRS_MU_INDIVIDUAL	CMS Program	2.16.840.1.113883.3.249.7	PQRS Meaningful Use Individual
PQRS_MU_GROUP	CMS Program	2.16.840.1.113883.3.249.7	PQRS Meaningful Use Group
MU_ONLY	CMS Program	2.16.840.1.113883.3.249.7	Meaningful Use Only

Figure 5: InformationRecipient Example

```
<informationRecipient>
  <intendedRecipient>
    <id root="2.16.840.1.113883.3.249.7" extension="CPC"/>
  </intendedRecipient>
</informationRecipient>
```

8.1.5 legalAuthenticator

The legalAuthenticator element represents the individual legally responsible for ensuring the data they have aggregated in the report was aggregated correctly.

16. **SHALL** contain exactly one [1..1] legalAuthenticator (CONF:17225).

Note: If a Data Submission Vendor (DSV) is used, the DSV is the legalAuthenticator.

- a. This legalAuthenticator **SHALL** contain exactly one [1..1] time (CONF:18167).
Note: This value is when the document was signed.
- b. This legalAuthenticator **SHALL** contain exactly one [1..1] signatureCode (CONF:18168).
 - i. This signatureCode **SHALL** contain exactly one [1..1] @code="S" Signed (CONF:18169).

- c. This legalAuthenticator **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:19670).
 - i. This assignedEntity **MAY** contain zero or one [0..1] **representedOrganization** (CONF:19671).

When the legalAuthenticator is a DSV, the representedOrganization/id is the DSV TIN.

- 1. The representedOrganization, if present, **SHALL** contain at least one [1..*] **id** (CONF:19671).
- 2. The representedOrganization, if present, **SHOULD** contain zero or one [0..1] **name** (CONF:19673).

Figure 6: LegalAuthenticator Example

```
<legalAuthenticator>
  <time value="20150312153222-0500"/>
  <signatureCode code="S"/>
  <assignedEntity>
    <id root="bc01a5d1-3a34-4286-82cc-43eb04c972a7"/>
    <representedOrganization>
      <id root="2.16.840.1.113883.19.5" extension="223344"/>
      <name>Good Health Clinic</name>
    </representedOrganization>
  </assignedEntity>
</legalAuthenticator>
```

8.1.6 participant is Device

The generic participant with a participationType of 'DEV' (device) and an associatedEntity classCode of 'RGPR' (regulated product) is used to represent the CMS EHR Certification ID.

- 17. **MAY** contain zero or more [0..*] **participant** (CONF:18300) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="DEV"** device (CodeSystem: HL7ParticipationType 2.16.840.1.113883.5.90 **STATIC**) (CONF:18301).
 - b. **SHALL** contain exactly one [1..1] **associatedEntity** (CONF:18302).
 - i. This associatedEntity **SHALL** contain exactly one [1..1] **@classCode="RGPR"** Regulated Product (CodeSystem: RoleClass 2.16.840.1.113883.5.110 **STATIC**) (CONF:18303).
 - ii. This associatedEntity **MAY** contain zero or one [0..1] **id** (CONF:18304) such that it

The CMS EHR Certification ID was formerly known as the ONC Certification Number.

- 1. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.3.2074.1"** CMS EHR Certification ID (CONF:18305).

Note: This value specifies that the id is the CMS EHR Certification ID.
- iii. This associatedEntity **SHALL** contain exactly one [1..1] **code** (CONF:18308).
 - 1. This code **SHALL** contain exactly one [1..1] **@code="129465004"** medical record, device (CodeSystem: SNOMED CT 2.16.840.1.113883.6.96 **STATIC**) (CONF:18309).

Figure 7: Device Participant Example

```

<participant typeCode="DEV">
  <associatedEntity classCode="RGPR">
    <id root="2.16.840.1.113883.3.2074.1" extension="1a2b3c"/>
    <code code="129465004" displayName="medical record, device"
      codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED-
CT"/>
  </associatedEntity>
</participant>

```

8.1.7 participant is Location

For CPC reporting, the generic participant with a participationType of 'LOC' (location) and an associatedEntity classCode of 'SDLOC' (service delivery location) representing the CPC Practice Site is required.

If ClinicalDocument/informationRecipient/intendedRecipient/id/@extension="CPC", then this location participant must be present.

18. **MAY** contain zero or one [0..1] **participant** (CONF:711150) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ParticipationType 2.16.840.1.113883.5.90) (CONF:711151).
 - b. **SHALL** contain exactly one [1..1] **associatedEntity** (CONF:711152).
 - i. This associatedEntity **SHALL** contain exactly one [1..1] **@classCode="SDLOC"** Service Delivery Location (CodeSystem: RoleClass 2.16.840.1.113883.5.110) (CONF:711153).
 - ii. This associatedEntity **SHALL** contain exactly one [1..1] **id** (CONF:711154).
 1. This id **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.3.249.5.1"** CPC Practice Site (CONF:711155).
Note: This OID contained in the **@root** (2.16.840.1.113883.3.249.5.1) designates that the **@extension** must hold a CPC Practice Site ID.
 2. This id **SHALL** contain exactly one [1..1] **@extension** (CONF:711156).
Note: This is the CPC Practice Site ID assigned to the CPC Practice Site.
 - iii. This associatedEntity **SHALL** contain exactly one [1..1] **code** (CONF:711218).
 1. This code **SHALL** contain exactly one [1..1] **@code="394730007"** Healthcare Related Organization (CodeSystem: SNOMED CT 2.16.840.1.113883.6.96) (CONF:711219).
 - iv. This associatedEntity **SHALL** contain exactly one [1..1] **addr** (CONF:711157).

Figure 8: Location Participant Example

```

<participant typeCode="LOC">
  <associatedEntity classCode="SDLOC">
    <id root="2.16.840.1.113883.3.249.5.1" extension="OK666333"
      assigningAuthorityName="CMS-CMMI"/>
    <code code="394730007"
      displayName="healthcare related organization"
      codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED-
CT"/>
    <addr>
      <streetAddressLine>123 Healthcare St</streetAddressLine>
      <city>Norman</city>
      <state>OK</state>
      <postalCode>73019</postalCode>
    </addr>
  </associatedEntity>
</participant>

```

8.1.8 documentationOf

The aggregated data contained in a QRDA Category III report was provided by one or more providers. The documentationOf service event can contain identifiers for all of the (one or more) providers involved, using the serviceEvent/performer elements. A serviceEvent/performer element must be present for each performer reporting data to a quality organization.

19. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:711214).
 - a. This documentationOf **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:18171).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] **@classCode="PCPR" Care Provision (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC)** (CONF:18172).
 - ii. This serviceEvent **SHALL** contain at least one [1..*] **performer** (CONF:711220).

Note: All providers seeking credit for CMS program reporting are listed as performers. For CPC reporting, only CPC Practice Site providers are listed as performers.

 1. Such performers **SHALL** contain exactly one [1..1] **@typeCode="PRF" Performer (CodeSystem: HL7ParticipationType 2.16.840.1.113883.5.90 STATIC)** (CONF:18174).
 2. Such performers **MAY** contain zero or one [0..1] **time** (CONF:18175).
 3. Such performers **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:18176).

The assignedEntity id/@root = '2.16.840.1.113883.4.6' coupled with the id/@extension represents the individual provider's National Provider Identification number (NPI). NPI is required except for the Group Practice Reporting Option (GPRO). For GPRO, id/@root='2.16.840.1.113883.4.6' is coupled with @nullFlavor="NA", and @extension shall be omitted.

- a. This assignedEntity **SHALL** contain exactly one [1..1] **id** (CONF:711167) such that it
 - i. **MAY** contain zero or one [0..1] **@nullFlavor="NA"** (CONF:711249).

Note: @nullFlavor is only present for PQRS GPRO reporting.

- ii. **SHALL** contain exactly one [1..1]
`@root="2.16.840.1.113883.4.6"` National
Provider ID (CONF:711169).
Note: This value specifies that the id is the
provider's National Provider Identifier (NPI).
- iii. **SHALL** contain exactly one [1..1] `@extension`
(CONF:711170).
Note: This is the provider's NPI, it is only
present when this is not PQRS GPRO
reporting.
- b. This assignedEntity **MAY** contain zero or more [0..*]
`telecom` (CONF:18310).
- c. This assignedEntity **SHALL** contain exactly one [1..1]
`representedOrganization` (CONF:18180).
 - i. This representedOrganization **SHALL** contain
exactly one [1..1] `id` (CONF:711168) such that
it
 - 1. **SHALL** contain exactly one [1..1]
`@root="2.16.840.1.113883.4.2"`
Tax ID Number (CONF:711171).
Note: This value specifies that this id is
the organization's Tax Identification
Number (TIN).
 - 2. **SHALL** contain exactly one [1..1]
`@extension` (CONF:711172).
Note: This is the organization's TIN.
 - ii. This representedOrganization **SHOULD** contain
zero or more [0..*] `name` (CONF:19659).

Figure 9: DocumentationOf Example

```

<documentationOf>
  <serviceEvent classCode="PCPR">
    <!-- Care provision -->
    <effectiveTime>
      <low value="20140101"/>
      <high value="20141231"/>
    </effectiveTime>
    <!-- Multiple performers can be included, each with an NPI and TIN
-->
    <performer typeCode="PRF">
      <time>
        <low value="20140101"/>
        <high value="20141231"/>
      </time>
      <assignedEntity>
        <!-- Provider NPI -->
        <id root="2.16.840.1.113883.4.6" extension="111111111"/>
        <representedOrganization>
          <!-- Organization TIN -->
          <id root="2.16.840.1.113883.4.2" extension="1234567"/>
          <name>Good Health Clinic</name>
        </representedOrganization>
      </assignedEntity>
    </performer>
  </serviceEvent>
</documentationOf>

```

8.1.9 authorization

If the data is submitted through an intermediary such as a data submission vendor, this authorization represents that the eligible professional has given permission to release the report.

PQRS, MU and CPC all allow aggregation and submission by a DSV. If a DSV is used, then information about the DSV (e.g., TIN) is captured as the Legal Authenticator.

20. **MAY** contain zero or one [0..1] **authorization** (CONF:18344).

a. The authorization, if present, **SHALL** contain exactly one [1..1] **consent** (CONF:18360).

i. This consent **SHALL** contain exactly one [1..1] **id** (CONF:18361).

Note: This is the identifier of the consent given by the EP.

ii. This consent **SHALL** contain exactly one [1..1] **code** (CodeSystem: SNOMED CT 2.16.840.1.113883.6.96 **STATIC**) (CONF:18363).

1. This code **SHALL** contain exactly one [1..1]

@code="425691002" Consent given for electronic record sharing (CodeSystem: SNOMED CT 2.16.840.1.113883.6.96) (CONF:19550).

iii. This consent **SHALL** contain exactly one [1..1] **statusCode** (CONF:18364).

1. This statusCode **SHALL** contain exactly one [1..1]

@code="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:19551).

Figure 10: Authorization Example

```

<authorization>
  <consent>
    <id root="84613250-e75e-11e1-aff1-0800200c9a66"/>
    <code code="425691002"
      displayName="consent given for electronic record sharing"
      codeSystem="2.16.840.1.113883.6.96"
      codeSystemName="SNOMED-CT"/>
    <statusCode code="completed"/>
  </consent>
</authorization>

```

8.1.10 component

A QRDA Category III document contains a Reporting Parameters Section and a Measure section.

21. **SHALL** contain exactly one [1..1] **component** (CONF:17217).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:17235).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:17281) such that it
 1. **SHALL** contain exactly one [1..1] [QRDA Category III Reporting Parameters Section \(CMS EP\)](#) (templateId:2.16.840.1.113883.10.20.27.2.6) (CONF:711141).
 - ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:17283) such that it
 1. **SHALL** contain exactly one [1..1] [QRDA Category III Measure Section \(CMS EP\)](#) (templateId:2.16.840.1.113883.10.20.27.2.3) (CONF:711142).

Figure 11: StructuredBody Example

```

<component>
  <structuredBody>
    <component>
      <!-- QRDA Category III Reporting Parameters Section (CMS EP) --
    >
      <section>
        ...
        <title>Reporting Parameters</title>
        ...
      </section>
    </component>
    <component>
      <!-- QRDA Category III Measure Section (CMS EP) -->
      <section>
        ...
        <title>Measure Section</title>
        ...
      </section>
    </component>
  </structuredBody>
</component>

```

8.2 Section-Level Templates

8.2.1 QRDA Category III Measure Section (CMS EP)

[section: templateId 2.16.840.1.113883.10.20.27.2.3 (open)]

Table 3: QRDA Category III Measure Section (CMS EP) Contexts

Contained By	Contains
QRDA Category III Report - CMS EP (required)	Measure Reference and Results (CMS EP)

This section references the measure(s) being reported. For each reported measure, this section includes entries for reporting various aggregate counts (e.g. number of patients in the measure's denominator). For continuous variable measures, this section includes entries for reporting the continuous variables. This section can also include entries not only for aggregate counts, but stratified aggregate counts (e.g. not just total number of patients in the denominator, but also the number of males in the denominator). Note that the QRDA-III standard allows for more than one measure within this section, but does not allow multiple occurrences of the same measure in a single QRDA-III instance.

For CPC reporting, this section must contain a Measure Reference and Results template for each measure that is being reported on by the CPC practice site.

1. Conforms to QRDA Category III Measure Section template (2.16.840.1.113883.10.20.27.2.1).
 2. **SHALL** contain exactly one [1..1] `templateId` (CONF:711276) such that it
 - a. **SHALL** contain exactly one [1..1]

@root="2.16.840.1.113883.10.20.27.2.3" (CONF:711277).
 3. **SHALL** contain exactly one [1..1] `templateId` (CONF:12801) such that it
 - a. **SHALL** contain exactly one [1..1]

@root="2.16.840.1.113883.10.20.24.2.2" (CONF:12802).
- Note: Measure Section templateId

4. **SHALL** contain exactly one [1..1] **templateId** (CONF:17284) such that it
 - a. **SHALL** contain exactly one [1..1]

@root="2.16.840.1.113883.10.20.27.2.1" (CONF:17285).

