



**HL7 Version 3 Implementation Guide:  
Clinical Quality Language (CQL) – based  
Health Quality Measure Format (HQMF)  
Release 1 – US Realm**

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**Volume 3 – QDM Templates for CQL-based HQMF**

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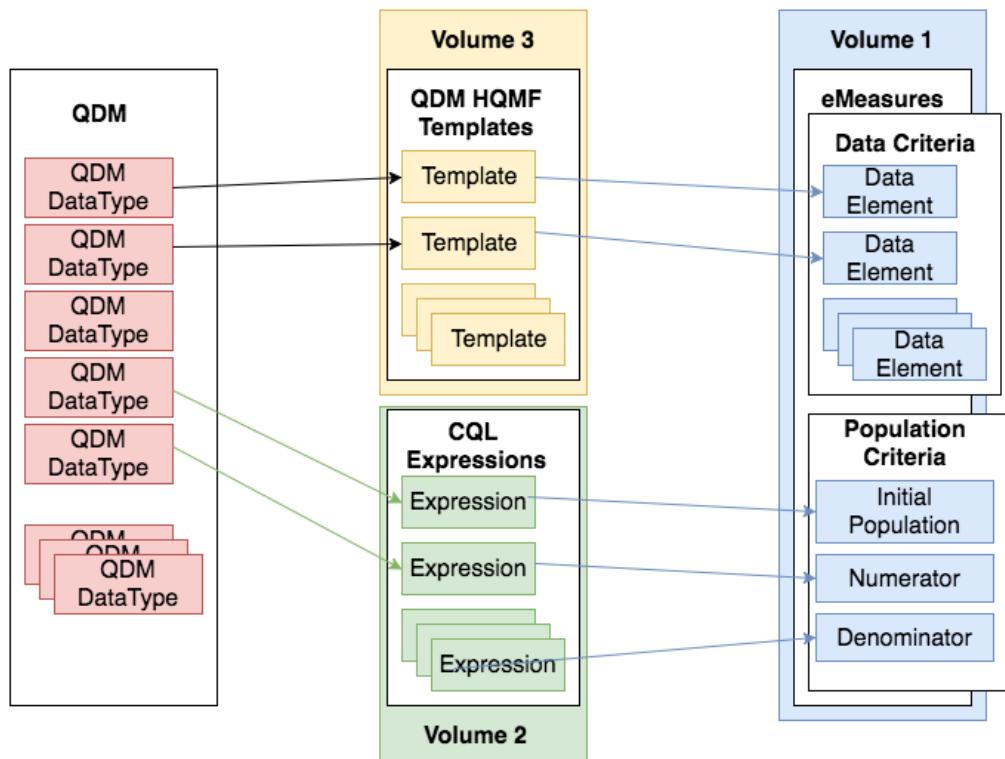
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# 1 STRUCTURE OF THIS GUIDE

Three volumes comprise this *HL7 Version 3 Implementation Guide: Clinical Quality Language (CQL)-based Health Quality Measure Format (HQMF), Release 1 (US Realm), Standard for Trial Use (STU) 2.1*:



**Figure 1: Relationship between QDM, CQL, eMeasure, and the volumes of this IG.**

**Volume 1 :** Provides narrative introduction, background material, and conformance requirements for representing CQL-based eCQMs in HQMF.

**Volume 2 :** Describes how to incorporate version 5.3 of the Quality Data Model into a CQL- based eCQM in accordance with accepted formatting and usage conventions.

**Volume 3 :** Contains the QDM templates for the CQL-based HQMF for QDM data types, necessary for constructing CQL-based HQMF measures that use the QDM.

## **2 CONFORMANCE CONVENTIONS**

### **2.1 Templates and Conformance Statements**

Conformance statements within this IG are presented as constraints from the Trifolia Workbench, a template repository. An algorithm converts constraints recorded in Trifolia to a printable presentation. Each constraint is uniquely identified by conformance number at or near the end of the constraint (e.g., CONF:3335-31306). The digits in the conformance number before the hyphen identify which implementation guide the template belongs to and the number after the hyphen is unique to the owning implementation guide. Together, these two numbers uniquely identify each constraint. These identifiers are persistent but not sequential. Conformance numbers in this guide associated with a conformance statement that is carried forward from a previous version of this guide will carry the same conformance number from the previous version. This is true even if the previous conformance statement has been edited. If a conformance statement is entirely new it will have a new conformance number.

Bracketed information following each template title indicates the template type (dataCriteriaSection, populationCriteriaSection, actCriteria, observationCriteria, etc.), the object identifier (OID) or uniform resource name (URN), and whether the template is open or closed. The identifier OID is the templateId/@root value; all templateIds have an @root value. Updated templates also have an @extension value, which is a date identifying the version of this template; such templates are identified by URN and the HL7 version (urn:hl7ii). The URN identifier includes both the @root and @extension value for the templateId (for example, identifier urn:hl7ii:2.16.840.1.113883.10.20.28.1.2:2017-08-01).

Each section and entry template in the guide includes a context table. The "Contained By" column indicates which documents or sections use this template and if the template is optional or required in the containing template. The "Contains" column indicates templates contained within this template. Each template also includes a constraint overview table to summarize the constraints in the template. Value set tables, where applicable, and brief XML example figures are included with most explanations.

### **2.2 Template Versioning**

A new version of an existing implementation guide reuses templates from the previous version. During the ballot phase or update phase, templates carry the designation “Published” to indicate the template is unchanged from the previous version or “Draft” to indicate a new or revised template. Substantial revisions to previously published templates are indicated by the version number (V2, V3, etc.) in all phases: ballot, update, and published guides.

If there are no substantive changes to a template that has been successfully published, the template will carry the same templateId/@root (identifier oid) and templateId/@extension as in the previous implementation guide. (In the case of older templates, the @extension attribute will not be present.) During a new ballot or update phase, “Published” is appended to the main heading for the template to indicate that the template cannot be commented on in the ballot or update. The “Published” designation is removed in the final publication versions.

## 2.3 Open and Closed Templates

In open templates, all of the features of the HQMF Release 1 Normative base specification are allowed except as constrained by the templates. By contrast, a closed template specifies what is allowed and nothing further may be included. Templates in an HQMF Release 1 Normative document are open. However measure developers should be cautioned that only the elements described in these templates are supported by the Measure Authoring Tool (MAT)<sup>1</sup>.

## 2.4 Conformance Verbs

The keywords **SHALL**, **SHOULD**, **MAY**, **NEED NOT**, **SHOULD NOT**, and **SHALL NOT** in this document are to be interpreted as described in the *HL7 Version 3 Publishing Facilitator's Guide*.

- **SHALL**: an absolute requirement for the particular element. Where a **SHALL** constraint is applied to an 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

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

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

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<sup>1</sup>Measure Authoring Tool. <https://www.emesuretool.cms.gov/>

## 2.6 Vocabulary Conformance

The templates in this document use terms from several code systems. These vocabularies are defined in various supporting specifications and may be maintained by other bodies, as is the case for the LOINC® and SNOMED CT® vocabularies.

Value-set bindings adhere to HL7 Vocabulary Working Group best practices, and include both a conformance verb (**SHALL**, **SHOULD**, **MAY**, etc.) and an indication of **DYNAMIC** vs. **STATIC** binding. Value-set constraints can be **STATIC**, meaning that they are bound to a specified version of a value set, or **DYNAMIC**, meaning that they are bound to the most current version of the value set. A simplified constraint, used when the binding is to a single code, includes the meaning of the code.

In a QDM-based HQMF document, a QDM data type is coupled with a single value set, a grouping value set, or a directly referenced code to become a QDM element. This guide uses the notation “{\$QDMElementValueSetOID}” in lieu of a real value set OID to indicate that this is where the value set binding should occur during creation of a QDM element.