Note: QRDA Category III Measure Section templateId
5. **SHALL** contain exactly one [1..1] **code** (CONF:12798).
 - a. This code **SHALL** contain exactly one [1..1] @code="55186-1" Measure

Section (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:19230).
6. **SHALL** contain exactly one [1..1] **title**="Measure Section" (CONF:12799).
7. **SHALL** contain exactly one [1..1] **text** (CONF:12800).
8. **SHALL** contain at least one [1..*] **entry** (CONF:711283) such that it
 - a. **SHALL** contain exactly one [1..1] Measure Reference and Results (CMS EP) (templateId:2.16.840.1.113883.10.20.27.3.17) (CONF:711284).

Figure 12: QRDA-III Measure Section (CMS EP) Example

```
<section>
  <!-- Measure Section template ID -->
  <templateId root="2.16.840.1.113883.10.20.24.2.2" />
  <!-- QRDA Category III Measure Section template ID -->
  <templateId root="2.16.840.1.113883.10.20.27.2.1" />
  <!-- QRDA Category III Measure Section (CMS EP) template ID -->
  <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>
    <table border="1" width="100%">
      <thead>
        <tr>
          <th>eMeasure Title</th>
          <th>Version neutral identifier</th>
          <th>Version specific identifier</th>
        </tr>
      </thead>
      <tbody>
        <tr>
          <td>Controlling High Blood Pressure</td>
          <td>abdc37cc-bac6-4156-9b91-d1be2c8b7268</td>
          <td>40280381-3d61-56a7-013e-66bc02da4dee</td>
        </tr>
      </tbody>
      <list>
        ...
      </list>
    </table>
  </text>
  <entry>
    <!-- Measure Reference and Results (CMS EP) -->
    <organizer classCode="CLUSTER" moodCode="EVN">
      ...
    </organizer>
  </entry>
</section>
```

8.2.2 QRDA Category III Reporting Parameters Section (CMS EP)

[section: templateId 2.16.840.1.113883.10.20.27.2.6 (open)]

Table 4: QRDA Category III Reporting Parameters Section (CMS EP) Contexts

Contained By	Contains
QRDA Category III Report - CMS EP (required)	Reporting Parameters Act (CMS EP)

The QRDA Category III Reporting Parameters Section provides information about the reporting time interval, and may contain other information that provides context for the data being reported. This template adds an optional Service Encounter template.

The QRDA Category III report contains data covering a single time period represented by the reporting parameters act.

1. Conforms to QRDA Category III Reporting Parameters Section template (2.16.840.1.113883.10.20.27.2.2).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:711278) such that it
 - a. **SHALL** contain exactly one [1..1]

@root="2.16.840.1.113883.10.20.27.2.6" (CONF:711279).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:14611) such that it
 - a. **SHALL** contain exactly one [1..1]

@root="2.16.840.1.113883.10.20.17.2.1" (CONF:14612).

Note: Reporting Parameters Section templateId
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:18323) such that it
 - a. **SHALL** contain exactly one [1..1]

@root="2.16.840.1.113883.10.20.27.2.2" (CONF:18324).

Note: QRDA Category III Reporting Parameters Section templateId
5. **SHALL** contain exactly one [1..1] **code** (CONF:18191).
 - a. This code **SHALL** contain exactly one [1..1] @code="55187-9" Reporting Parameters (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:19229).
6. **SHALL** contain exactly one [1..1] **title**="Reporting Parameters" (CONF:4142).
7. **SHALL** contain exactly one [1..1] **text** (CONF:4143).
8. **SHALL** contain exactly one [1..1] **entry** (CONF:711285) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is derived from (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:711286).
 - b. **SHALL** contain exactly one [1..1] [Reporting Parameters Act \(CMS EP\)](#) (templateId:2.16.840.1.113883.10.20.27.3.23) (CONF:711175).

Figure 13: QRDA-III Reporting Parameters Section (CMS EP) Example

```

<section>
  <!--Reporting Parameters Section template ID -->
  <templateId root="2.16.840.1.113883.10.20.17.2.1" />
  <!--QRDA Category III Reporting Parameters Section template ID -->
  <templateId root="2.16.840.1.113883.10.20.27.2.2" />
  <!--QRDA Category III Reporting Parameters (CMS EP) template ID --
>
  <templateId root="2.16.840.1.113883.10.20.27.2.6" />
  <code code="55187-9" codeSystem="2.16.840.1.113883.6.1" />
  <title>Reporting Parameters</title>
  <text>
    <list>
      <item>Reporting period: 01 Jan 2014 - 31 Dec 2014</item>
    </list>
  </text>
  <entry typeCode="DRIV">
    <!-- Reporting Parameters Act (CMS EP) -->
    <act classCode="ACT" moodCode="EVN">
      ...
    </act>
  </entry>
</section>

```

8.3 Entry-Level Templates

8.3.1 Aggregate Count (CMS EP)

[observation: templateId 2.16.840.1.113883.10.20.27.3.24 (open)]

Table 5: Aggregate Count (CMS EP) Contexts

Contained By	Contains
Measure Data (CMS EP) (required) Reporting Stratum (CMS EP) (required) Race Supplemental Data Element (CMS EP) (required) Ethnicity Supplemental Data Element (CMS EP) (required) Sex Supplemental Data Element (CMS EP) (required) Payer Supplemental Data Element (CMS EP) (required)	

The Aggregate Count captures the number of items aggregated. This template is contained in a parent template that describes the item. For CMS EP program reporting, the count must be sent even if the number is zero.

Table 6: Aggregate Count (CMS EP) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Fixed Value
observation[templateId/@root = '2.16.840.1.113883.10.20.27.3.24']					
@classCode	1..1	SHALL		17563	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		17564	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		711262	
@root	1..1	SHALL		711263	2.16.840.1.113883.10.20.27.3.24
templateId	1..1	SHALL		17565	
@root	1..1	SHALL		18095	2.16.840.1.113883.10.20.27.3.3
code	1..1	SHALL		17566	
@code	1..1	SHALL		19508	2.16.840.1.113883.5.4 (ActCode) = MSRAGG
statusCode	1..1	SHALL		711244	
@code	1..1	SHALL		711245	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	INT	17567	
@value	1..1	SHALL		17568	
methodCode	1..1	SHALL		19509	
@code	1..1	SHALL		19510	2.16.840.1.113883.5.84 (ObservationMethod) = COUNT

1. Conforms to Aggregate Count template (2.16.840.1.113883.10.20.27.3.3).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:17563).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:17564).
4. **SHALL** contain exactly one [1..1] templateId (CONF:711262) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.27.3.24" (CONF:711263).
5. **SHALL** contain exactly one [1..1] templateId (CONF:17565) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.27.3.3" (CONF:18095).
Note: Aggregate Count templateId
6. **SHALL** contain exactly one [1..1] code (CONF:17566).

- a. This code **SHALL** contain exactly one [1..1] `@code="MSRAGG"` rate aggregation (CodeSystem: ActCode 2.16.840.1.113883.5.4) (CONF:19508).
- 7. **SHALL** contain exactly one [1..1] `statusCode` (CONF:711244).
 - a. This `statusCode` **SHALL** contain exactly one [1..1] `@code="completed"` Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:711245).
- 8. **SHALL** contain exactly one [1..1] `value` with `@xsi:type="INT"` (CONF:17567).
 - a. This value **SHALL** contain exactly one [1..1] `@value` (CONF:17568).
- 9. **SHALL** contain exactly one [1..1] `methodCode` (CONF:19509).
 - a. This `methodCode` **SHALL** contain exactly one [1..1] `@code="COUNT"` Count (CodeSystem: ObservationMethod 2.16.840.1.113883.5.84) (CONF:19510).

Figure 14: Aggregate Count (CMS EP) Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- Aggregate Count template ID (QRDA III) -->
  <templateId root="2.16.840.1.113883.10.20.27.3.3"/>
  <!-- Aggregate Count (CMS EP) template ID -->
  <templateId root="2.16.840.1.113883.10.20.27.3.24"/>
  <code code="MSRAGG" displayName="rate aggregation"
    codeSystem="2.16.840.1.113883.5.4" codeSystemName="ActCode"/>
  <statusCode code="completed"/>
  <value xsi:type="INT" value="1000"/>
  <methodCode code="COUNT" displayName="Count"
    codeSystem="2.16.840.1.113883.5.84"
    codeSystemName="ObservationMethod"/>
</observation>

```

8.3.2 Continuous Variable Measure Value (CMS EP)

[observation: templateId 2.16.840.1.113883.10.20.27.3.26 (open)]

Table 7: Continuous Variable Measure Value (CMS EP) Contexts

Contained By	Contains
Measure Data (CMS EP) (optional) Reporting Stratum (CMS EP) (optional)	

This observation represents the continuous variables found in quality measures that measure performance criteria by time spans, magnitude changes, etc. A continuous variable for a given patient might be the time spent waiting for a procedure. A continuous variable for a population might be the mean wait time. The type of aggregation (e.g. mean, median) is represented in the observation/methodCode.

Table 8: Continuous Variable Measure Value (CMS EP) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Fixed Value
observation[templateId/@root = '2.16.840.1.113883.10.20.27.3.26']					
@classCode	1..1	SHALL		17569	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		17570	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		711264	
@root	1..1	SHALL		711265	2.16.840.1.113883.10.20.27.3.26
templateId	1..1	SHALL		18096	
@root	1..1	SHALL		18097	2.16.840.1.113883.10.20.27.3.2
code	1..1	SHALL		17571	
statusCode	1..1	SHALL		711241	
@code	1..1	SHALL		711242	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL		17572	
methodCode	1..1	SHALL		18242	2.16.840.1.113883.1.11.20450 (ObservationMethodAggregate)
reference	1..1	SHALL		18243	
externalObservation	1..1	SHALL		18244	
id	1..1	SHALL		711205	

1. Conforms to Continuous Variable Measure Value template (2.16.840.1.113883.10.20.27.3.2).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:17569).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:17570).
4. **SHALL** contain exactly one [1..1] templateId (CONF:711264) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.27.3.26" (CONF:711265).
5. **SHALL** contain exactly one [1..1] templateId (CONF:18096) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.27.3.2" (CONF:18097).
Note: Continuous Variable Measure Value templateId
6. **SHALL** contain exactly one [1..1] code (CONF:17571).

- a. This code element **SHALL** equal the code element in that eMeasure's measure observation definition (CONF:711243).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:711241).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:711242).
8. **SHALL** contain exactly one [1..1] **value** (CONF:17572).
9. **SHALL** contain exactly one [1..1] **methodCode**, which **SHALL** be selected from ValueSet [ObservationMethodAggregate](#) 2.16.840.1.113883.1.11.20450 **STATIC** (CONF:18242).
10. **SHALL** contain exactly one [1..1] **reference** (CONF:18243).
 - a. This reference **SHALL** contain exactly one [1..1] **externalObservation** (CONF:18244).
 - i. This externalObservation **SHALL** contain exactly one [1..1] **id** (CONF:711205).
Note: This is the id in the eMeasure's measure observation definition.

Table 9: ObservationMethodAggregate

Value Set: ObservationMethodAggregate 2.16.840.1.113883.1.11.20450			
Code	Code System	Code System OID	Print Name
AVERAGE	ObservationMethod	2.16.840.1.113883.5.84	Average
COUNT	ObservationMethod	2.16.840.1.113883.5.84	Count
MAX	ObservationMethod	2.16.840.1.113883.5.84	Maxima
MEDIAN	ObservationMethod	2.16.840.1.113883.5.84	Median
MIN	ObservationMethod	2.16.840.1.113883.5.84	Minima
MODE	ObservationMethod	2.16.840.1.113883.5.84	Mode
STDEV.P	ObservationMethod	2.16.840.1.113883.5.84	Population Standard Deviation
STDEV.S	ObservationMethod	2.16.840.1.113883.5.84	Sample Standard Deviation
SUM	ObservationMethod	2.16.840.1.113883.5.84	Sum
VARIANCE.P	ObservationMethod	2.16.840.1.113883.5.84	Population Variance
...			

Figure 15: Continuous Variable Measure Value (CMS EP) Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- Continuous Variable Measure Value template ID (QRDA III) -->
  <templateId root="2.16.840.1.113883.10.20.27.3.2"/>
  <!-- Continuous Variable Measure Value (CMS EP) template ID -->
  <templateId root="2.16.840.1.113883.10.20.27.3.26"/>
  <code nullFlavor="OTH">
    <originalText>Time Difference</originalText>
  </code>
  <statusCode code="completed"/>
  <value xsi:type="PQ" value="55" unit="min"/>
  <methodCode code="MEDIAN" displayName="Median"
    codeSystem="2.16.840.1.113883.5.84"
    codeSystemName="ObservationMethod"/>
  <!-- reference to the relevant measure observation in the
eMeasure -->
  <reference typeCode="REFR">
    <externalObservation classCode="OBS" moodCode="EVN">
      <id root="bcefe756-fb9f-4e46-aadc-d19de340b6b5"/>
    </externalObservation>
  </reference>
</observation>

```

8.3.3 Ethnicity Supplemental Data Element (CMS EP)

```
[observation: templateId 2.16.840.1.113883.10.20.27.3.22 (open)]
```

Table 10: Ethnicity Supplemental Data Element (CMS EP) Contexts

Contained By	Contains
Measure Data (CMS EP) (required)	Aggregate Count (CMS EP)

This observation represents whether the patient is Hispanic or not Hispanic and provides the number of patients in the population that report that ethnicity. For CMS EP programs, all codes present in the value set must be reported, even if the count is zero. If the eMeasure is episode-based, the count will reflect the patient count rather than the episode count.

Table 11: Ethnicity Supplemental Data Element (CMS EP) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Fixed Value
observation[templateId/@root = '2.16.840.1.113883.10.20.27.3.22']					
@classCode	1..1	SHALL		18216	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		18217	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		711253	
@root	1..1	SHALL		711254	2.16.840.1.113883.10.20.27.3.22
templateId	1..1	SHALL		18218	
@root	1..1	SHALL		18219	2.16.840.1.113883.10.20.27.3.7
code	1..1	SHALL		18220	
@code	1..1	SHALL		18221	2.16.840.1.113883.6.96 (SNOMED CT) = 364699009
statusCode	1..1	SHALL		18118	
@code	1..1	SHALL		18119	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	18222	2.16.840.1.114222.4.11.837 (EthnicityGroup)
entryRelationship	1..1	SHALL		18120	
@typeCode	1..1	SHALL		18121	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		18122	true
observation	1..1	SHALL		711201	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:18216).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:18217).
3. **SHALL** contain exactly one [1..1] templateId (CONF:711253) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.27.3.22" (CONF:711254).
4. **SHALL** contain exactly one [1..1] templateId (CONF:18218) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.27.3.7" (CONF:18219).
Note: Ethnicity Supplemental Data Element templateId
5. **SHALL** contain exactly one [1..1] code (CONF:18220).

- a. This code **SHALL** contain exactly one [1..1] `@code="364699009"` Ethnic Group (CodeSystem: SNOMED CT 2.16.840.1.113883.6.96) (CONF:18221).
6. **SHALL** contain exactly one [1..1] `statusCode` (CONF:18118).
 - a. This `statusCode` **SHALL** contain exactly one [1..1] `@code="completed"` Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:18119).
7. **SHALL** contain exactly one [1..1] `value` with `@xsi:type="CD"`, where the code **SHALL** be selected from ValueSet [EthnicityGroup](#) 2.16.840.1.114222.4.11.837 **DYNAMIC** (CONF:18222).
8. **SHALL** contain exactly one [1..1] `entryRelationship` (CONF:18120) such that it
 - a. **SHALL** contain exactly one [1..1] `@typeCode="SUBJ"` Has Subject (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:18121).
 - b. **SHALL** contain exactly one [1..1] `@inversionInd="true"` (CONF:18122).
 - c. **SHALL** contain exactly one [1..1] [Aggregate Count \(CMS EP\)](#) (templateId:2.16.840.1.113883.10.20.27.3.24) (CONF:711201).

Table 12: EthnicityGroup

Value Set: EthnicityGroup 2.16.840.1.114222.4.11.837			
Code System: Race & Ethnicity - CDC 2.16.840.1.113883.6.238			
Value Set Source: http://phinivads.cdc.gov/vads/ViewValueSet.action?id=35D34BBC-617F-DD11-B38D-00188B398520			
Code	Code System	Code System OID	Print Name
2135-2	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Hispanic or Latino
2186-5	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Not Hispanic or Latino

Figure 16: Ethnicity Supplemental Data Element (CMS EP) Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- Ethnicity Supplemental Data Element template ID -->
  <templateId root="2.16.840.1.113883.10.20.27.3.7"/>
  <!-- Ethnicity Supplemental Data Element (CMS EP) template ID -->
  <templateId root="2.16.840.1.113883.10.20.27.3.22"/>
  <code code="364699009" displayName="Ethnic Group"
    codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED-
CT"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    code="2186-5" displayName="Not Hispanic or Latino"
    codeSystem="2.16.840.1.113883.6.238" codeSystemName="Race
&
    Ethnicity - CDC"/>
  <!-- Aggregate Count (CMS EP) -->
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <observation classCode="OBS" moodCode="EVN">
      ...
    </observation>
  </entryRelationship>
</observation>

```

8.3.4 Measure Data (CMS EP)

```
[observation: templateId 2.16.840.1.113883.10.20.27.3.16 (open)]
```

Table 13: Measure Data (CMS EP) Contexts

Contained By	Contains
Measure Reference and Results (CMS EP) (required)	Aggregate Count (CMS EP) Continuous Variable Measure Value (CMS EP) Ethnicity Supplemental Data Element (CMS EP) Payer Supplemental Data Element (CMS EP) Race Supplemental Data Element (CMS EP) Reporting Stratum (CMS EP) Sex Supplemental Data Element (CMS EP)

This observation asserts a population into which a subject falls and provides the number of patients in the population. It may also contain reporting stratum, supplemental data element counts, and continuous variables that are relevant to the population. The measure data entry must reference a unique measure population ID.

Populations that are used in eMeasures can be complicated. The simple case has one each of initial patient population (IPP), numerator, and denominator, along with denominator exclusions and denominator exceptions. It is also possible to have eMeasures with multiple population groups (a population group is a set of IPP, numerator, denominator, etc.), and eMeasures with multiple denominators and numerators (for example, an eMeasure with 3 denominators and 2 numerators will require a QRDA Category III report with 6 sets of data). QRDA Category III reports were designed to allow the representation of data sets that map to all of these types of multiple populations.

Table 14: Measure Data (CMS EP) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Fixed Value
observation[templateId/@root = '2.16.840.1.113883.10.20.27.3.16']					
@classCode	1..1	SHALL		17615	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		17616	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		711266	
@root	1..1	SHALL		711267	2.16.840.1.113883.10.20.27.3.16
templateId	1..1	SHALL		17912	
@root	1..1	SHALL		17913	2.16.840.1.113883.10.20.27.3.5
code	1..1	SHALL		17617	

XPath	Card.	Verb	Data Type	CONF#	Fixed Value
@code	1..1	SHALL		18198	2.16.840.1.113883.5.4 (ActCode) = ASSERTION
statusCode	1..1	SHALL		18199	2.16.840.1.113883.5.14 (ActStatus)
@code	1..1	SHALL		19555	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	17618	2.16.840.1.113883.1.11.20369 (ObservationPopulationInclusion)
entryRelationship	1..1	SHALL		17619	
@typeCode	1..1	SHALL		17910	SUBJ
@inversionInd	1..1	SHALL		17911	true
observation	1..1	SHALL		711198	
entryRelationship	0..*	MAY		17918	
@typeCode	1..1	SHALL		17919	COMP
observation	1..1	SHALL		711180	
entryRelationship	1..*	SHALL		711190	
@typeCode	1..1	SHALL		18137	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		711181	
entryRelationship	1..*	SHALL		711191	
@typeCode	1..1	SHALL		18144	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		711182	
entryRelationship	1..*	SHALL		711192	
@typeCode	1..1	SHALL		18145	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		711183	
entryRelationship	1..*	SHALL		711193	
@typeCode	1..1	SHALL		18146	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		711184	
entryRelationship	0..*	MAY		18143	

XPath	Card.	Verb	Data Type	CONF#	Fixed Value
@typeCode	1..1	SHALL		18148	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		711212	
reference	1..1	SHALL		18239	
external Observation	1..1	SHALL		18240	
id	1..1	SHALL		711233	

1. Conforms to Measure Data template (2.16.840.1.113883.10.20.27.3.5).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:17615).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:17616).
4. **SHALL** contain exactly one [1..1] templateId (CONF:711266) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.27.3.16" (CONF:711267).
5. **SHALL** contain exactly one [1..1] templateId (CONF:17912) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.27.3.5" (CONF:17913).
Note: Measure Data templateId
6. **SHALL** contain exactly one [1..1] code (CONF:17617).
 - a. This code **SHALL** contain exactly one [1..1] @code="ASSERTION" Assertion (CodeSystem: ActCode 2.16.840.1.113883.5.4 **STATIC**) (CONF:18198).
7. **SHALL** contain exactly one [1..1] statusCode (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:18199).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:19555).
8. **SHALL** contain exactly one [1..1] value with @xsi:type="CD", where the code **SHOULD** be selected from ValueSet [ObservationPopulationInclusion](#) 2.16.840.1.113883.1.11.20369 **DYNAMIC** (CONF:17618).
9. **SHALL** contain exactly one [1..1] entryRelationship (CONF:17619) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="SUBJ" (CONF:17910).
 - b. **SHALL** contain exactly one [1..1] @inversionInd="true" (CONF:17911).
 - c. **SHALL** contain exactly one [1..1] [Aggregate Count \(CMS EP\)](#) (templateId:2.16.840.1.113883.10.20.27.3.24) (CONF:711198).
10. **MAY** contain zero or more [0..*] entryRelationship (CONF:17918) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" (CONF:17919).
 - b. **SHALL** contain exactly one [1..1] [Reporting Stratum \(CMS EP\)](#) (templateId:2.16.840.1.113883.10.20.27.3.20) (CONF:711180).
11. **SHALL** contain at least one [1..*] entryRelationship (CONF:711190) such that it

- a. **SHALL** contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:18137).
 - b. **SHALL** contain exactly one [1..1] Sex Supplemental Data Element (CMS EP) (templateId:2.16.840.1.113883.10.20.27.3.21) (CONF:711181).
- 12. **SHALL** contain at least one [1..*] entryRelationship (CONF:711191) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:18144).
 - b. **SHALL** contain exactly one [1..1] Ethnicity Supplemental Data Element (CMS EP) (templateId:2.16.840.1.113883.10.20.27.3.22) (CONF:711182).
- 13. **SHALL** contain at least one [1..*] entryRelationship (CONF:711192) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:18145).
 - b. **SHALL** contain exactly one [1..1] Race Supplemental Data Element (CMS EP) (templateId:2.16.840.1.113883.10.20.27.3.19) (CONF:711183).
- 14. **SHALL** contain at least one [1..*] entryRelationship (CONF:711193) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:18146).
 - b. **SHALL** contain exactly one [1..1] Payer Supplemental Data Element (CMS EP) (templateId:2.16.840.1.113883.10.20.27.3.18) (CONF:711184).

If observation/value/@code="MSRPOPL" then the following entryRelationship SHALL be present.

- 15. **MAY** contain zero or more [0..*] entryRelationship (CONF:18143) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:18148).
 - b. **SHALL** contain exactly one [1..1] Continuous Variable Measure Value (CMS EP) (templateId:2.16.840.1.113883.10.20.27.3.26) (CONF:711212).
- 16. **SHALL** contain exactly one [1..1] reference (CONF:18239) such that it
 - a. **SHALL** contain exactly one [1..1] externalObservation (CONF:18240).
 - i. This externalObservation **SHALL** contain exactly one [1..1] id (CONF:711233).
Note: This is the id defined in the corresponding eMeasure population criteria section.

Table 15: ObservationPopulationInclusion

Value Set: ObservationPopulationInclusion 2.16.840.1.113883.1.11.20369			
Code	Code System	Code System OID	Print Name
DENEX	ObservationValue	2.16.840.1.113883.5.1063	Denominator Exclusions
DENOM	ObservationValue	2.16.840.1.113883.5.1063	Denominator
DENEXCEP	ObservationValue	2.16.840.1.113883.5.1063	Denominator Exceptions
IPP	ObservationValue	2.16.840.1.113883.5.1063	Initial Patient Population
MSRPOPL	ObservationValue	2.16.840.1.113883.5.1063	Measure Population
NUMER	ObservationValue	2.16.840.1.113883.5.1063	Numerator
NUMEX	ObservationValue	2.16.840.1.113883.5.1063	Numerator Exclusions

Figure 17: Measure Data (CMS EP) Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- Measure Data template ID -->
  <templateId root="2.16.840.1.113883.10.20.27.3.5"/>
  <!-- Measure Data (CMS EP) template ID -->
  <templateId root="2.16.840.1.113883.10.20.27.3.16"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
    displayName="Assertion" codeSystemName="ActCode"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" code="IPP"
codeSystem="2.16.840.1.113883.5.1063"
    displayName="initial patient population"
    codeSystemName="ObservationValue"/>
  <!-- Aggregate Count (CMS EP) -->
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <observation classCode="OBS" moodCode="EVN">
      ...
    </observation>
  </entryRelationship>
  <!-- Sex Supplemental Data Element (CMS EP) -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      ...
    </observation>
  </entryRelationship>
  <!-- Ethnicity Supplemental Data Element (CMS EP) -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      ...
    </observation>
  </entryRelationship>
  <!-- Race Supplemental Data Element (CMS EP) -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      ...
    </observation>
  </entryRelationship>
  <!-- Payer Supplemental Data Element (CMS EP) -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      ...
    </observation>
  </entryRelationship>
  <!-- reference to the relevant population in the eMeasure -->
  <reference typeCode="REFR">
    <externalObservation classCode="OBS" moodCode="EVN">
      <id root="670DFFA3-F2EE-4CF7-9083-743F2C1D7D50"/>
      <!-- This is the population ID in the eMeasure.
      In this case, the IPP -->
    </externalObservation>
  </reference>
</observation>

```

8.3.5 Measure Reference and Results (CMS EP)

[organizer: templateId 2.16.840.1.113883.10.20.27.3.17 (open)]

Table 16: Measure Reference and Results (CMS EP) Contexts

Contained By	Contains
QRDA Category III Measure Section (CMS EP) (required)	Measure Data (CMS EP) Performance Rate for Proportion Measure (CMS EP)

This template defines the way that a measure should be referenced. Measures are referenced through externalAct reference to an externalDocument. The externalDocument/ids and version numbers are used to reference the measure. Component entries can be used to report various rates, aggregate counts (e.g., number of patients in the measure's denominator); stratified aggregate counts (e.g., number of male patients in the measure's denominator); or continuous variables from continuous variable measures.