A full discussion of the representation of vocabulary is outside the scope of this document; for more information, see the *HL7 Version 3*, Normative Edition sections on Abstract Data Types and XML Data Types R2.

## 2.7 Data Types

HQMF Normative uses the HL7 Version 3 Data Types, Release 2 abstract and Release 2 XML-specific specification. All attributes of a data type are allowed unless explicitly prohibited by this specification.

## 2.8 QDM Attribute Mappings

In a QDM-HQMF template, the QDM data type is mapped to the template, and QDM attributes of the QDM data type are mapped to attributes of the QDM-HQMF template. Attribute-level mapping is indicated within the template via a note.

## 2.9 Asserting an ActCriteria Not Met with a Reason

To specify a QDM element as not done, such as to say a patient was not prescribed with antithrombotic therapy because of contraindication (“Medication, Not Ordered”), this is done through the use of the actionNegationInd attribute (The QDM attribute negation rationale is represented using the actionNegationInd).

The actionNegationInd if true, specifies that the actCriteria indicated was not met. A nested reason for the actCriteria not being met can be represented through an outboundRelationship type of “RSON” to the Reason entry QDM-HQMF template.

## 2.10 XPath Notation

Instead of the traditional dotted notation used by HL7 to represent RIM classes, this document uses XML Path Language (XPath) notation in conformance statements and elsewhere to identify

the XML elements and attributes within the HQMF Release 1 Normative document instance to which various constraints are applied. The implicit context of these expressions is the root of the document. This notation provides a mechanism that will be familiar to developers for identifying parts of an XML document.

XPath statements appear in this document in a monospace font.

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.

## **2.11 XML Examples and Sample Documents**

XML examples appear in figures in this document in this monospace font. Portions of the XML content may be omitted from the content for brevity, marked by an ellipsis (...).

Within the narrative, XML element (code, measureAttribute, etc.) and attribute (SNOMED CT, 282291009, etc.) names also appear in this monospace font.

### 3 DOCUMENT

#### 3.1 QDM Templates for CQL-Based HQMF Header (V2)

[QualityMeasureDocument: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.1.2:2017-08-01 (open) ]

**Table 1: QDM Templates for CQL-Based HQMF Header (V2) Contexts**

Contained By:	Contains:
	<a href="#">Data Criteria Section (V2)</a> <a href="#">Measure Description Section</a> <a href="#">Measure Observations Section</a> <a href="#">Population Criteria Section (V2)</a>

This is the document header template for a CQL-based HQMF document that contains QDM-based entry templates (QDM Version 5.3).

**Table 2: QDM Templates for CQL-Based HQMF Header (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
QualityMeasureDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.1.2:2017-08-01)					
typeId	1..1	SHALL		<a href="#">3346-18786</a>	
@root	1..1	SHALL		<a href="#">3346-18787</a>	2.16.840.1.113883.1.3
@extension	1..1	SHALL		<a href="#">3346-18788</a>	POQM_HD000001UV02
templateId	1..1	SHALL		<a href="#">3346-18771</a>	
item	1..1	SHALL		<a href="#">3346-18772</a>	
@root	1..1	SHALL		<a href="#">3346-18773</a>	2.16.840.1.113883.10.20.28.1.2
@extension	0..1	SHALL		<a href="#">3346-33755</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-18542</a>	
code	1..1	SHALL		<a href="#">3346-18575</a>	
@code	1..1	SHALL		<a href="#">3346-18576</a>	57024-2
@codeSystem	1..1	SHALL		<a href="#">3346-33757</a>	urn:oid:2.16.840.1.113883.6.1 (LOINC)
title	1..1	SHALL		<a href="#">3346-18541</a>	
text	0..1	SHOULD		<a href="#">3346-18578</a>	
statusCode	1..1	SHALL		<a href="#">3346-18579</a>	
@code	1..1	SHALL		<a href="#">3346-32666</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY		<a href="#">3346-18789</a>	
availabilityTime	0..1	MAY		<a href="#">3346-18790</a>	
languageCode	0..1	MAY		<a href="#">3346-18791</a>	
setId	1..1	SHALL		<a href="#">3346-18543</a>	
versionNumber	0..1	SHOULD		<a href="#">3346-18544</a>	
author	0..*	SHOULD		<a href="#">3346-18563</a>	

responsibleParty	1..1	SHALL		<a href="#">3346-18564</a>	
representedResponsibleOrganization	1..1	SHALL		<a href="#">3346-18565</a>	
id	1..1	SHALL		<a href="#">3346-18566</a>	
item	1..1	SHALL		<a href="#">3346-18567</a>	
name	1..1	SHALL		<a href="#">3346-18568</a>	
custodian	1..1	SHALL		<a href="#">3346-18555</a>	
responsibleParty	1..1	SHALL		<a href="#">3346-18556</a>	
@classCode	1..1	SHALL		<a href="#">3346-29933</a>	ASSIGNED
representedResponsibleOrganization	1..1	SHALL		<a href="#">3346-18557</a>	
id	1..1	SHALL		<a href="#">3346-18558</a>	
item	1..1	SHALL		<a href="#">3346-18559</a>	
name	1..1	SHALL		<a href="#">3346-18560</a>	
verifier	0..1	SHOULD		<a href="#">3346-18754</a>	
responsibleParty	1..1	SHALL		<a href="#">3346-18755</a>	
representedResponsibleOrganization	1..1	SHALL		<a href="#">3346-18756</a>	
id	1..1	SHALL		<a href="#">3346-18757</a>	
item	1..1	SHALL		<a href="#">3346-18758</a>	
name	1..1	SHALL		<a href="#">3346-18759</a>	
relatedDocument	1..*	SHALL		<a href="#">3346-34627</a>	
expressionDocument	1..1	SHALL		<a href="#">3346-34628</a>	
text	1..1	SHALL		<a href="#">3346-34629</a>	
@mediaType	1..1	SHALL		<a href="#">3346-34631</a>	application/cql
reference	1..1	SHALL		<a href="#">3346-</a>	

				<a href="#">34630</a>	
@value	1..1	SHALL		<a href="#">3346-34632</a>	
controlVariable	1..1	SHALL		<a href="#">3346-18545</a>	
measurePeriod	1..1	SHALL		<a href="#">3346-18546</a>	
code	1..1	SHALL		<a href="#">3346-18547</a>	
@code	1..1	SHALL		<a href="#">3346-18548</a>	MSRTP
@codeSystem	1..1	SHALL		<a href="#">3346-30056</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL		<a href="#">3346-18550</a>	
subjectOf	1..1	SHALL		<a href="#">3346-18580</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18581</a>	
code	1..1	SHALL		<a href="#">3346-18582</a>	
@code	1..1	SHALL		<a href="#">3346-18583</a>	MSRSCORE
@codeSystem	1..1	SHALL		<a href="#">3346-30057</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	CD	<a href="#">3346-29935</a>	
@code	1..1	SHALL		<a href="#">3346-29936</a>	urn:oid:2.16.840.1.113883.1.11. 20367 (ObservationMeasureScoring)
subjectOf	1..*	SHALL		<a href="#">3346-18588</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18590</a>	
code	1..1	SHALL		<a href="#">3346-18591</a>	
@code	1..1	SHALL		<a href="#">3346-29934</a>	MSRTYPE
@codeSystem	1..1	SHALL		<a href="#">3346-30058</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	CD	<a href="#">3346-29938</a>	
@code	1..1	SHALL		<a href="#">3346-29939</a>	urn:oid:2.16.840.1.113883.1.11. 20368 (ObservationMeasureType)
subjectOf	0..1	SHOULD		<a href="#">3346-18596</a>	

measureAttribute	1..1	SHALL		<a href="#">3346-18597</a>	
code	1..1	SHALL		<a href="#">3346-18598</a>	
@code	1..1	SHALL		<a href="#">3346-18599</a>	ITMCNT
@codeSystem	1..1	SHALL		<a href="#">3346-30059</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	CD	<a href="#">3346-29983</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-18603</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18604</a>	
code	1..1	SHALL		<a href="#">3346-18605</a>	
@code	1..1	SHALL		<a href="#">3346-29941</a>	COPY
@codeSystem	1..1	SHALL		<a href="#">3346-30060</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-18609</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-18610</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18611</a>	
code	1..1	SHALL		<a href="#">3346-18612</a>	
@code	1..1	SHALL		<a href="#">3346-18613</a>	CRS
@codeSystem	1..1	SHALL		<a href="#">3346-30061</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-29942</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-18617</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18618</a>	
code	1..1	SHALL		<a href="#">3346-18619</a>	
@code	1..1	SHALL		<a href="#">3346-18620</a>	GUIDE
@codeSystem	1..1	SHALL		<a href="#">3346-30062</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-29943</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-</a>	