Table 17: Measure Reference and Results (CMS EP) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Fixed Value
organizer[templateId/@root = '2.16.840.1.113883.10.20.27.3.17']					
@classCode	1..1	SHALL		17887	2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		17888	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		711268	
@root	1..1	SHALL		711269	2.16.840.1.113883.10.20.27.3.17
templateId	1..1	SHALL		19532	
@root	1..1	SHALL		19533	2.16.840.1.113883.10.20.24.3.98
templateId	1..1	SHALL		17908	
@root	1..1	SHALL		17909	2.16.840.1.113883.10.20.27.3.1
statusCode	1..1	SHALL		17889	
@code	1..1	SHALL		19552	2.16.840.1.113883.5.14 (ActStatus) = completed
reference	1..1	SHALL		17890	
@typeCode	1..1	SHALL		17891	REFR
external Document	1..1	SHALL		17892	2.16.840.1.113883.5.6 (HL7ActClass)
@classCode	1..1	SHALL		19548	2.16.840.1.113883.5.6 (HL7ActClass)

XPath	Card.	Verb	Data Type	CONF#	Fixed Value
id	1..1	SHALL		18192	
@root	1..1	SHALL		18193	
code	0..1	SHOULD		17896	2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		19553	2.16.840.1.113883.6.1 (LOINC) = 57024-2
text	0..1	SHOULD		17897	
component	0..*	MAY		17903	
observation	1..1	SHALL		711213	
component	1..*	SHALL		18425	
observation	1..1	SHALL		18428	

1. Conforms to Measure Reference and Results template (2.16.840.1.113883.10.20.27.3.1).
2. **SHALL** contain exactly one [1..1] **@classCode**="CLUSTER" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:17887).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:17888).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:711268) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.27.3.17" (CONF:711269).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:19532) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.24.3.98" (CONF:19533).
Note: Measure Reference templateId
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:17908) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.27.3.1" (CONF:17909).
Note: Measure Reference and Results templateId
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:17889).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:19552).
8. **SHALL** contain exactly one [1..1] **reference** (CONF:17890) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" (CONF:17891).
 - b. **SHALL** contain exactly one [1..1] **externalDocument** (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:17892).
 - i. This **externalDocument** **SHALL** contain exactly one [1..1] **@classCode** (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:19548).

- ii. This externalDocument **SHALL** contain exactly one [1..1] **id** (CONF:18192) such that it
 - 1. **SHALL** contain exactly one [1..1] **@root** (CONF:18193).
Note: This **id/@root** SHALL equal the version specific identifier for eMeasure (i.e., QualityMeasureDocument/id).
- iii. This externalDocument **SHOULD** contain zero or one [0..1] **code** (CodeSystem: LOINC 2.16.840.1.113883.6.1 **STATIC**) (CONF:17896).
 - 1. The code, if present, **SHALL** contain exactly one [1..1] **@code="57024-2"** Health Quality Measure Document (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:19553).

This text is the title and optionally a brief description of the Quality Measure.

- iv. This externalDocument **SHOULD** contain zero or one [0..1] **text** (CONF:17897).
9. **MAY** contain zero or more [0..*] **component** (CONF:17903) such that it
- a. **SHALL** contain exactly one [1..1] Performance Rate for Proportion Measure (CMS EP) (templateId:2.16.840.1.113883.10.20.27.3.25) (CONF:711213).
10. **SHALL** contain at least one [1..*] **component** (CONF:18425) such that it
- a. **SHALL** contain exactly one [1..1] Measure Data (CMS EP) (templateId:2.16.840.1.113883.10.20.27.3.16) (CONF:18428).

Figure 18: Measure Reference and Results (CMS EP) Example

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <!-- Measure Reference template ID -->
  <templateId root="2.16.840.1.113883.10.20.24.3.98" />
  <!-- Measure Reference and Results template ID -->
  <templateId root="2.16.840.1.113883.10.20.27.3.1" />
  <!-- Measure Reference and Results (CMS EP) template ID -->
  <templateId root="2.16.840.1.113883.10.20.27.3.17" />
  <statusCode code="completed" />
  <reference typeCode="REFR">
    <externalDocument classCode="DOC" moodCode="EVN">
      <!-- This is the version-specific identifier for
eMeasure -->
      <id root="40280381-3d61-56a7-013e-66a5a5834990" />
      <code code="57024-2" displayName="Health Quality Measure
Document"
codeSystemName="LOINC"
codeSystem="2.16.840.1.113883.6.1" />
      <!-- This is the title of the eMeasure -->
      <text>Breast Cancer Screening</text>
    </externalDocument>
  </reference>
  <component>
    <!-- Performance Rate for Proportion Measure (CMS EP) -->
    <observation classCode="OBS" moodCode="EVN">
      ...
    </observation>
  </component>
</organizer>
```


8.3.6 Payer Supplemental Data Element (CMS EP)

[observation: templateId 2.16.840.1.113883.10.20.27.3.18 (open)]

Table 18: Payer Supplemental Data Element (CMS EP) Contexts

Contained By	Contains
Measure Data (CMS EP) (required)	Aggregate Count (CMS EP)

This observation represents the policy or program providing the coverage for the patients being reported on and provides the number of patients in the population that are covered by that policy or program. When a patient has multiple payers, only count the primary payer (usually this is the first payer listed). For CMS EP programs, all codes present in the value set must be reported, even if the count is zero. If an eMeasure is episode-based, the count will reflect the patient count rather than the episode count.

Individual payer codes from the Public Health Data Standards Consortium Source of Payment Typology (2.16.840.1.113883.3.221.5) have been grouped for QRDA-III aggregate reports.

Table 19: Payer Supplemental Data Element (CMS EP) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Fixed Value
observation[templateId/@root = '2.16.840.1.113883.10.20.27.3.18']					
@classCode	1..1	SHALL		21155	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		21156	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		711270	
@root	1..1	SHALL		711271	2.16.840.1.113883.10.20.27.3.18
templateId	1..1	SHALL		12561	
@root	1..1	SHALL		12562	2.16.840.1.113883.10.20.24.3.55
id	1..*	SHALL		12564	
code	1..1	SHALL		12565	
@code	1..1	SHALL		14029	2.16.840.1.113883.6.1 (LOINC) = 48768-6
statusCode	1..1	SHALL		18106	
@code	1..1	SHALL		18107	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	711196	
translation	1..1	SHALL		711230	

XPath	Card.	Verb	Data Type	CONF#	Fixed Value
@code	1..1	SHALL		711231	2.16.840.1.113883.3.249.14.102 (CMS Payer Groupings)
@nullFlavor	1..1	SHALL		711229	OTH
entryRelationship	1..1	SHALL		18108	
@typeCode	1..1	SHALL		18109	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		18110	true
observation	1..1	SHALL		711199	

1. Conforms to Payer Supplemental Data Element template (2.16.840.1.113883.10.20.27.3.9).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:21155).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:21156).
4. **SHALL** contain exactly one [1..1] templateId (CONF:711270) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.27.3.18" (CONF:711271).
5. **SHALL** contain exactly one [1..1] templateId (CONF:12561) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.24.3.55" (CONF:12562).
Note: Payer Characteristic Payer templateId
6. **SHALL** contain exactly one [1..1] templateId (CONF:18237) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.27.3.9" (CONF:18238).
Note: Payer Supplemental Data Element templateId
7. **SHALL** contain at least one [1..*] id (CONF:12564).
8. **SHALL** contain exactly one [1..1] code (CONF:12565).
 - a. This code **SHALL** contain exactly one [1..1] @code="48768-6" Payment Source (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:14029).
9. **SHALL** contain exactly one [1..1] statusCode (CONF:18106).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:18107).
10. **SHALL** contain exactly one [1..1] value with @xsi:type="CD" (CONF:711196).
 - a. This value **SHALL** contain exactly one [1..1] translation (CONF:711230).
 - i. This translation **SHALL** contain exactly one [1..1] @code, which **SHALL** be selected from ValueSet [CMS Payer Groupings](#) 2.16.840.1.113883.3.249.14.102 (CONF:711231).
 - b. This value **SHALL** contain exactly one [1..1] @nullFlavor="OTH" (CONF:711229).
11. **SHALL** contain exactly one [1..1] entryRelationship (CONF:18108) such that it

- a. **SHALL** contain exactly one [1..1] @typeCode="SUBJ" Has Subject (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:18109).
- b. **SHALL** contain exactly one [1..1] @inversionInd="true" (CONF:18110).
- c. **SHALL** contain exactly one [1..1] Aggregate Count (CMS EP) (templateId:2.16.840.1.113883.10.20.27.3.24) (CONF:711199).

Table 20: CMS Payer Groupings

Value Set: CMS Payer Groupings 2.16.840.1.113883.3.249.14.102			
Values specifying the primary payer for CMS QRDA-III report submissions that groups codes from the Public Health Data Standards Consortium Source of Payment Typology (2.16.840.1.113883.3.221.5). Codes are grouped as follows:			
Payer Grouping A: Medicare (1)			
Payer Grouping B: Medicaid (2)			
Payer Grouping C: Private Health Insurance (5), Blue Cross/Blue Shield (6)			
Payer Grouping D: Other Government (3), Department of Corrections (4), Managed Care Unspecified (7), No Payment Listed (8), Miscellaneous/Other (9)			
Code	Code System	Code System OID	Print Name
A	CMS Clinical Codes	2.16.840.1.113883.3.249.12	Medicare
B	CMS Clinical Codes	2.16.840.1.113883.3.249.12	Medicaid
C	CMS Clinical Codes	2.16.840.1.113883.3.249.12	Private Health Insurance
D	CMS Clinical Codes	2.16.840.1.113883.3.249.12	Other

Figure 19: Payer Supplemental Data Element (CMS EP) Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- Payer Characteristic Payer template ID -->
  <templateId root="2.16.840.1.113883.10.20.24.3.55"/>
  <!-- Payer Supplemental Data Element template ID -->
  <templateId root="2.16.840.1.113883.10.20.27.3.9"/>
  <!-- Payer Supplemental Data Element (CMS EP) template ID -->
  <templateId root="2.16.840.1.113883.10.20.27.3.18"/>
  <id nullFlavor="NA"/>
  <code code="48768-6" displayName="Payment source"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="SNOMED-
CT"/>
  <statusCode code="completed"/>
  <!-- Parent template requires "SHALL be drawn from Value Set:
PHDSC
  Source of Payment Typology 2.16.840.1.114222.4.11.3591 DYNAMIC-
->
  <!-- CMS Prefers to group the insurances more broadly than the
  Source of Payment Typology allows. Therefore, nullFlavor of OTH
will
  be used and CMS local codes used to identify groupings-->
  <value xsi:type="CD" nullFlavor="OTH">
    <translation code="A" displayName="Medicare"
      codeSystem="2.16.840.1.113883.3.249.12"
      codeSystemName="CMS Clinical Codes"/>
  </value>
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <!-- Aggregate Count (CMS EP) -->
    <observation classCode="OBS" moodCode="EVN">
      ...
    </observation>
  </entryRelationship>
</observation>

```

8.3.7 Performance Rate for Proportion Measure (CMS EP)

[observation: templateId 2.16.840.1.113883.10.20.27.3.25 (open)]

Table 21: Performance Rate for Proportion Measure (CMS EP) Contexts

Contained By	Contains
Measure Reference and Results (CMS EP) (optional)	

This template is only used with proportion measures. The performance rate is a ratio of patients that meet the numerator criteria divided by patients in the denominator (after accounting for exclusions and exceptions). Performance Rate is calculated using this formula: Performance Rate = (NUMER) / (DENOM – DENOM EXCL – DENOM EXCEP).

Table 22: Performance Rate for Proportion Measure (CMS EP) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Fixed Value
observation[templateId/@root = '2.16.840.1.113883.10.20.27.3.25']					
@classCode	1..1	SHALL		18395	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		18396	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		711255	
@root	1..1	SHALL		711256	2.16.840.1.113883.10.20.27.3.25
templateId	1..1	SHALL		19649	
@root	1..1	SHALL		19650	2.16.840.1.113883.10.20.27.3.14
code	1..1	SHALL		18397	
@code	1..1	SHALL		18398	2.16.840.1.113883.6.1 (LOINC) = 72510-1
statusCode	1..1	SHALL		18421	
@code	1..1	SHALL		18422	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	REAL	18399	
reference	1..1	SHALL		711203	
@typeCode	1..1	SHALL		19652	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
external Observation	1..1	SHALL		19653	
@classCode	1..1	SHALL		19654	2.16.840.1.113883.5.6 (HL7ActClass)
id	1..1	SHALL		711204	
@root	1..1	SHALL		19656	
code	1..1	SHALL		19657	
@code	1..1	SHALL		19658	2.16.840.1.113883.5.1063 (ObservationValue) = NUMER

1. Conforms to Performance Rate for Proportion Measure template (2.16.840.1.113883.10.20.27.3.14).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:18395).

3. **SHALL** contain exactly one [1..1] `@moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC)` (CONF:18396).
4. **SHALL** contain exactly one [1..1] `templateId` (CONF:711255) such that it
 - a. **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.10.20.27.3.25"` (CONF:711256).
5. **SHALL** contain exactly one [1..1] `templateId` (CONF:19649) such that it
 - a. **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.10.20.27.3.14"` (CONF:19650).
Note: Performance Rate for Proportion Measure templateId
6. **SHALL** contain exactly one [1..1] `code` (CONF:18397).
 - a. This code **SHALL** contain exactly one [1..1] `@code="72510-1" Performance Rate (CodeSystem: LOINC 2.16.840.1.113883.6.1 STATIC)` (CONF:18398).
7. **SHALL** contain exactly one [1..1] `statusCode` (CONF:18421).
 - a. This `statusCode` **SHALL** contain exactly one [1..1] `@code="completed" completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 STATIC)` (CONF:18422).
8. **SHALL** contain exactly one [1..1] `value` with `@xsi:type="REAL"` (CONF:18399).
This is a reference to the specific Numerator included in the calculation.
9. **SHALL** contain exactly one [1..1] `reference` (CONF:711203).
 - a. This reference **SHALL** contain exactly one [1..1] `@typeCode="REFR" refers to (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002)` (CONF:19652).
 - b. This reference **SHALL** contain exactly one [1..1] `externalObservation` (CONF:19653).
 - i. This `externalObservation` **SHALL** contain exactly one [1..1] `@classCode (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6)` (CONF:19654).
 - ii. This `externalObservation` **SHALL** contain exactly one [1..1] `id` (CONF:711204).
 1. This `id` **SHALL** contain exactly one [1..1] `@root` (CONF:19656).
Note: This is the ID of the numerator in the referenced eMeasure.
 - iii. This `externalObservation` **SHALL** contain exactly one [1..1] `code` (CONF:19657).
 1. This code **SHALL** contain exactly one [1..1] `@code="NUMER" Numerator (CodeSystem: ObservationValue 2.16.840.1.113883.5.1063)` (CONF:19658).

Figure 20: Performance Rate for Proportion Measure (CMS EP) Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- Performance Rate for Proportion Measure template ID -->
  <templateId root="2.16.840.1.113883.10.20.27.3.14"/>
  <!-- Performance Rate for Proportion Measure (CMS EP) template ID
-->
  <templateId root="2.16.840.1.113883.10.20.27.3.25"/>
  <code code="72510-1" codeSystem="2.16.840.1.113883.6.1"
  displayName="Performance Rate"
  codeSystemName="2.16.840.1.113883.6.1"/>
  <statusCode code="completed"/>
  <value xsi:type="REAL" value="0.833"/>
  <!-- This is the reference to the Numerator in the eMeasure -->
  <reference typeCode="REFR">
    <externalObservation classCode="OBS" moodCode="EVN">
      <!-- The externalObservationID contains the ID of the
      numerator in the referenced eMeasure. -->
      <id root="17D7EEFE-C12C-4020-BA68-545A3FFC3598"/>
      <code code="NUMER" displayName="Numerator"
      codeSystem="2.16.840.1.113883.5.1063"
      codeSystemName="ObservationValue"/>
    </externalObservation>
  </reference>
</observation>

```

8.3.8 Race Supplemental Data Element (CMS EP)

```
[observation: templateId 2.16.840.1.113883.10.20.27.3.19 (open)]
```

Table 23: Race Supplemental Data Element (CMS EP) Contexts

Contained By	Contains
Measure Data (CMS EP) (required)	Aggregate Count (CMS EP)

This observation represents the race category reported by patients and provides the number of patients in the population that report that race category. For CMS EP programs, all codes present in the value set must be reported, even if the count is zero. If there are multiple race values reported for a patient, count as 'Other Race' value. For episode-based eMeasures, the count will reflect the patient count rather than the episode count.

Table 24: Race Supplemental Data Element (CMS EP) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Fixed Value
observation[templateId/@root = '2.16.840.1.113883.10.20.27.3.19']					
@classCode	1..1	SHALL		18223	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		18224	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		711257	
@root	1..1	SHALL		711258	2.16.840.1.113883.10.20.27.3.19
templateId	1..1	SHALL		18225	
@root	1..1	SHALL		18226	2.16.840.1.113883.10.20.27.3.8
code	1..1	SHALL		18227	
@code	1..1	SHALL		18228	2.16.840.1.113883.6.96 (SNOMED CT) = 103579009
statusCode	1..1	SHALL		18112	
@code	1..1	SHALL		18113	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	18229	2.16.840.1.114222.4.11.836 (RaceCategory)
entryRelationship	1..1	SHALL		18114	
@typeCode	1..1	SHALL		18115	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		18116	true
observation	1..1	SHALL		711200	

1. Conforms to Race Supplemental Data Element template (2.16.840.1.113883.10.20.27.3.8).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:18223).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:18224).
4. **SHALL** contain exactly one [1..1] templateId (CONF:711257) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.27.3.19" (CONF:711258).
5. **SHALL** contain exactly one [1..1] templateId (CONF:18225) such that it

- a. **SHALL** contain exactly one [1..1]
`@root="2.16.840.1.113883.10.20.27.3.8"` (CONF:18226).
 Note: Race Supplemental Data Element templateId
6. **SHALL** contain exactly one [1..1] **code** (CONF:18227).
 - a. This code **SHALL** contain exactly one [1..1] `@code="103579009"` Race
 (CodeSystem: SNOMED CT 2.16.840.1.113883.6.96) (CONF:18228).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:18112).
 - a. This statusCode **SHALL** contain exactly one [1..1] `@code="completed"`
 Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14
STATIC) (CONF:18113).
8. **SHALL** contain exactly one [1..1] **value** with `@xsi:type="CD"`, where the code **SHALL**
 be selected from ValueSet [RaceCategory](#) 2.16.840.1.114222.4.11.836
DYNAMIC (CONF:18229).
9. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:18114) such that it
 - a. **SHALL** contain exactly one [1..1] `@typeCode="SUBJ"` Has Subject
 (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:18115).
 - b. **SHALL** contain exactly one [1..1] `@inversionInd="true"` (CONF:18116).
 - c. **SHALL** contain exactly one [1..1] [Aggregate Count \(CMS EP\)](#)
 (templateId:2.16.840.1.113883.10.20.27.3.24) (CONF:711200).

Table 25: RaceCategory

Value Set: RaceCategory 2.16.840.1.114222.4.11.836			
Code System: Race & Ethnicity - CDC 2.16.840.1.113883.6.238			
Value Set Source: https://phinvads.cdc.gov/vads/ViewValueSet.action?id=67D34BBC-617F-DD11-B38D-00188B398520			
Code	Code System	Code System OID	Print Name
1002-5	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	American Indian or Alaska Native
2028-9	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Asian
2054-5	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Black or African American
2076-8	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Native Hawaiian or Other Pacific Islander
2106-3	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	White
2131-1	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Other Race

Figure 21: Race Supplemental Data Element (CMS EP) Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- Race Supplemental Data Element template ID -->
  <templateId root="2.16.840.1.113883.10.20.27.3.8"/>
  <!-- Race Supplemental Data Element (CMS EP) template ID -->
  <templateId root="2.16.840.1.113883.10.20.27.3.19"/>
  <code code="103579009"
    displayName="Race"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED-CT"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    code="2054-5"
    displayName="Black or African American"
    codeSystem="2.16.840.1.113883.6.238"
    codeSystemName="Race & Ethnicity - CDC"/>
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <!-- Aggregate Count (CMS EP) -->
    <observation classCode="OBS" moodCode="EVN">
      ...
    </observation>
  </entryRelationship>
</observation>

```

8.3.9 Reporting Parameters Act (CMS EP)

```
[act: templateId 2.16.840.1.113883.10.20.27.3.23 (open)]
```

Table 26: Reporting Parameters Act (CMS EP) Contexts

Contained By	Contains
QRDA Category III Reporting Parameters Section (CMS EP) (required)	

This template provides information about the reporting time interval, and provides context for the patient data being reported to the CMS EP program.

Table 27: Reporting Parameters Act (CMS EP) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Fixed Value
act[templateId/@root = '2.16.840.1.113883.10.20.27.3.23']					
@classCode	1..1	SHALL		3269	2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		3270	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		711272	
@root	1..1	SHALL		711273	2.16.840.1.113883.10.20.27.3.23
templateId	1..1	SHALL		18098	
@root	1..1	SHALL		18099	2.16.840.1.113883.10.20.17.3.8
code	1..1	SHALL		3272	2.16.840.1.113883.6.96 (SNOMED CT) = 252116004
effectiveTime	1..1	SHALL		3273	
low	1..1	SHALL		3274	
high	1..1	SHALL		3275	

1. Conforms to Reporting Parameters Act template (2.16.840.1.113883.10.20.17.3.8).
2. **SHALL** contain exactly one [1..1] @classCode="ACT" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:3269).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:3270).
4. **SHALL** contain exactly one [1..1] templateId (CONF:711272) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.27.3.23" (CONF:711273).
5. **SHALL** contain exactly one [1..1] templateId (CONF:18098) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.17.3.8" (CONF:18099).
Note: Reporting Parameters Act templateId
6. **SHALL** contain exactly one [1..1] code="252116004" Observation Parameters (CodeSystem: SNOMED CT 2.16.840.1.113883.6.96 **STATIC**) (CONF:3272).
7. **SHALL** contain exactly one [1..1] effectiveTime (CONF:3273).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] low (CONF:3274).
 - b. This effectiveTime **SHALL** contain exactly one [1..1] high (CONF:3275).

Figure 22: Reporting Parameters Act (CMS EP) Example

```

<act classCode="ACT" moodCode="EVN">
  <!-- Reporting Parameters Act template ID -->
  <templateId root="2.16.840.1.113883.10.20.17.3.8"/>
  <!-- Reporting Parameters Act (CMS EP) template ID -->
  <templateId root="2.16.840.1.113883.10.20.27.3.23"/>
  <id root="55a43e20-6463-46eb-81c3-9a3a1ad41225"/>
  <code code="252116004" codeSystem="2.16.840.1.113883.6.96"
    displayName="Observation Parameters" />
  <effectiveTime>
    <low value="20140101"/>
    <!-- The low value is the start date of the reporting period -->
    <high value="20141231"/>
    <!-- The high value is the end date of the reporting period -->
  </effectiveTime>
</act>

```

8.3.10 Reporting Stratum (CMS EP)

[observation: templateId 2.16.840.1.113883.10.20.27.3.20 (open)]

Table 28: Reporting Stratum (CMS EP) Contexts

Contained By	Contains
Measure Data (CMS EP) (optional)	Aggregate Count (CMS EP) Continuous Variable Measure Value (CMS EP)

Stratifications are used to classify populations by one or more characteristics, variables, or other categories. As subsets of the overall population, they are used in risk adjustment, analysis and interpretation. Examples of stratification include age, discharge status for an inpatient stay, facility location within a hospital (e.g., ICU, Emergency Department), surgical procedures, and specific conditions.

This observation uses the reference/externalObservation element to reference the stratification used in the quality measure. The definition of the stratification is in the corresponding eMeasure. The Reporting Stratum also provides the number of patients in the referenced stratification. Note that all strata must be present for CMS EP program reporting, even if the count is zero. Each stratum identified in the referenced eMeasure(s), must be reported for each population.

Table 29: Reporting Stratum (CMS EP) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Fixed Value
observation[templateId/@root = '2.16.840.1.113883.10.20.27.3.20']					
@classCode	1..1	SHALL		17575	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		17576	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		711274	
@root	1..1	SHALL		711275	2.16.840.1.113883.10.20.27.3.20
templateId	1..1	SHALL		18093	
@root	1..1	SHALL		18094	2.16.840.1.113883.10.20.27.3.4
code	1..1	SHALL		17577	
@code	1..1	SHALL		17578	2.16.840.1.113883.5.4 (ActCode) = ASSERTION
statusCode	1..1	SHALL		17579	
@code	1..1	SHALL		18201	2.16.840.1.113883.5.14 (ActStatus) = completed
value	0..1	SHOULD		17580	
entryRelationship	1..1	SHALL		17581	
@typeCode	1..1	SHALL		17582	SUBJ
@inversionInd	1..1	SHALL		17583	true
observation	1..1	SHALL		711197	
entryRelationship	0..*	MAY		19511	
observation	1..1	SHALL		711211	
reference	1..1	SHALL		18204	
@typeCode	1..1	SHALL		18205	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
external Observation	1..1	SHALL		18206	
id	1..1	SHALL		711210	

1. Conforms to Reporting Stratum template
(2.16.840.1.113883.10.20.27.3.4).
2. **SHALL** contain exactly one [1..1] `@classCode="OBS"` (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:17575).
3. **SHALL** contain exactly one [1..1] `@moodCode="EVN"` (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:17576).
4. **SHALL** contain exactly one [1..1] `templateId` (CONF:711274) such that it
 - a. **SHALL** contain exactly one [1..1]
`@root="2.16.840.1.113883.10.20.27.3.20"` (CONF:711275).
5. **SHALL** contain exactly one [1..1] `templateId` (CONF:18093) such that it
 - a. **SHALL** contain exactly one [1..1]
`@root="2.16.840.1.113883.10.20.27.3.4"` (CONF:18094).
Note: Reporting Stratum templateId
6. **SHALL** contain exactly one [1..1] `code` (CONF:17577).
 - a. This code **SHALL** contain exactly one [1..1] `@code="ASSERTION"` Assertion (CodeSystem: ActCode 2.16.840.1.113883.5.4 **STATIC**) (CONF:17578).
7. **SHALL** contain exactly one [1..1] `statusCode` (CONF:17579).
 - a. This statusCode **SHALL** contain exactly one [1..1] `@code="completed"` Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:18201).
8. **SHOULD** contain zero or one [0..1] `value` (CONF:17580).
 - a. This value **SHALL** be the same as the contents of the observation/code element in the referenced eMeasure (e.g., 21112-8 'Birth date') (CONF:711232).
9. **SHALL** contain exactly one [1..1] `entryRelationship` (CONF:17581) such that it
 - a. **SHALL** contain exactly one [1..1] `@typeCode="SUBJ"` (CONF:17582).
 - b. **SHALL** contain exactly one [1..1] `@inversionInd="true"` (CONF:17583).
 - c. **SHALL** contain exactly one [1..1] Aggregate Count (CMS EP)
(templateId:2.16.840.1.113883.10.20.27.3.24) (CONF:711197).

The Continuous Variable template may also be nested inside the Reporting Stratum Template to represent continuous variables found in quality measures for the various strata.

10. **MAY** contain zero or more [0..*] `entryRelationship` (CONF:19511) such that it
 - a. **SHALL** contain exactly one [1..1] Continuous Variable Measure Value (CMS EP)
(templateId:2.16.840.1.113883.10.20.27.3.26) (CONF:711211).
11. **SHALL** contain exactly one [1..1] `reference` (CONF:18204).
 - a. This reference **SHALL** contain exactly one [1..1] `@typeCode="REFR"` (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:18205).
 - b. This reference **SHALL** contain exactly one [1..1] `externalObservation` (CONF:18206).
 - i. This externalObservation **SHALL** contain exactly one [1..1] `id` (CONF:711210).
Note: This is the ID of the stratum in the referenced eMeasure.