				<a href="#">18624</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18625</a>	
code	1..1	SHALL		<a href="#">3346-18626</a>	
@code	1..1	SHALL		<a href="#">3346-18627</a>	DEF
@codeSystem	1..1	SHALL		<a href="#">3346-30063</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-18690</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-18630</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18631</a>	
code	1..1	SHALL		<a href="#">3346-18632</a>	
@code	1..1	SHALL		<a href="#">3346-18633</a>	IDUR
@codeSystem	1..1	SHALL		<a href="#">3346-30064</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-18636</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-18637</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18638</a>	
code	1..1	SHALL		<a href="#">3346-18639</a>	
@code	1..1	SHALL		<a href="#">3346-18640</a>	KEY
@codeSystem	1..1	SHALL		<a href="#">3346-30065</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
subjectOf	0..1	SHOULD		<a href="#">3346-18644</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18645</a>	
code	1..1	SHALL		<a href="#">3346-18646</a>	
@code	1..1	SHALL		<a href="#">3346-18647</a>	MSRAGG
@codeSystem	1..1	SHALL		<a href="#">3346-30066</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-18649</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-18650</a>	

measureAttribute	1..1	SHALL		<a href="#">3346-18651</a>	
code	1..1	SHALL		<a href="#">3346-18652</a>	
@code	1..1	SHALL		<a href="#">3346-18653</a>	MSRADJ
@codeSystem	1..1	SHALL		<a href="#">3346-30067</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-18656</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-18657</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18658</a>	
code	1..1	SHALL		<a href="#">3346-18659</a>	
@code	1..1	SHALL		<a href="#">3346-18663</a>	RAT
@codeSystem	1..1	SHALL		<a href="#">3346-30068</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-18662</a>	
subjectOf	0..*	SHOULD		<a href="#">3346-18664</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18665</a>	
code	1..1	SHALL		<a href="#">3346-18666</a>	
@code	1..1	SHALL		<a href="#">3346-18667</a>	REF
@codeSystem	1..1	SHALL		<a href="#">3346-30069</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-18668</a>	
subjectOf	0..*	SHOULD		<a href="#">3346-18669</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18670</a>	
code	1..1	SHALL		<a href="#">3346-18671</a>	
@code	1..1	SHALL		<a href="#">3346-18672</a>	MSRSET
@codeSystem	1..1	SHALL		<a href="#">3346-30070</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	CD	<a href="#">3346-29950</a>	urn:oid:2.16.840.1.113883.1.11. 16927 (RoleClassServiceDeliveryLocatio n)

subjectOf	0..1	SHOULD		<a href="#">3346-18674</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18675</a>	
code	1..1	SHALL		<a href="#">3346-18676</a>	
@code	1..1	SHALL		<a href="#">3346-18677</a>	MSRJUR
@codeSystem	1..1	SHALL		<a href="#">3346-30071</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	CD	<a href="#">3346-29951</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-18679</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18680</a>	
code	1..1	SHALL		<a href="#">3346-18681</a>	
@code	1..1	SHALL		<a href="#">3346-29952</a>	MSRTOPIC
@codeSystem	1..1	SHALL		<a href="#">3346-30072</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	CD	<a href="#">3346-29953</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-18691</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18692</a>	
code	1..1	SHALL		<a href="#">3346-18693</a>	
@code	1..1	SHALL		<a href="#">3346-18694</a>	MSRRPTR
@codeSystem	1..1	SHALL		<a href="#">3346-30073</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	CD	<a href="#">3346-29954</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-18698</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18699</a>	
code	1..1	SHALL		<a href="#">3346-18700</a>	
@code	1..1	SHALL		<a href="#">3346-18701</a>	MSRRPTTIME
@codeSystem	1..1	SHALL		<a href="#">3346-30074</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	PQ	<a href="#">3346-</a>	

				<a href="#">29955</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-18705</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18706</a>	
code	1..1	SHALL		<a href="#">3346-18707</a>	
@code	1..1	SHALL		<a href="#">3346-30075</a>	USE
@codeSystem	1..1	SHALL		<a href="#">3346-30076</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-18711</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-18712</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18713</a>	
code	1..1	SHALL		<a href="#">3346-18714</a>	
@code	1..1	SHALL		<a href="#">3346-18715</a>	SDE
@codeSystem	1..1	SHALL		<a href="#">3346-30077</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-18718</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-18719</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18720</a>	
code	1..1	SHALL		<a href="#">3346-18721</a>	
@code	1..1	SHALL		<a href="#">3346-29956</a>	TRANF
@codeSystem	1..1	SHALL		<a href="#">3346-30078</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-18725</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-18726</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18727</a>	
code	1..1	SHALL		<a href="#">3346-18728</a>	
@code	1..1	SHALL		<a href="#">3346-18729</a>	STRAT
@codeSystem	1..1	SHALL		<a href="#">3346-30079</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)

value	1..1	SHALL	ED	<a href="#">3346-18732</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-18733</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18734</a>	
code	1..1	SHALL		<a href="#">3346-18735</a>	
@code	1..1	SHALL		<a href="#">3346-18736</a>	IPOP
@codeSystem	1..1	SHALL		<a href="#">3346-30080</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-18739</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-18740</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18741</a>	
code	1..1	SHALL		<a href="#">3346-18742</a>	
@code	1..1	SHALL		<a href="#">3346-29957</a>	DENOM
@codeSystem	1..1	SHALL		<a href="#">3346-30081</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-18746</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-18747</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-18748</a>	
code	1..1	SHALL		<a href="#">3346-18749</a>	
@code	1..1	SHALL		<a href="#">3346-29958</a>	DENEX
@codeSystem	1..1	SHALL		<a href="#">3346-30082</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-18753</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-29959</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-29960</a>	
code	1..1	SHALL		<a href="#">3346-30083</a>	
@code	1..1	SHALL		<a href="#">3346-30084</a>	NUMER
@codeSystem	1..1	SHALL		<a href="#">3346-</a>	urn:oid:2.16.840.1.113883.5.4

				<a href="#">30085</a>	(HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-29962</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-29963</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-29964</a>	
code	1..1	SHALL		<a href="#">3346-29965</a>	
@code	1..1	SHALL		<a href="#">3346-29967</a>	NUMEX
@codeSystem	1..1	SHALL		<a href="#">3346-30086</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-29966</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-29968</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-29969</a>	
code	1..1	SHALL		<a href="#">3346-29970</a>	
@code	1..1	SHALL		<a href="#">3346-29971</a>	DENEXCEP
@codeSystem	1..1	SHALL		<a href="#">3346-30087</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-29972</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-29973</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-29974</a>	
code	1..1	SHALL		<a href="#">3346-29975</a>	
@code	1..1	SHALL		<a href="#">3346-29976</a>	MSRPOPL
@codeSystem	1..1	SHALL		<a href="#">3346-30088</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-29977</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-29978</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-29979</a>	
code	1..1	SHALL		<a href="#">3346-29980</a>	
@code	1..1	SHALL		<a href="#">3346-29981</a>	MSRPOPLEX

@codeSystem	1..1	SHALL		<a href="#">3346-30089</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-29982</a>	
subjectOf	0..1	SHOULD		<a href="#">3346-29984</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-29985</a>	
code	1..1	SHALL		<a href="#">3346-29986</a>	
@code	1..1	SHALL		<a href="#">3346-29987</a>	DISC
@codeSystem	1..1	SHALL		<a href="#">3346-30090</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
value	1..1	SHALL	ED	<a href="#">3346-29988</a>	
subjectOf	0..1	MAY		<a href="#">3346-34637</a>	
measureAttribute	1..1	SHALL		<a href="#">3346-34638</a>	
code	1..1	SHALL		<a href="#">3346-34639</a>	
@code	1..1	SHALL		<a href="#">3346-34640</a>	CMPMSRSCR
@codeSystem	1..1	SHALL		<a href="#">3346-34641</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
value	1..1	SHALL	CD	<a href="#">3346-34642</a>	
@code	1..1	SHALL		<a href="#">3346-34643</a>	
component	1..*	SHALL		<a href="#">3346-18813</a>	
component	1..1	SHALL		<a href="#">3346-18815</a>	
dataCriteriaSection	1..1	SHALL		<a href="#">3346-18833</a>	<a href="#">Data Criteria Section (V2)</a> <a href="#">(identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.2.6:2017-08-01</a>
component	1..*	SHALL		<a href="#">3346-19057</a>	
populationCriteriaSection	1..1	SHALL		<a href="#">3346-19058</a>	<a href="#">Population Criteria Section (V2)</a> <a href="#">(identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.2.7:2017-08-01</a>
component	0..1	MAY		<a href="#">3346-29989</a>	
measureDescriptionSection	1..1	SHALL		<a href="#">3346-</a>	<a href="#">Measure Description Section</a>

				<a href="#">29990</a>	<a href="#">(identifier: urn:oid:2.16.840.1.113883.10.2 0.28.2.3)</a>
component	0..1	MAY		<a href="#">3346- 29991</a>	
measureObservationsSection	1..1	SHALL		<a href="#">3346- 29992</a>	<a href="#">Measure Observations Section (identifier: urn:oid:2.16.840.1.113883.10.2 0.28.2.4)</a>

1. **SHALL** contain exactly one [1..1] **typeId** (CONF:3346-18786).
  - a. This typeId **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.1.3"` (CONF:3346-18787).
  - b. This typeId **SHALL** contain exactly one [1..1] `@extension="POQM_HD000001UV02"` (CONF:3346-18788).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-18771) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-18772) such that it
    - i. **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.10.20.28.1.2"` (CONF:3346-18773).
    - ii. **SHALL** contain zero or one [0..1] `@extension="2017-08-01"` (CONF:3346-33755).
3. **SHALL** contain exactly one [1..1] **id** (CONF:3346-18542).
4. **SHALL** contain exactly one [1..1] **code** (CONF:3346-18575).
  - a. This code **SHALL** contain exactly one [1..1] `@code="57024-2"` Health Quality Measure Document (CONF:3346-18576).
  - b. This code **SHALL** contain exactly one [1..1] **codeSystem** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3346-33757).
5. **SHALL** contain exactly one [1..1] **title** (CONF:3346-18541).
6. **SHOULD** contain zero or one [0..1] **text** (CONF:3346-18578).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-18579).
  - a. This statusCode **SHALL** contain exactly one [1..1] `@code="completed"` Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-32666).
8. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-18789).
9. **MAY** contain zero or one [0..1] **availabilityTime** (CONF:3346-18790).
10. **MAY** contain zero or one [0..1] **languageCode** (CONF:3346-18791).
11. **SHALL** contain exactly one [1..1] **setId** (CONF:3346-18543).
12. **SHOULD** contain zero or one [0..1] **versionNumber** (CONF:3346-18544).
13. **SHOULD** contain zero or more [0..\*] **author** (CONF:3346-18563).
  - a. The author, if present, **SHALL** contain exactly one [1..1] **responsibleParty** (CONF:3346-18564).
    - i. This responsibleParty **SHALL** contain exactly one [1..1] **representedResponsibleOrganization** (CONF:3346-18565).
      1. This representedResponsibleOrganization **SHALL** contain exactly one [1..1] **id** (CONF:3346-18566).

- a. This id **SHALL** contain exactly one [1..1] **item** (CONF:3346-18567).
  - 2. This representedResponsibleOrganization **SHALL** contain exactly one [1..1] **name** (CONF:3346-18568).
14. **SHALL** contain exactly one [1..1] **custodian** (CONF:3346-18555).
- a. This custodian **SHALL** contain exactly one [1..1] **responsibleParty** (CONF:3346-18556).
    - i. This responsibleParty **SHALL** contain exactly one [1..1] **@classCode="ASSIGNED"** (CONF:3346-29933).
    - ii. This responsibleParty **SHALL** contain exactly one [1..1] **representedResponsibleOrganization** (CONF:3346-18557).
      - 1. This representedResponsibleOrganization **SHALL** contain exactly one [1..1] **id** (CONF:3346-18558).
        - a. This id **SHALL** contain exactly one [1..1] **item** (CONF:3346-18559).
      - 2. This representedResponsibleOrganization **SHALL** contain exactly one [1..1] **name** (CONF:3346-18560).
15. **SHOULD** contain zero or one [0..1] **verifier** (CONF:3346-18754).
- a. The verifier, if present, **SHALL** contain exactly one [1..1] **responsibleParty** (CONF:3346-18755).
    - i. This responsibleParty **SHALL** contain exactly one [1..1] **representedResponsibleOrganization** (CONF:3346-18756).
      - 1. This representedResponsibleOrganization **SHALL** contain exactly one [1..1] **id** (CONF:3346-18757).
        - a. This id **SHALL** contain exactly one [1..1] **item** (CONF:3346-18758).
      - 2. This representedResponsibleOrganization **SHALL** contain exactly one [1..1] **name** (CONF:3346-18759).
16. **SHALL** contain at least one [1..\*] **relatedDocument** (CONF:3346-34627).
- a. Such relatedDocuments **SHALL** contain exactly one [1..1] **expressionDocument** (CONF:3346-34628).
    - i. This expressionDocument **SHALL** contain exactly one [1..1] **text** (CONF:3346-34629).
      - 1. This text **SHALL** contain exactly one [1..1] **@mediaType="application/cql"** (CONF:3346-34631).
      - 2. This text **SHALL** contain exactly one [1..1] **reference** (CONF:3346-34630).
        - a. This reference **SHALL** contain exactly one [1..1] **@value** (CONF:3346-34632).
 

Note: This value contains a URI (relative or absolute) that identifies the CQL expression document.
17. **SHALL** contain exactly one [1..1] **controlVariable** (CONF:3346-18545).
- a. This controlVariable **SHALL** contain exactly one [1..1] **measurePeriod** (CONF:3346-18546).