Figure 23: Reporting Stratum (CMS EP) Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- Reporting Stratum template ID -->
  <templateId root="2.16.840.1.113883.10.20.27.3.4"/>
  <!-- Reporting Stratum (CMS EP) template ID -->
  <templateId root="2.16.840.1.113883.10.20.27.3.20"/>
  <code code="ASSERTION"
        codeSystem="2.16.840.1.113883.5.4"
        displayName="Assertion"
        codeSystemName="ActCode"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" nullFlavor="OTH">
    <originalText>Stratum</originalText>
  </value>
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <!-- Aggregate Count (CMS EP) -->
    <observation classCode="OBS" moodCode="EVN">
      ...
    </observation>
  </entryRelationship>
  <reference typeCode="REFR">
    <!-- Reference to the relevant strata in the eMeasure -->
    <externalObservation classCode="OBS" moodCode="EVN">
      <id root="9ACF2C09-8C0A-4BAD-97C1-DF6CB37E1AEB"/>
    </externalObservation>
  </reference>
</observation>

```

8.3.11 Sex Supplemental Data Element (CMS EP)

[observation: templateId 2.16.840.1.113883.10.20.27.3.21 (open)]

Table 30: Sex Supplemental Data Element (CMS EP) Contexts

Contained By	Contains
Measure Data (CMS EP) (required)	Aggregate Count (CMS EP)

This observation represents the sex of a person as used for administrative purposes (as opposed to clinical gender) and provides the number of patients in the population that are of that sex. For CMS EP programs, all codes present in the value set must be reported, even if the count is zero. If the eMeasure is episode-based, the count will reflect the patient count rather than the episode count.

Table 31: Sex Supplemental Data Element (CMS EP) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Fixed Value
observation[templateId/@root = '2.16.840.1.113883.10.20.27.3.21']					
@classCode	1..1	SHALL		18230	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		18231	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		711259	
@root	1..1	SHALL		711260	2.16.840.1.113883.10.20.27.3.21
templateId	1..1	SHALL	II	18232	
@root	1..1	SHALL		18233	2.16.840.1.113883.10.20.27.3.6
code	1..1	SHALL		18234	
@code	1..1	SHALL		18235	2.16.840.1.113883.6.96 (SNOMED CT) = 184100006
statusCode	1..1	SHALL		18124	
@code	1..1	SHALL		18125	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	18236	2.16.840.1.113883.1.11.1 (Administrative Gender (HL7 V3))
entryRelationship	1..1	SHALL		18126	
@typeCode	1..1	SHALL		18127	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		18128	true
observation	1..1	SHALL		711202	

1. Conforms to Sex Supplemental Data Element template (2.16.840.1.113883.10.20.27.3.6).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:18230).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:18231).
4. **SHALL** contain exactly one [1..1] templateId (CONF:711259) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.27.3.21" (CONF:711260).
5. **SHALL** contain exactly one [1..1] templateId (CONF:18232) such that it

- a. **SHALL** contain exactly one [1..1]
`@root="2.16.840.1.113883.10.20.27.3.6"` (CONF:18233).
 Note: Sex Supplemental Data Element templateId
- 6. **SHALL** contain exactly one [1..1] **code** (CONF:18234).
 - a. This code **SHALL** contain exactly one [1..1] `@code="184100006"` Patient sex (CodeSystem: SNOMED CT 2.16.840.1.113883.6.96 **STATIC**) (CONF:18235).
- 7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:18124).
 - a. This statusCode **SHALL** contain exactly one [1..1] `@code="completed"` Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:18125).
- 8. **SHALL** contain exactly one [1..1] **value** with `@xsi:type="CD"`, where the code **SHALL** be selected from ValueSet [Administrative Gender \(HL7 V3\)](#) 2.16.840.1.113883.1.11.1 **DYNAMIC** (CONF:18236).
 - a. Certification validators will allow use of Value Set - ONC Administrative Sex 2.16.840.1.113762.1.4.1 or Value Set - Administrative Gender (HL7 V3) 2.16.840.1.113883.1.11.1 (CONF:711261).
- 9. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:18126) such that it
 - a. **SHALL** contain exactly one [1..1] `@typeCode="SUBJ"` Has Subject (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:18127).
 - b. **SHALL** contain exactly one [1..1] `@inversionInd="true"` (CONF:18128).
 - c. **SHALL** contain exactly one [1..1] [Aggregate Count \(CMS EP\)](#) (templateId:2.16.840.1.113883.10.20.27.3.24) (CONF:711202).

Table 32: Administrative Gender (HL7 V3)

Value Set: Administrative Gender (HL7 V3) 2.16.840.1.113883.1.11.1 Administrative Gender based upon HL7 V3 vocabulary. This value set contains only male, female and undifferentiated concepts.			
Code	Code System	Code System OID	Print Name
F	AdministrativeGender	2.16.840.1.113883.5.1	Female
M	AdministrativeGender	2.16.840.1.113883.5.1	Male
UN	AdministrativeGender	2.16.840.1.113883.5.1	Undifferentiated

Table 33: ONC Administrative Sex

Value Set: ONC Administrative Sex 2.16.840.1.113762.1.4.1 ONC Administrative gender.			
Code	Code System	Code System OID	Print Name
F	AdministrativeSex	2.16.840. 1.113883.18.2	Female
M	AdministrativeSex	2.16.840. 1.113883.18.2	Male
U	AdministrativeSex	2.16.840. 1.113883.18.2	Unknown

Figure 24: Sex Supplemental Data Element (CMS EP) Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- Sex Supplemental Data Element template ID -->
  <templateId root="2.16.840.1.113883.10.20.27.3.6"/>
  <!-- Sex Supplemental Data Element (CMS EP) template ID -->
  <templateId root="2.16.840.1.113883.10.20.27.3.21"/>
  <code code="184100006"
    displayName="patient sex"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED-CT"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    code="F"
    codeSystem="2.16.840.1.113883.5.1"
    codeSystemName="AdministrativeGender"/>
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <!-- Aggregate Count (CMS EP) -->
    <observation classCode="OBS" moodCode="EVN">
      ...
    </observation>
  </entryRelationship>
</observation>

```

APPENDIX

9. Troubleshooting and Support

9.1 Resources

The following provide additional information:

- **eCQM Library** contains resources for eCQMs including Measure Logic Guidance: http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/eCQM_Library.html
- **National Library of Medicine (NLM) Value Set Authority Center (VSAC)** contains the official versions of the value sets used for eCQMs: <https://vsac.nlm.nih.gov/>
- **Electronic Clinical Quality Measure specification feedback system** is a tool offered by CMS and the Office of the National Coordinator (ONC) for Health Information Technology for implementers to submit issues and request guidance on eCQM logic, specifications, and certification: <http://oncprojecttracking.org/secure/Dashboard.jspa>

9.2 Support

Contact	Organization	Phone	Email	Role	Responsibility
CMS IT Service Desk	CMS	(410) 786-2580 (800) 562-1963	CMS_IT_Service_Desk@cms.hhs.gov	Help desk support	1 st level user support & problem reporting
QNet Help Desk	QualityNet	(866) 288-8912	qnetsupport@hcqis.org	Help desk support	1 st level user support & problem reporting
CPC Help Desk	CPC/Telligen	(800) 381-4724	cpcisupport@telligen.org	Help desk support	CPC support & problem reporting

9.3 Errata or Enhancement Requests

Table 3: Errata or Enhancement Request Location

Contact	Organization	URL	Purpose
HL7 QRDA I, DSTU Release 2 Comments page	HL7	http://www.hl7.org/dstucomments/showdetail.cfm?dstuid=80	Document errors or enhancement request to the HL7 standard.
HL7 QRDA III, DSTU Release 1 Comments page	HL7	http://www.hl7.org/dstucomments/showdetail.cfm?dstuid=90	Document errors or enhancement request to the HL7 standard.

10. QRDA-I DSTU R2 Supplemental Implementation Guide Changes to Base Standard

This table lists all changes made to QRDA-I in Part A of this guide. The "Base Standard" is the *HL7 Implementation Guide for CDA Release 2: Quality Report Document Architecture, Category I, DSTU Release 2, (US Realm), Draft Standard for Trial Use—July 2012* including updates to non-normative content for errata approved as of July, 2014.

CONF. #	Section	Base Standard	Changed To
CMS_0001	5.1.1	n/a	Conforms to QDM-Based QRDA template (2.16.840.1.113883.10.20.24.1.2). SHALL contain exactly one [1..1] templateId (CONF: CMS_0001) such that it
CMS_0002	5.1.1	n/a	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.24.1.3" (CONF: CMS_0002).
CMS_0003	5.1.1	MAY contain zero or more [0..*] participant (CONF:10003).	MAY contain zero or more [0..*] participant (CONF:CMS_0003) such that it
CMS_0004 CMS_0005 CMS_0006	5.1.1	n/a	SHALL contain exactly one [1..1] associatedEntity (CONF: CMS_0004) <ul style="list-style-type: none">This associatedEntity MAY contain zero or one [1..1] id (CONF: CMS_0005) such that itSHALL contain exactly one [1..1] @root='2.16.840.1.113883.3.2074.1' CMS EHR Certification Number (formerly known as Office of the National Coordinator Certification Number) and the value of @extension is the Certification Number (CONF: CMS_0006).
CMS_0007	5.1.2	n/a	For Non-Medicare patients it SHALL contain exactly one [1..1] Patient Identifier Number (CONF: CMS_0007)

CONF. #	Section	Base Standard	Changed To
CMS_0008	5.1.2	SHOULD contain zero or one [0..1] postalCode (ValueSet: PostalCodeValueSet 2.16.840.1.113883.3.8 8.12.80.2 DYNAMIC) (CONF:7294).	SHOULD contain zero or one [0..1] postalCode (CONF:CMS_0008).
CMS_0009	5.1.2	SHOULD contain zero or one [0..1] country , where the @code SHALL be selected from ValueSet CountryValueSet 2.16.840.1.113883.3.8 8.12.80.63 DYNAMIC (CONF:7295).	SHOULD contain zero or one [0..1] country (CONF:CMS_0009).
CMS_0010	5.1.2	SHALL contain at least one [1..*] given (CONF:7157).	SHALL contain exactly one [1..1] given (CONF: CMS_0010).
CMS_0011	5.1.2	This patient SHALL contain exactly one [1..1] administrativeGenderCode , which SHALL be selected from ValueSet 2.16.840.1.113883.1.1 1.1 (Administrative Gender Value Set) DYNAMIC (CONF:6394).	This patient SHALL contain exactly one [1..1] administrativeGenderCode , which SHALL be selected from either ValueSet ONC Administrative Sex 2.16.840.1.113762.1.4.1 or ValueSet Administrative Gender (HL7 V3) 2.16.840.1.113883.1.11.1 DYNAMIC (CONF: CMS_0011).
CMS_0012	5.1.2	SHOULD be precise to day (CONF:5300)	SHALL be precise to day (CONF: CMS_0012)
CMS_0013	5.1.2	This patient MAY contain zero or one [0..1] raceCode , which SHALL be selected from ValueSet Race 2.16.840.1.113883.1.1 1.14914 DYNAMIC (CONF:5322).	This patient SHALL contain exactly one [1..1] raceCode , which SHALL be selected from ValueSet Race 2.16.840.1.114222.4.11.83 6 DYNAMIC (CONF: CMS_0013)
CMS_0014	5.1.2	This patient MAY contain zero or more [0..*] sdtc:raceCode , where the @code SHALL be selected from ValueSet Race Value Set 2.16.840.1.113883.1.1 1.14914 DYNAMIC (CONF:7263).	This patient MAY contain zero or more [0..*] sdtc:raceCode , where the @code SHALL be selected from ValueSet Race 2.16.840.1.114222.4.11.83 6 DYNAMIC (CONF: CMS_0014).

CONF. #	Section	Base Standard	Changed To
CMS_0015	5.1.2	This patient MAY contain zero or one [0..1] ethnicGroupCode , which SHALL be selected from ValueSet EthnicityGroup 2.16.840.1.114222.4.11.837 DYNAMIC (CONF:5323).	This patient SHALL contain exactly one [1..1] ethnicGroupCode , which SHALL be selected from ValueSet EthnicityGroup 2.16.840.1.114222.4.11.837 DYNAMIC (CONF: CMS_0015).
CMS_0016	5.1.3	This representedCustodianOrganization SHOULD contain zero or one [0..1] id (CONF:26958) such that it	This representedCustodianOrganization SHALL contain exactly one [1..1] id (CONF:CMS_0016) such that it (Applicable only for HQR)
CMS_0017	5.1.4	MAY contain zero or one [0..1] documentationOf (CONF:16579)	SHALL contain exactly one [1..1] documentationOf (CONF: CMS_0017)
CMS_0018	5.1.4	This assignedEntity SHOULD contain exactly at least one [0..1] id (CONF:16587) such that it	This assignedEntity SHALL contain exactly one [1..1] id (CONF:CMS_0018) such that it
CMS_0019 CMS_0020	5.1.4	n/a	This assignedEntity MAY contain zero or one [0..1] assignedPerson (CONF:CMS_0019) This assignedPerson MAY contain zero or one [0..1] name (CONF:CMS_0020)
CMS_0021	5.1.4	This representedOrganization SHOULD contain zero or one [0..1] id (CONF:16592) such that it	This representedOrganization SHALL contain exactly one [1..1] id (CONF: CMS_0021) such that it
CMS_0022	5.1.4	n/a	This representedOrganization MAY contain zero or one [0..1] name (CMS_0022)
CMS_0023	5.1.5	MAY contain zero or more [0..*] informationRecipient (CONF:16703).	SHALL contain exactly one [1..1] informationRecipient (CONF: CMS_0023).
CMS_0024	5.1.5	This intendedRecipient SHALL contain at least one [1..*] id (CONF:16705) such that	This intendedRecipient SHALL contain exactly one [1..1] id (CONF: CMS_0024) such that

CONF. #	Section	Base Standard	Changed To
CMS_0025 CMS_0026	5.1.4	n/a	<p>This intendedRecipient SHALL contain exactly one [1..1] id (CONF: CMS_0025) such that</p> <ul style="list-style-type: none"> It SHALL contain exactly one [1..1] @root='2.16.840.1.113883.3.249.7' (CONF: CMS_0026) <p>It SHALL contain exactly one [1..1] @extension, the value of @extension is CMS Program Name (CONF: CMS_0025).</p>
CMS_0027	5.2.3	SHOULD contain zero or more [0..*] entry (CONF:12833)	SHALL contain at least one [1..*] entry (CONF: CMS_0027)

10.1 Program Specific Constraints

This table lists program specific constraints made to QRDA-I in Part A of this guide.