- i. This measurePeriod **SHALL** contain exactly one [1..1] **code** (CONF:3346-18547).
    - 1. This code **SHALL** contain exactly one [1..1] @code="MSRTTP" Measurement Period (CONF:3346-18548).
    - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30056).
  - ii. This measurePeriod **SHALL** contain exactly one [1..1] **value** (CONF:3346-18550).  
 Note: Measure period could be either an IVL\_TS or a PIVL\_TS data type. Refer to the HQMF Normative Release 1 standard for details.
18. **SHALL** contain exactly one [1..1] **subjectOf** (CONF:3346-18580) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18581).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18582).
      - 1. This code **SHALL** contain exactly one [1..1] @code="MSRScore" Measure Scoring (CONF:3346-18583).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30057).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3346-29935).
      - 1. This value **SHALL** contain exactly one [1..1] @code (ValueSet: [ObservationMeasureScoring](#) urn:oid:2.16.840.1.113883.1.11.20367) (CONF:3346-29936).
19. **SHALL** contain at least one [1..\*] **subjectOf** (CONF:3346-18588) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18590).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18591).
      - 1. This code **SHALL** contain exactly one [1..1] @code="MSRTYPE" Measure Type (CONF:3346-29934).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30058).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3346-29938).
      - 1. This value **SHALL** contain exactly one [1..1] @code (ValueSet: [ObservationMeasureType](#) urn:oid:2.16.840.1.113883.1.11.20368) (CONF:3346-29939).
20. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18596) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18597).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18598).
      - 1. This code **SHALL** contain exactly one [1..1] @code="ITMCNT" Items Counted (CONF:3346-18599).

2. This code **SHALL** contain exactly one [1..1] **@codeSystem**  
 (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4)  
 (CONF:3346-30059).
  - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with  
`@xsi:type="CD"` (CONF:3346-29983).
21. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18603) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18604).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18605).
      1. This code **SHALL** contain exactly one [1..1] **@code="COPY"** Copyright (CONF:3346-29941).
      2. This code **SHALL** contain exactly one [1..1] **@codeSystem**  
 (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4)  
 (CONF:3346-30060).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with  
`@xsi:type="ED"` (CONF:3346-18609).
22. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18610) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18611).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18612).
      1. This code **SHALL** contain exactly one [1..1] **@code="CRS"** Clinical Recommendation Statement (CONF:3346-18613).
      2. This code **SHALL** contain exactly one [1..1] **@codeSystem**  
 (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4)  
 (CONF:3346-30061).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with  
`@xsi:type="ED"` (CONF:3346-29942).
23. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18617) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18618).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18619).
      1. This code **SHALL** contain exactly one [1..1] **@code="GUIDE"** Guide (CONF:3346-18620).
      2. This code **SHALL** contain exactly one [1..1] **@codeSystem**  
 (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4)  
 (CONF:3346-30062).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with  
`@xsi:type="ED"` (CONF:3346-29943).
24. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18624) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18625).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18626).
      1. This code **SHALL** contain exactly one [1..1] **@code="DEF"** Definition (CONF:3346-18627).

2. This code **SHALL** contain exactly one [1..1] **@codeSystem**  
 (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4)  
 (CONF:3346-30063).
  - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with  
`@xsi:type="ED"` (CONF:3346-18690).
25. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18630) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18631).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18632).
      1. This code **SHALL** contain exactly one [1..1] **@code="IDUR"**  
 Improvement Notation (CONF:3346-18633).
      2. This code **SHALL** contain exactly one [1..1] **@codeSystem**  
 (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4)  
 (CONF:3346-30064).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with  
`@xsi:type="ED"` (CONF:3346-18636).
26. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18637) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18638).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18639).
      1. This code **SHALL** contain exactly one [1..1] **@code="KEY"** Keyword  
 (CONF:3346-18640).
      2. This code **SHALL** contain exactly one [1..1] **@codeSystem**  
 (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4)  
 (CONF:3346-30065).
27. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18644) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18645).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18646).
      1. This code **SHALL** contain exactly one [1..1] **@code="MSRAGG"** Rate Aggregation (CONF:3346-18647).
      2. This code **SHALL** contain exactly one [1..1] **@codeSystem**  
 (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4)  
 (CONF:3346-30066).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with  
`@xsi:type="ED"` (CONF:3346-18649).
28. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18650) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18651).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18652).
      1. This code **SHALL** contain exactly one [1..1] **@code="MSRADJ"** Risk Adjustment (CONF:3346-18653).
      2. This code **SHALL** contain exactly one [1..1] **@codeSystem**  
 (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4)  
 (CONF:3346-30067).

- ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="ED" (CONF:3346-18656).
- 29. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18657) such that it
  - a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18658).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18659).
      - 1. This code **SHALL** contain exactly one [1..1] @code="RAT" Rationale (CONF:3346-18663).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30068).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="ED" (CONF:3346-18662).
- 30. **SHOULD** contain zero or more [0..\*] **subjectOf** (CONF:3346-18664) such that it
  - a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18665).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18666).
      - 1. This code **SHALL** contain exactly one [1..1] @code="REF" Reference (CONF:3346-18667).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30069).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="ED" (CONF:3346-18668).
- 31. **SHOULD** contain zero or more [0..\*] **subjectOf** (CONF:3346-18669) such that it
  - a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18670).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18671).
      - 1. This code **SHALL** contain exactly one [1..1] @code="MSRSET" Care Setting (CONF:3346-18672).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30070).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (ValueSet: [RoleClassServiceDeliveryLocation](#) urn:oid:2.16.840.1.113883.1.11.16927) (CONF:3346-29950).
- 32. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18674) such that it
  - a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18675).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18676).
      - 1. This code **SHALL** contain exactly one [1..1] @code="MSRJUR" Jurisdiction (CONF:3346-18677).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30071).

- ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3346-29951).
33. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18679) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18680).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18681).
      - 1. This code **SHALL** contain exactly one [1..1] @code="MSRTOPIC" Topic Type (CONF:3346-29952).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30072).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3346-29953).
34. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18691) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18692).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18693).
      - 1. This code **SHALL** contain exactly one [1..1] @code="MSRRPTR" Reporter Type (CONF:3346-18694).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30073).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3346-29954).
35. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18698) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18699).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18700).
      - 1. This code **SHALL** contain exactly one [1..1] @code="MSRRPTTIME" Timeframe for Reporting (CONF:3346-18701).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30074).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="PQ" (CONF:3346-29955).
36. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18705) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18706).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18707).
      - 1. This code **SHALL** contain exactly one [1..1] @code="USE" Notice of Use (CONF:3346-30075).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30076).

- ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="ED" (CONF:3346-18711).
37. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18712) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18713).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18714).
      - 1. This code **SHALL** contain exactly one [1..1] @code="SDE" Supplemental Data Elements (CONF:3346-18715).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30077).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="ED" (CONF:3346-18718).
38. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18719) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18720).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18721).
      - 1. This code **SHALL** contain exactly one [1..1] @code="TRANF" Transmission Format (CONF:3346-29956).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30078).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="ED" (CONF:3346-18725).
39. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18726) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18727).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18728).
      - 1. This code **SHALL** contain exactly one [1..1] @code="STRAT" Stratification (CONF:3346-18729).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30079).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="ED" (CONF:3346-18732).
40. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18733) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18734).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18735).
      - 1. This code **SHALL** contain exactly one [1..1] @code="IPOP" Initial Population (CONF:3346-18736).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30080).

- ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="ED" (CONF:3346-18739).
41. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18740) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18741).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18742).
      - 1. This code **SHALL** contain exactly one [1..1] @code="DENOM" Denominator (CONF:3346-29957).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30081).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="ED" (CONF:3346-18746).
42. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-18747) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-18748).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-18749).
      - 1. This code **SHALL** contain exactly one [1..1] @code="DENEX" Denominator Exclusion (CONF:3346-29958).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30082).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="ED" (CONF:3346-18753).
43. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-29959) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-29960).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-30083).
      - 1. This code **SHALL** contain exactly one [1..1] @code="NUMER" Numerator (CONF:3346-30084).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30085).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="ED" (CONF:3346-29962).
44. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-29963) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-29964).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-29965).
      - 1. This code **SHALL** contain exactly one [1..1] @code="NUMEX" Numerator Exclusion (CONF:3346-29967).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30086).

- ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="ED" (CONF:3346-29966).
45. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-29968) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-29969).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-29970).
      - 1. This code **SHALL** contain exactly one [1..1] @code="DENEXCEP" Denominator Exception (CONF:3346-29971).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30087).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="ED" (CONF:3346-29972).
46. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-29973) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-29974).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-29975).
      - 1. This code **SHALL** contain exactly one [1..1] @code="MSRPOPL" Measure Population (CONF:3346-29976).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30088).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="ED" (CONF:3346-29977).
47. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-29978) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-29979).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-29980).
      - 1. This code **SHALL** contain exactly one [1..1] @code="MSRPOPLEX" Measure Population Exclusions (CONF:3346-29981).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30089).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="ED" (CONF:3346-29982).
48. **SHOULD** contain zero or one [0..1] **subjectOf** (CONF:3346-29984) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-29985).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-29986).
      - 1. This code **SHALL** contain exactly one [1..1] @code="DISC" Disclaimer (CONF:3346-29987).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30090).

- ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="ED" (CONF:3346-29988).
49. **MAY** contain zero or one [0..1] **subjectof** (CONF:3346-34637) such that it
- a. **SHALL** contain exactly one [1..1] **measureAttribute** (CONF:3346-34638).
    - i. This measureAttribute **SHALL** contain exactly one [1..1] **code** (CONF:3346-34639).
      - 1. This code **SHALL** contain exactly one [1..1] @code="CMPMSRSCR" Composite measure scoring (CONF:3346-34640).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-34641).
    - ii. This measureAttribute **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3346-34642).
      - 1. This value **SHALL** contain exactly one [1..1] @code (CONF:3346-34643).

Note: Will add a valueset that contain the following codes:  
"OPPORSCR","ALLORNONESCR","LINEARSCR","WEIGHTSCR"
50. **SHALL** contain at least one [1..\*] **component** (CONF:3346-18813).
51. **SHALL** contain exactly one [1..1] **component** (CONF:3346-18815) such that it
- a. **SHALL** contain exactly one [1..1] [Data Criteria Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.2.6:2017-08-01) (CONF:3346-18833).
52. **SHALL** contain at least one [1..\*] **component** (CONF:3346-19057) such that it
- a. **SHALL** contain exactly one [1..1] [Population Criteria Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.2.7:2017-08-01) (CONF:3346-19058).
53. **MAY** contain zero or one [0..1] **component** (CONF:3346-29989) such that it
- a. **SHALL** contain exactly one [1..1] [Measure Description Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.28.2.3) (CONF:3346-29990).
54. **MAY** contain zero or one [0..1] **component** (CONF:3346-29991) such that it
- a. **SHALL** contain exactly one [1..1] [Measure Observations Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.28.2.4) (CONF:3346-29992).

## 4 SECTION

### 4.1 Data Criteria Section (V2)

[dataCriteriaSection: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.2.6:2017-08-01 (open) ]

**Table 3: Data Criteria Section (V2) Contexts**

Contained By:	Contains:
<a href="#">QDM Templates for CQL-Based HQMF Header (V2)</a> (required)	<a href="#">Adverse Event (V2)</a> <a href="#">Allergy Intolerance (V2)</a> <a href="#">Assessment, Performed (V2)</a> <a href="#">Assessment, Recommended</a> <a href="#">Care Goal (V2)</a> <a href="#">Communication: From Patient to Provider (V2)</a> <a href="#">Communication: From Provider to Patient (V2)</a> <a href="#">Communication: From Provider to Provider (V2)</a> <a href="#">Device, Applied</a> <a href="#">Device, Order</a> <a href="#">Device, Recommended</a> <a href="#">Diagnosis (V2)</a> <a href="#">Diagnostic Study, Order (V2)</a> <a href="#">Diagnostic Study, Performed (V2)</a> <a href="#">Diagnostic Study, Recommended (V2)</a> <a href="#">Encounter, Order</a> <a href="#">Encounter, Performed (V2)</a> <a href="#">Encounter, Recommended</a> <a href="#">Family History</a> <a href="#">Immunization, Administered (V2)</a> <a href="#">Immunization, Order (V2)</a> <a href="#">Intervention, Order</a> <a href="#">Intervention, Performed (V2)</a> <a href="#">Intervention, Recommended</a> <a href="#">Laboratory Test, Order</a> <a href="#">Laboratory Test, Performed (V2)</a> <a href="#">Laboratory Test, Recommended</a> <a href="#">Medication, Active (V2)</a> <a href="#">Medication, Administered (V2)</a> <a href="#">Medication, Discharge (V2)</a> <a href="#">Medication, Dispensed (V2)</a> <a href="#">Medication, Order (V2)</a> <a href="#">Patient Care Experience</a> <a href="#">Patient Characteristic (V2)</a> <a href="#">Patient Characteristic Birth Date</a> <a href="#">Patient Characteristic Clinical Trial Participant</a> <a href="#">Patient Characteristic Ethnicity</a>

Contained By:	Contains:
	<a href="#">Patient Characteristic Expired</a> <a href="#">Patient Characteristic Payer</a> <a href="#">Patient Characteristic Race</a> <a href="#">Patient Characteristic Sex</a> <a href="#">Physical Exam, Order</a> <a href="#">Physical Exam, Performed (V2)</a> <a href="#">Physical Exam, Recommended</a> <a href="#">Procedure, Order (V2)</a> <a href="#">Procedure, Performed (V2)</a> <a href="#">Procedure, Recommended</a> <a href="#">Provider Care Experience</a> <a href="#">Provider Characteristic (V2)</a> <a href="#">Substance, Administered (V2)</a> <a href="#">Substance, Order (V2)</a> <a href="#">Substance, Recommended (V2)</a> <a href="#">Symptom (V2)</a>

The Data Criteria Section contains the criteria describing the data of interest to a measure.

**Table 4: Data Criteria Section (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
dataCriteriaSection (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.2.6:2017-08-01)					
templateId	1..1	SHALL		<a href="#">3346-18804</a>	
item	1..*	SHALL		<a href="#">3346-18805</a>	
@root	1..1	SHALL		<a href="#">3346-18806</a>	2.16.840.1.113883.10.20.28.2.6
@extension	1..1	SHALL		<a href="#">3346-33440</a>	2017-08-01
id	0..1	MAY		<a href="#">3346-18856</a>	
code	1..1	SHALL		<a href="#">3346-18807</a>	
@code	1..1	SHALL		<a href="#">3346-18808</a>	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 57025-9
@codeSystem	1..1	SHALL		<a href="#">3346-30091</a>	urn:oid:2.16.840.1.113883.6.1 (LOINC)
title	1..1	SHALL		<a href="#">3346-18857</a>	
@value	1..1	SHALL		<a href="#">3346-18964</a>	Data Criteria Section
text	1..1	SHALL		<a href="#">3346-18858</a>	
entry	1..*	SHALL		<a href="#">3346-18853</a>	
entry	0..*	MAY		<a href="#">3346-34258</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34259</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIIV
observationCriteria	1..1	SHALL		<a href="#">3346-34260</a>	<a href="#">Adverse Event (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.120:2017-08-01)</a>
entry	0..*	MAY		<a href="#">3346-34261</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34262</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIIV
observationCriteria	1..1	SHALL		<a href="#">3346-34263</a>	<a href="#">Allergy Intolerance (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.119:2017-08-01)</a>
entry	0..*	MAY		<a href="#">3346-34176</a>	