CONF. #	Section	Data Element/ Section	Description
16858	5.1.2	Medicare HIC Number	<p>This data element is required for Pioneer ACO.</p> <p>This data element is required for PQRS and HQR, if the payer is Medicare.</p>
CMS_0016	5.1.3	CMS Certification Number	This data element is required for HQR only.
CMS_0017	5.1.4	National Provider Identification (NPI) Number	This data element is optional for GPROs and HQR by setting <id @root='2.16.840.1.113883.4.6' @nullFlavor='NA'/>.
CMS_0018 CMS_0019	5.1.4	Provider Name (Given and Family)	This data element is optional for Pioneer ACO and for HQR.
CMS_0022	5.1.4	Clinic Name	This data element is optional for Pioneer ACO and for HQR.

10.2 Validation Rules

Element	Validation Rule
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Element	Validation Rule
Medicare HIC number	<p>The format of Medicare Health Insurance Claim (HIC) numbers shall meet the following requirements. (Note: this specified format validation rule is for EP only.)</p> <ul style="list-style-type: none">(a) No embedded dashes or spaces.(b) Must be alphanumeric.(c) Alpha characters must be upper case.(d) Length can't be > 12 or < 7.(e) If alphanumeric, all numbers cannot be 9s.(f) If length 7: must be 1 alpha + 6 numeric.(g) If length 8: must be 2 alpha + 6 numeric.(h) If length 9: must be 3 alpha + 6 numeric.(i) If length 10: can either be 1 alpha + 9 numeric, or 9 numeric + 1 alpha.(j) If length 11: must be 2 alpha + 9 numeric, or 9 numeric + 1 alpha + 1 numeric, or 9 numeric + 2 alpha.(k) If length 12: must be 3 alpha + 9 numeric.

11. QRDA-III DSTU R1 Supplemental Implementation Guide Changes to Base Standard

This table lists all changes made to QRDA-III in Part B of this guide. The "Base Standard" is the *HL7 Implementation Guide for CDA Release 2: Quality Reporting Document Architecture, Category III, DSTU Release 1, (US Realm), Draft Standard for Trial Use—November 2012*.

CONF. #	Section	Base Standard	Changed To
711280	8.1	n/a	SHALL contain exactly one [1..1] templateId (CONF:711280) such that it
711281	8.1	n/a	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.27.1.2" (CONF:711281).
711174 / 711246	8.1	SHALL contain exactly one [1..1] confidentialityCode , which SHOULD be selected from ValueSet HL7 BasicConfidentialityKind 2.16.840.1.113883.1.11.16926 STATIC 2010-04-21 (CONF:17238).	SHALL contain exactly one [1..1] confidentialityCode (CONF:711174). This confidentialityCode SHALL contain exactly one [1..1] @code="N" Normal (CodeSystem: ConfidentialityCode 2.16.840.1.113883.5.25 STATIC) (CONF:711246).
711247	8.1	This languageCode SHALL contain exactly one [1..1] @code , which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC (CONF:19669).	This languageCode SHALL contain exactly one [1..1] @code="en" English (CodeSystem: Language 2.16.840.1.113883.6.121) (CONF:711247).
711240	8.1.2	n/a	This assignedAuthor SHALL contain exactly one [1..1] id (CONF:711240).
711158	8.1.4	n/a	SHALL contain exactly one [1..1] informationRecipient (CONF:711158).
711159	8.1.4	n/a	This informationRecipient SHALL contain exactly one [1..1] intendedRecipient (CONF:711159).
711160	8.1.4	n/a	This intendedRecipient SHALL contain exactly one [1..1] id (CONF:711160).

CONF. #	Section	Base Standard	Changed To
711161	8.1.4	n/a	The id/@root specifies that this identifier represents a CMS Program. This id SHALL contain exactly one [1..1] @root="2.16.840.1.113883.3.249.7" CMS Program (CONF:711161).
711162	8.1.4	n/a	The id/@extension contains the CMS Program the report is being submitted to. This id SHALL contain exactly one [1..1] @extension, which SHALL be selected from ValueSet CMS Program Name 2.16.840.1.113883.3.249.14.101 STATIC (CONF:711162).
7111248	8.1.4	n/a	If ClinicalDocument/informationRecipient/intendedRecipient/id/@extension="CPC", then ClinicalDocument/participant/@typeCode="LOC" SHALL be present (CONF:711248).
17225	8.1.5	SHALL contain exactly one [1..1] legalAuthenticator (CONF:17225).	SHALL contain exactly one [1..1] legalAuthenticator (CONF:17225). Note: If a Data Submission Vendor (DSV) is used, the DSV is the legalAuthenticator.
18167	8.1.5	This legalAuthenticator SHALL contain exactly one [1..1] time (CONF:18167).	This legalAuthenticator SHALL contain exactly one [1..1] time (CONF:18167). Note: This value is when the document was signed.
19670	8.1.5	This legalAuthenticator SHALL contain exactly one [1..1] assignedEntity (CONF:19670).	When the legalAuthenticator is a DSV, the representedOrganization/id is the DSV TIN. The representedOrganization, if present, SHALL contain at least one [1..*] id (CONF:19670).
711150	8.1.7	n/a	MAY contain zero or one [0..1] participant (CONF:711150) such that it

CONF. #	Section	Base Standard	Changed To
711151	8.1.7	n/a	SHALL contain exactly one [1..1] <code>@typeCode="LOC"</code> Location (CodeSystem: HL7ParticipationType 2.16.840.1.113883.5.90) (CONF:711151).
711152	8.1.7	n/a	SHALL contain exactly one [1..1] <code>associatedEntity</code> (CONF:711152).
711153	8.1.7	n/a	This <code>associatedEntity</code> SHALL contain exactly one [1..1] <code>@classCode="SDLOC"</code> Service Delivery Location (CodeSystem: RoleClass 2.16.840.1.113883.5.110) (CONF:711153).
711154	8.1.7	n/a	This <code>associatedEntity</code> SHALL contain exactly one [1..1] <code>id</code> (CONF:711154).
711155	8.1.7	n/a	This <code>id</code> SHALL contain exactly one [1..1] <code>@root="2.16.840.1.113883.3.249.5.1"</code> CPC Practice Site (CONF:711155).
711156	8.1.7	n/a	This <code>id</code> SHALL contain exactly one [1..1] <code>@extension</code> (CONF:711156). Note: This is the CPC Practice Site ID assigned to the CPC Practice Site.
711218	8.1.7	n/a	This <code>associatedEntity</code> SHALL contain exactly one [1..1] <code>code</code> (CONF:711218).
711219	8.1.7	n/a	This <code>code</code> SHALL contain exactly one [1..1] <code>@code="394730007"</code> Healthcare Related Organization (CodeSystem: SNOMED CT 2.16.840.1.113883.6.96) (CONF:711219).
711157	8.1.7	n/a	This <code>associatedEntity</code> SHALL contain exactly one [1..1] <code>addr</code> (CONF:711157).
7111214	8.1.8	MAY contain zero or one [0..1] <code>documentationOf</code> (CONF:18170).	SHALL contain exactly one [1..1] <code>documentationOf</code> (CONF:711214).

CONF. #	Section	Base Standard	Changed To
711220	8.1.8	This serviceEvent SHALL contain at least one [1..*] performer (CONF:18173).	This serviceEvent SHALL contain at least one [1..*] performer (CONF:711220). Note: All providers seeking credit for CMS program reporting are listed as performers. For CPC reporting, only CPC Practice Site providers are listed as performers.
711167	8.1.8	This assignedEntity id/@root coupled with the id/@extension can be used to represent the individual provider's National Provider Identification number (NPI). Other assignedEntity ids may be present. This assignedEntity SHALL contain exactly one [1..1] id (CONF:18177) such that it	The assignedEntity id/@root = '2.16.840.1.113883.4.6' coupled with the id/@extension represents the individual provider's National Provider Identification number (NPI). NPI is required except for the Group Practice Reporting Option (GPRO). For GPRO, id/@root = '2.16.840.1.113883.4.6' is coupled with @nullFlavor="NA", and @extension shall be omitted. This assignedEntity SHALL contain exactly one [1..1] id (CONF:711167) such that it
711249	8.1.8	n/a	MAY contain zero or one [0..1] @nullFlavor="NA" (CONF:711249). Note: @nullFlavor is only present for PQRS GPRO reporting.
711169	8.1.8	MAY contain zero or one [0..1] @root="2.16.840.1.113883.4.6" National Provider ID (CONF:18178).	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.4.6" National Provider ID (CONF:711169). Note: This value specifies that the id is the provider's National Provider Identifier (NPI).
711170	8.1.8	MAY contain zero or one [0..1] @extension (CONF:18247).	SHALL contain exactly one [1..1] @extension (CONF:711170). Note: This is the provider's NPI, it is only present when this is not PQRS GPRO reporting.
711168	8.1.8	This representedOrganization MAY contain zero or one [0..1] id (CONF:18181) such that it	This representedOrganization SHALL contain exactly one [1..1] id (CONF:711168) such that it

CONF. #	Section	Base Standard	Changed To
711171	8.1.8	SHALL contain exactly one [1..1] <code>@root="2.16.840.1.113883.4.2"</code> Tax ID Number (CONF:18182).	SHALL contain exactly one [1..1] <code>@root="2.16.840.1.113883.4.2"</code> Tax ID Number (CONF:711171). Note: This value specifies that this id is the organization's Tax Identification Number (TIN).
711172	8.1.8	SHALL contain exactly one [1..1] <code>@extension</code> (CONF:18190).	SHALL contain exactly one [1..1] <code>@extension</code> (CONF:711172).
711141	8.1.10	SHALL contain exactly one [1..1] QRDA Category III Reporting Parameters Section (templateId:2.16.840.1.113883.10.20.27.2.2) (CONF:17282).	SHALL contain exactly one [1..1] QRDA Category III Reporting Parameters Section (CMS EP) (templateId:2.16.840.1.113883.10.20.27.2.6) (CONF:711141).
711142	8.1.10	SHALL contain exactly one [1..1] QRDA Category III Measure Section (templateId:2.16.840.1.113883.10.20.27.2.1) (CONF:17301).	SHALL contain exactly one [1..1] QRDA Category III Measure Section (CMS EP) (templateId:2.16.840.1.113883.10.20.27.2.3) (CONF:711142).
711276	8.2.1	n/a	SHALL contain exactly one [1..1] <code>templateId</code> (CONF:711276) such that it
711277	8.2.1	n/a	SHALL contain exactly one [1..1] <code>@root="2.16.840.1.113883.10.20.27.2.3"</code> (CONF:711277).
711283	8.2.1	n/a	SHALL contain at least one [1..*] <code>entry</code> (CONF:711283) such that it
711284	8.2.1	n/a	SHALL contain exactly one [1..1] Measure Reference and Results (CMS EP) (templateId:2.16.840.1.113883.10.20.27.3.17) (CONF:711284).
711278	8.2.2	n/a	SHALL contain exactly one [1..1] <code>templateId</code> (CONF:711278) such that it
711279	8.2.2	n/a	SHALL contain exactly one [1..1] <code>@root="2.16.840.1.113883.10.20.27.2.6"</code> (CONF:711279).
711285	8.2.2	n/a	SHALL contain exactly one [1..1] <code>entry</code> (CONF:711285) such that it

CONF. #	Section	Base Standard	Changed To
711286	8.2.2	n/a	SHALL contain exactly one [1..1] <code>@typeCode="DRIV"</code> Is derived from (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 STATIC) (CONF:711286).
711175	8.2.2	n/a	SHALL contain exactly one [1..1] <u>Reporting Parameters Act (CMS EP)</u> (templateId:2.16.840.1.113883.10.20.27.3.23) (CONF:711175).
711262	8.3.1	n/a	SHALL contain exactly one [1..1] <code>templateId</code> (CONF:711262) such that it
711263	8.3.1	n/a	SHALL contain exactly one [1..1] <code>@root="2.16.840.1.113883.10.20.27.3.24"</code> (CONF:711263).
711244	8.3.1	n/a	SHALL contain exactly one [1..1] <code>statusCode</code> (CONF:711244).
711245	8.3.1	n/a	This <code>statusCode</code> SHALL contain exactly one [1..1] <code>@code="completed"</code> Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:711245).
711264	8.3.2	n/a	SHALL contain exactly one [1..1] <code>templateId</code> (CONF:711264) such that it
711265	8.3.2	n/a	SHALL contain exactly one [1..1] <code>@root="2.16.840.1.113883.10.20.27.3.26"</code> (CONF:711265).
711243	8.3.2	If this continuous variable measure references an eMeasure, this code element SHALL equal the code element in that eMeasure's measure observation definition (CONF:18256).	This code element SHALL equal the code element in that eMeasure's measure observation definition (CONF:711243).
711241	8.3.2	n/a	SHALL contain exactly one [1..1] <code>statusCode</code> (CONF:711241).

CONF. #	Section	Base Standard	Changed To
711242	8.3.2	n/a	This statusCode SHALL contain exactly one [1..1] <code>@code="completed"</code> Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:711242).
711205	8.3.2	This externalObservation SHALL contain exactly one [1..1] <code>id</code> (CONF:18245). If this reference is to an eMeasure, this <code>id</code> SHALL equal the <code>id</code> in that eMeasure's measure observation definition (CONF:18255).	This externalObservation SHALL contain exactly one [1..1] <code>id</code> (CONF:711205). Note: This is the <code>id</code> in the eMeasure's measure observation definition.
711253	8.3.3	n/a	SHALL contain exactly one [1..1] <code>templateId</code> (CONF:711253) such that it
711254	8.3.3	n/a	SHALL contain exactly one [1..1] <code>@root="2.16.840.1.113883.10.20.27.3.22"</code> (CONF:711254).
711201	8.3.3	SHALL contain exactly one [1..1] <u>Aggregate Count</u> (templateId:2.16.840.1.113883.10.20.27.3.3) (CONF:18123).	SHALL contain exactly one [1..1] <u>Aggregate Count (CMS EP)</u> (templateId:2.16.840.1.113883.10.20.27.3.24) (CONF:711201).
711266	8.3.4	n/a	SHALL contain exactly one [1..1] <code>templateId</code> (CONF:711266) such that it
711267	8.3.4	n/a	SHALL contain exactly one [1..1] <code>@root="2.16.840.1.113883.10.20.27.3.16"</code> (CONF:711267).
711198	8.3.4	SHALL contain exactly one [1..1] <u>Aggregate Count</u> (templateId:2.16.840.1.113883.10.20.27.3.3) (CONF:17620).	SHALL contain exactly one [1..1] <u>Aggregate Count (CMS EP)</u> (templateId:2.16.840.1.113883.10.20.27.3.24) (CONF:711198).
711180	8.3.4	SHALL contain exactly one [1..1] <u>Reporting Stratum</u> (templateId:2.16.840.1.113883.10.20.27.3.4) (CONF:17920).	SHALL contain exactly one [1..1] <u>Reporting Stratum (CMS EP)</u> (templateId:2.16.840.1.113883.10.20.27.3.20) (CONF:711180).
711190	8.3.4	MAY contain zero or more [0..*] <code>entryRelationship</code> (CONF:18136) such that it	SHALL contain at least one [1..*] <code>entryRelationship</code> (CONF:711190) such that it

CONF. #	Section	Base Standard	Changed To
711181	8.3.4	SHALL contain exactly one [1..1] <u>Sex Supplemental Data Element</u> (templateId:2.16.840.1.113883.10.20.27.3.6) (CONF:18138).	SHALL contain exactly one [1..1] <u>Sex Supplemental Data Element (CMS EP)</u> (templateId:2.16.840.1.113883.10.20.27.3.21) (CONF:711181).
711191	8.3.4	MAY contain zero or more [0..*] entryRelationship (CONF:18139) such that it	SHALL contain at least one [1..*] entryRelationship (CONF:711191) such that it
711182	8.3.4	SHALL contain exactly one [1..1] <u>Ethnicity Supplemental Data Element</u> (templateId:2.16.840.1.113883.10.20.27.3.7) (CONF:18149).	SHALL contain exactly one [1..1] <u>Ethnicity Supplemental Data Element (CMS EP)</u> (templateId:2.16.840.1.113883.10.20.27.3.22) (CONF:711182).
711192	8.3.4	MAY contain zero or more [0..*] entryRelationship (CONF:18140) such that it	SHALL contain at least one [1..*] entryRelationship (CONF:711192) such that it
711183	8.3.4	SHALL contain exactly one [1..1] <u>Race Supplemental Data Element</u> (templateId:2.16.840.1.113883.10.20.27.3.8) (CONF:18150).	SHALL contain exactly one [1..1] <u>Race Supplemental Data Element (CMS EP)</u> (templateId:2.16.840.1.113883.10.20.27.3.19) (CONF:711183).
711193	8.3.4	MAY contain zero or more [0..*] entryRelationship (CONF:18141) such that it	SHALL contain at least one [1..*] entryRelationship (CONF:711193) such that it
711184	8.3.4	SHALL contain exactly one [1..1] <u>Payer Supplemental Data Element</u> (templateId:2.16.840.1.113883.10.20.27.3.9) (CONF:18151).	SHALL contain exactly one [1..1] <u>Payer Supplemental Data Element (CMS EP)</u> (templateId:2.16.840.1.113883.10.20.27.3.18) (CONF:711184).
711212	8.3.4	SHALL contain exactly one [1..1] <u>Continuous Variable Measure Value</u> (templateId:2.16.840.1.113883.10.20.27.3.2) (CONF:18153).	SHALL contain exactly one [1..1] <u>Continuous Variable Measure Value (CMS EP)</u> (templateId:2.16.840.1.113883.10.20.27.3.26) (CONF:711212).
711233	8.3.4	This externalObservation SHALL contain exactly one [1..1] id (CONF:18241). If this reference is to an eMeasure, this id SHALL equal the id defined in the corresponding eMeasure population criteria section (CONF:18258).	This externalObservation SHALL contain exactly one [1..1] id (CONF:711233). Note: This is the id defined in the corresponding eMeasure population criteria section.

CONF. #	Section	Base Standard	Changed To
711268	8.3.5	n/a	SHALL contain exactly one [1..1] templateId (CONF:711268) such that it
711269	8.3.5	n/a	SHALL contain exactly one [1..1] @root ="2.16.840.1.113883.10.20.27.3.17" (CONF:711269).
711213	8.3.5	SHALL contain exactly one [1..1] <u>Performance Rate for Proportion Measure</u> (templateId:2.16.840.1.113883.10.20.27.3.14) (CONF:17904).	SHALL contain exactly one [1..1] <u>Performance Rate for Proportion Measure (CMS EP)</u> (templateId:2.16.840.1.113883.10.20.27.3.25) (CONF:711213).
18428	8.3.5	SHALL contain exactly one [1..1] <u>Measure Data</u> (templateId:2.16.840.1.113883.10.20.27.3.5) (CONF:18426).	SHALL contain exactly one [1..1] <u>Measure Data (CMS EP)</u> (templateId:2.16.840.1.113883.10.20.27.3.16) (CONF:18428).
711270	8.3.6	n/a	SHALL contain exactly one [1..1] templateId (CONF:711270) such that it
711270	8.3.6	n/a	SHALL contain exactly one [1..1] @root ="2.16.840.1.113883.10.20.27.3.18" (CONF:711271).
7111230	8.3.6	n/a	This value SHALL contain exactly one [1..1] translation (CONF:711230).
711231	8.3.6	n/a	This translation SHALL contain exactly one [1..1] @code , which SHALL be selected from ValueSet <u>CMS Payer Groupings</u> 2.16.840.1.113883.3.249.14.102 (CONF:711231).
711229	8.3.6	n/a	This value SHALL contain exactly one [1..1] @nullFlavor ="OTH" (CONF:711229).
711199	8.3.6	SHALL contain exactly one [1..1] <u>Aggregate Count</u> (templateId:2.16.840.1.113883.10.20.27.3.3) (CONF:18111).	SHALL contain exactly one [1..1] <u>Aggregate Count (CMS EP)</u> (templateId:2.16.840.1.113883.10.20.27.3.24) (CONF:711199).
711255	8.3.7	n/a	SHALL contain exactly one [1..1] templateId (CONF:711255) such that it

CONF. #	Section	Base Standard	Changed To
711256	8.3.7	n/a	SHALL contain exactly one [1..1] <code>@root="2.16.840.1.113883.10.20.27.3.25"</code> (CONF:711256).
711203	8.3.7	MAY contain zero or one [0..1] reference (CONF:19651).	SHALL contain exactly one [1..1] reference (CONF:711203).
711204	8.3.7	The <code>externalObservationID</code> contains the ID of the numerator in the referenced <code>eMeasure</code> . This <code>externalObservation</code> SHALL contain exactly one [1..1] <code>id</code> (CONF:19655).	This <code>externalObservation</code> SHALL contain exactly one [1..1] <code>id</code> (CONF:711204).
711257	8.3.8	n/a	SHALL contain exactly one [1..1] <code>templateId</code> (CONF:711257) such that it
711258	8.3.8	n/a	SHALL contain exactly one [1..1] <code>@root="2.16.840.1.113883.10.20.27.3.19"</code> (CONF:711258).
711200	8.3.8	SHALL contain exactly one [1..1] Aggregate Count (<code>templateId:2.16.840.1.113883.10.20.27.3.3</code>) (CONF:18117).	SHALL contain exactly one [1..1] Aggregate Count (CMS EP) (<code>templateId:2.16.840.1.113883.10.20.27.3.24</code>) (CONF:711200).
711272	8.3.9	n/a	SHALL contain exactly one [1..1] <code>templateId</code> (CONF:711272) such that it
711273	8.3.9	n/a	SHALL contain exactly one [1..1] <code>@root="2.16.840.1.113883.10.20.27.3.23"</code> (CONF:711273).
711274	8.3.10	n/a	SHALL contain exactly one [1..1] <code>templateId</code> (CONF:711274) such that it
711275	8.3.10	n/a	SHALL contain exactly one [1..1] <code>@root="2.16.840.1.113883.10.20.27.3.20"</code> (CONF:711275).

CONF. #	Section	Base Standard	Changed To
711232	8.3.10	If this Reporting Stratum references an eMeasure, and the value of externalObservation/id equals the reference stratification id defined in the eMeasure, then this value SHALL be the same as the contents of the observation/code element in the eMeasure that is defined along with the observation/id element (CONF:18259).	This value SHALL be the same as the contents of the observation/code element in the referenced eMeasure (e.g., 21112-8 'Birth date') (CONF:711232).
711197	8.3.10	SHALL contain exactly one [1..1] <u>Aggregate Count</u> (templateId:2.16.840.1.113883.10.20.27.3.3) (CONF:17584).	SHALL contain exactly one [1..1] <u>Aggregate Count (CMS EP)</u> (templateId:2.16.840.1.113883.10.20.27.3.24) (CONF:711197).
711211	8.3.10	SHALL contain exactly one [1..1] <u>Continuous Variable Measure Value</u> (templateId:2.16.840.1.113883.10.20.27.3.2) (CONF:19513).	SHALL contain exactly one [1..1] <u>Continuous Variable Measure Value (CMS EP)</u> (templateId:2.16.840.1.113883.10.20.27.3.26) (CONF:711211).
711210	8.3.10	If this reference is to an eMeasure, this id equals the referenced stratification id defined in the eMeasure. This externalObservation SHALL contain exactly one [1..1] <i>id</i> (CONF:18207).	This externalObservation SHALL contain exactly one [1..1] <i>id</i> (CONF:711210). Note: This is the ID of the stratum in the referenced eMeasure.
711259	8.3.11	n/a	SHALL contain exactly one [1..1] <i>templateId</i> (CONF:711259) such that it
711260	8.3.11	n/a	SHALL contain exactly one [1..1] <i>@root="2.16.840.1.113883.10.20.27.3.21"</i> (CONF:711260).
711261	8.3.11	n/a	Certification validators will allow use of Value Set - ONC Administrative Sex 2.16.840.1.113762.1.4.1 or Value Set - Administrative Gender (HL7 V3) 2.16.840.1.113883.1.11.1 (CONF:711261).
711202	8.3.11	SHALL contain exactly one [1..1] <u>Aggregate Count</u> (templateId:2.16.840.1.113883.10.20.27.3.3) (CONF:18129).	SHALL contain exactly one [1..1] <u>Aggregate Count (CMS EP)</u> (templateId:2.16.840.1.113883.10.20.27.3.24) (CONF:711202).

12. Acronyms

This section describes acronyms used in this guide.

Acronym	Literal Translation
ACO	Accountable Care Organizations
CCN	CMS Certification Number
CDA	Clinical Document Architecture
CMS	Centers for Medicare & Medicaid Services
CPC	Comprehensive Primary Care Initiative
CQM	Clinical Quality Measure
DSTU	Draft Standard for Trial Use
DSV	Data Submission Vendor
eCQM	electronic Clinical Quality Measure
EHR	electronic health record
EP	Eligible Professional
GPRO	Group Practice Reporting Option
GUID	Globally Unique Identifier
HIC	Health Insurance Claim
HL7	Health Level Seven
HL7 V3.	Health Level 7 Version 3
HQMF	Health Quality Measures Format
HQR	Hospital Quality Reporting
ID	identifier
IPP	initial patient population
IQR	Inpatient Quality Reporting
MU	Meaningful Use
n/a	not applicable
NLM	National Library of Medicine
NPI	National Provider Identification Number

Acronym	Literal Translation
ONC	Office of the National Coordinator for Health Information Technology
PQRS	Physician Quality Reporting System
QDM	Quality Data Model
QRDA	Quality Reporting Data Architecture
QRDA-I	Quality Reporting Data Architecture Category I
QRDA-III	Quality Reporting Data Architecture Category III
TIN	Taxpayer Identification Number
VSAC	Value Set Authority Center
XML	Extensible Markup Language

13. Glossary

Term	Definition
Electronic health record (EHR)	Electronic records of patient health information gathered and/or generated in any care delivery setting. This information includes patient demographics, progress notes, medications, vital signs, past medical history, immunizations, laboratory data, and radiology reports. This provides the ability to pass information from care point to care point providing the ability for quality health management by physicians.
eMeasure	A standardized performance measure in the Health Quality Measures Format (HQMF). CMS uses "eCQM" (electronic Clinical Quality Measure) for the eMeasures developed under the Meaningful Use program.
Physician Quality Reporting System (PQRS)	A quality reporting system that includes an incentive payment for eligible professionals who satisfactorily report data on quality measures for covered professional services provided during the specified program year.
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.

14. References

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http://www.hl7.org/documentcenter/public/standards/dstu/CDAR2_QRDA_DSTUR2_2012JUL.zip

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ONC, Electronic Clinical Quality Measure issue reporting system.
<http://oncprojecttracking.org/secure/Dashboard.jspa>

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