@typeCode	1..1	SHALL		<a href="#">3346-34177</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
observationCriteria	1..1	SHALL		<a href="#">3346-34178</a>	<a href="#">Assessment, Performed (V2)</a> <a href="#">(identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.117:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-34179</a>	
typeId	1..1	SHALL		<a href="#">3346-34180</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
observationCriteria	1..1	SHALL		<a href="#">3346-34181</a>	<a href="#">Assessment, Recommended</a> <a href="#">(identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.118:2017-05-01</a>
entry	0..*	MAY		<a href="#">3346-32667</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32668</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
observationCriteria	1..1	SHALL		<a href="#">3346-32669</a>	<a href="#">Care Goal (V2)</a> ( <a href="#">identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.7:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-32670</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32671</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
actCriteria	1..1	SHALL		<a href="#">3346-34481</a>	<a href="#">Communication: From Patient to</a> <a href="#">Provider (V2)</a> ( <a href="#">identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.8:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-32673</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32674</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
actCriteria	1..1	SHALL		<a href="#">3346-32675</a>	<a href="#">Communication: From Provider</a> <a href="#">to Patient (V2)</a> ( <a href="#">identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.9:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-32676</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32677</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
actCriteria	1..1	SHALL		<a href="#">3346-32678</a>	<a href="#">Communication: From Provider</a> <a href="#">to Provider (V2)</a> ( <a href="#">identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a>

					<a href="#">20.28.4.10:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-32685</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32686</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
procedureCriteria	1..1	SHALL		<a href="#">3346-32687</a>	<a href="#">Device, Applied (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.13:2017-05-01</a>
entry	0..*	MAY		<a href="#">3346-32691</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32692</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
supplyCriteria	1..1	SHALL		<a href="#">3346-32693</a>	<a href="#">Device, Order (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.15:2017-05-01</a>
entry	0..*	MAY		<a href="#">3346-32694</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32695</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
supplyCriteria	1..1	SHALL		<a href="#">3346-32696</a>	<a href="#">Device, Recommended (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.16:2017-05-01</a>
entry	0..*	MAY		<a href="#">3346-34055</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34056</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
observationCriteria	1..1	SHALL		<a href="#">3346-34057</a>	<a href="#">Diagnosis (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.110:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-34038</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34039</a>	DRIV
observationCriteria	1..1	SHALL		<a href="#">3346-34040</a>	<a href="#">Family History (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.111:2017-05-01</a>
entry	0..*	MAY		<a href="#">3346-32715</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32716</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
observationCriteria	1..1	SHALL		<a href="#">3346-32717</a>	<a href="#">Diagnostic Study, Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.</a>

					<a href="#">20.28.4.22:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-32718</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32719</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIIV
observationCriteria	1..1	SHALL		<a href="#">3346-32720</a>	<a href="#">Diagnostic Study, Performed (V2)</a> (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.23:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-32721</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32722</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIIV
observationCriteria	1..1	SHALL		<a href="#">3346-32723</a>	<a href="#">Diagnostic Study, Recommended (V2)</a> (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.24:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-32730</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32731</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIIV
encounterCriteria	1..1	SHALL		<a href="#">3346-32732</a>	<a href="#">Encounter, Order</a> (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.27:2017-05-01</a>
entry	0..*	MAY		<a href="#">3346-32733</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32734</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIIV
encounterCriteria	1..1	SHALL		<a href="#">3346-32735</a>	<a href="#">Encounter, Performed (V2)</a> (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.5:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-32736</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32737</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIIV
encounterCriteria	1..1	SHALL		<a href="#">3346-32738</a>	<a href="#">Encounter, Recommended</a> (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.28:2017-05-01</a>
entry	0..*	MAY		<a href="#">3346-32757</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32758</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIIV

actCriteria	1..1	SHALL		<a href="#">3346-32759</a>	<a href="#">Intervention, Order (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.35:2017-05-01)</a>
entry	0..*	MAY		<a href="#">3346-32760</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32761</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
actCriteria	1..1	SHALL		<a href="#">3346-32762</a>	<a href="#">Intervention, Performed (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.36:2017-08-01)</a>
entry	0..*	MAY		<a href="#">3346-32763</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32764</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
actCriteria	1..1	SHALL		<a href="#">3346-32765</a>	<a href="#">Intervention, Recommended (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.37:2017-05-01)</a>
entry	0..*	MAY		<a href="#">3346-32775</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32776</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
procedureCriteria	1..1	SHALL		<a href="#">3346-32777</a>	<a href="#">Laboratory Test, Order (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.41:2017-05-01)</a>
entry	0..*	MAY		<a href="#">3346-32778</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32779</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
observationCriteria	1..1	SHALL		<a href="#">3346-32780</a>	<a href="#">Laboratory Test, Performed (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.42:2017-08-01)</a>
entry	0..*	MAY		<a href="#">3346-32781</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32782</a>	DRIV
observationCriteria	1..1	SHALL		<a href="#">3346-32783</a>	<a href="#">Laboratory Test, Recommended (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.43:2017-05-01)</a>
entry	0..*	MAY		<a href="#">3346-32787</a>	
@typeCode	1..1	SHALL		<a href="#">3346-</a>	urn:oid:2.16.840.1.113883.5.10

				<a href="#">32788</a>	02 (HL7ActRelationshipType) = DRIIV
substanceAdministrationCriteria	1..1	SHALL		<a href="#">3346-32789</a>	<a href="#">Medication, Active (V2)</a> <a href="#">(identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.44:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-32790</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32791</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIIV
substanceAdministrationCriteria	1..1	SHALL		<a href="#">3346-32792</a>	<a href="#">Medication, Administered (V2)</a> <a href="#">(identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.45:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-33949</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33950</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIIV
substanceAdministrationCriteria	1..1	SHALL		<a href="#">3346-33951</a>	<a href="#">Immunization, Administered (V2)</a> <a href="#">(identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.112:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-32797</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32803</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIIV
substanceAdministrationCriteria	1..1	SHALL		<a href="#">3346-32804</a>	<a href="#">Medication, Discharge (V2)</a> <a href="#">(identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.48:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-32798</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32805</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIIV
substanceAdministrationCriteria	1..1	SHALL		<a href="#">3346-32806</a>	<a href="#">Medication, Order (V2)</a> <a href="#">(identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.51:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-33955</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33956</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIIV
substanceAdministrationCriteria	1..1	SHALL		<a href="#">3346-34037</a>	<a href="#">Immunization, Order (V2)</a> <a href="#">(identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a>

					<a href="#">20.28.4.113:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-32799</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32807</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
supplyCriteria	1..1	SHALL		<a href="#">3346-32808</a>	<a href="#">Medication, Dispensed (V2)</a> (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.49:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-32811</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32821</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
observationCriteria	1..1	SHALL		<a href="#">3346-32822</a>	<a href="#">Patient Care Experience</a> (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.52:2017-05-01</a>
entry	0..*	MAY		<a href="#">3346-32812</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32823</a>	DRIV
observationCriteria	1..1	SHALL		<a href="#">3346-32824</a>	<a href="#">Patient Characteristic (V2)</a> (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.53:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-32813</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32825</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
observationCriteria	1..1	SHALL		<a href="#">3346-32826</a>	<a href="#">Patient Characteristic Clinical Trial Participant</a> (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.6:2017-05-01</a>
entry	0..*	MAY		<a href="#">3346-32814</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32827</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
observationCriteria	1..1	SHALL		<a href="#">3346-32828</a>	<a href="#">Patient Characteristic Birth Date</a> (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.54:2017-05-01</a>
entry	0..*	MAY		<a href="#">3346-32815</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32829</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV

observationCriteria	1..1	SHALL		<a href="#">3346-32830</a>	Patient Characteristic Ethnicity (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.20.28.4.56:2017-05-01</a>
entry	0..*	MAY		<a href="#">3346-32816</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32831</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
observationCriteria	1..1	SHALL		<a href="#">3346-32832</a>	Patient Characteristic Expired (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.20.28.4.57:2017-05-01</a>
entry	0..*	MAY		<a href="#">3346-32817</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32833</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
observationCriteria	1..1	SHALL		<a href="#">3346-32834</a>	Patient Characteristic Payer (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.20.28.4.58:2017-05-01</a>
entry	0..*	MAY		<a href="#">3346-32818</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32835</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
observationCriteria	1..1	SHALL		<a href="#">3346-32836</a>	Patient Characteristic Race (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.20.28.4.59:2017-05-01</a>
entry	0..*	MAY		<a href="#">3346-32819</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32837</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
observationCriteria	1..1	SHALL		<a href="#">3346-32838</a>	Patient Characteristic Sex (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.20.28.4.55:2017-05-01</a>
entry	0..*	MAY		<a href="#">3346-32844</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32845</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
observationCriteria	1..1	SHALL		<a href="#">3346-32846</a>	Physical Exam, Order (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.20.28.4.61:2017-05-01</a>
entry	0..*	MAY		<a href="#">3346-32847</a>	

@typeCode	1..1	SHALL		<a href="#">3346-32848</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIIV
observationCriteria	1..1	SHALL		<a href="#">3346-32849</a>	<a href="#">Physical Exam, Performed (V2)</a> <a href="#">(identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.62:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-32850</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32851</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIIV
observationCriteria	1..1	SHALL		<a href="#">3346-32852</a>	<a href="#">Physical Exam, Recommended</a> <a href="#">(identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.63:2017-05-01</a>
entry	0..*	MAY		<a href="#">3346-32856</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32857</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIIV
procedureCriteria	1..1	SHALL		<a href="#">3346-32858</a>	<a href="#">Procedure, Performed (V2)</a> <a href="#">(identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.67:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-32859</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32860</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIIV
procedureCriteria	1..1	SHALL		<a href="#">3346-32861</a>	<a href="#">Procedure, Recommended</a> <a href="#">(identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.68:2017-05-01</a>
entry	0..*	MAY		<a href="#">3346-32862</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32863</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIIV
procedureCriteria	1..1	SHALL		<a href="#">3346-32864</a>	<a href="#">Procedure, Order (V2)</a> <a href="#">(identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.66:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-32868</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32869</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIIV
observationCriteria	1..1	SHALL		<a href="#">3346-32870</a>	<a href="#">Provider Care Experience</a> <a href="#">(identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a>

					<a href="#">20.28.4.70:2017-05-01</a>
entry	0..*	MAY		<a href="#">3346-32871</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32872</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
observationCriteria	1..1	SHALL		<a href="#">3346-32873</a>	<a href="#">Provider Characteristic (V2)</a> (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.71:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-32996</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32997</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
substanceAdministrationCriteria	1..1	SHALL		<a href="#">3346-32998</a>	<a href="#">Substance, Administered (V2)</a> (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.73:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-33005</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33006</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
substanceAdministrationCriteria	1..1	SHALL		<a href="#">3346-33007</a>	<a href="#">Substance, Order (V2)</a> (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.77:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-33011</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33012</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
substanceAdministrationCriteria	1..1	SHALL		<a href="#">3346-33013</a>	<a href="#">Substance, Recommended (V2)</a> (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.78:2017-08-01</a>
entry	0..*	MAY		<a href="#">3346-34058</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34059</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
observationCriteria	1..1	SHALL		<a href="#">3346-34113</a>	<a href="#">Symptom (V2)</a> (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.</a> <a href="#">20.28.4.116:2017-08-01</a>

55. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-18804) such that it

a. **SHALL** contain at least one [1..\*] **item** (CONF:3346-18805) such that it

i. **SHALL** contain exactly one [1..1]

**@root="2.16.840.1.113883.10.20.28.2.6"** (CONF:3346-18806).

- ii. **SHALL** contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33440).
56. **MAY** contain zero or one [0..1] **id** (CONF:3346-18856).
57. **SHALL** contain exactly one [1..1] **code** (CONF:3346-18807).
- a. This code **SHALL** contain exactly one [1..1] @code="57025-9" Data Criteria (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1 **STATIC**) (CONF:3346-18808).
  - b. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3346-30091).
58. **SHALL** contain exactly one [1..1] **title** (CONF:3346-18857).
- a. This title **SHALL** contain exactly one [1..1] @value="Data Criteria Section" (CONF:3346-18964).
59. **SHALL** contain exactly one [1..1] **text** (CONF:3346-18858).
60. **SHALL** contain at least one [1..\*] **entry** (CONF:3346-18853).
61. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-34258) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34259).
  - b. **SHALL** contain exactly one [1..1] **Adverse Event (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.120:2017-08-01) (CONF:3346-34260).
62. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-34261) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34262).
  - b. **SHALL** contain exactly one [1..1] **Allergy Intolerance (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.119:2017-08-01) (CONF:3346-34263).
63. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-34176) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34177).
  - b. **SHALL** contain exactly one [1..1] **Assessment, Performed (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.117:2017-08-01) (CONF:3346-34178).
64. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-34179) such that it
- a. **SHALL** contain exactly one [1..1] typeId="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34180).
  - b. **SHALL** contain exactly one [1..1] **Assessment, Recommended** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.118:2017-05-01) (CONF:3346-34181).
65. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32667) such that it

- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32668).
  - b. **SHALL** contain exactly one [1..1] Care Goal (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.7:2017-08-01) (CONF:3346-32669).
66. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32670) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32671).
  - b. **SHALL** contain exactly one [1..1] Communication: From Patient to Provider (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.8:2017-08-01) (CONF:3346-34481).
67. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32673) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32674).
  - b. **SHALL** contain exactly one [1..1] Communication: From Provider to Patient (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.9:2017-08-01) (CONF:3346-32675).
68. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32676) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32677).
  - b. **SHALL** contain exactly one [1..1] Communication: From Provider to Provider (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.10:2017-08-01) (CONF:3346-32678).
69. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32685) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32686).
  - b. **SHALL** contain exactly one [1..1] Device, Applied (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.13:2017-05-01) (CONF:3346-32687).
70. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32691) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32692).
  - b. **SHALL** contain exactly one [1..1] Device, Order (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.15:2017-05-01) (CONF:3346-32693).
71. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32694) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32695).

- b. **SHALL** contain exactly one [1..1] [Device, Recommended](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.16:2017-05-01) (CONF:3346-32696).
72. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-34055) such that it
- a. **SHALL** contain exactly one [1..1] @[typeCode="DRIV"](#) Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34056).
  - b. **SHALL** contain exactly one [1..1] [Diagnosis \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.110:2017-08-01) (CONF:3346-34057).
73. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-34038) such that it
- a. **SHALL** contain exactly one [1..1] @[typeCode="DRIV"](#) Is Derived From (CONF:3346-34039).
  - b. **SHALL** contain exactly one [1..1] [Family History](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.111:2017-05-01) (CONF:3346-34040).
74. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32715) such that it
- a. **SHALL** contain exactly one [1..1] @[typeCode="DRIV"](#) Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32716).
  - b. **SHALL** contain exactly one [1..1] [Diagnostic Study, Order \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.22:2017-08-01) (CONF:3346-32717).
75. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32718) such that it
- a. **SHALL** contain exactly one [1..1] @[typeCode="DRIV"](#) Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32719).
  - b. **SHALL** contain exactly one [1..1] [Diagnostic Study, Performed \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.23:2017-08-01) (CONF:3346-32720).
76. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32721) such that it
- a. **SHALL** contain exactly one [1..1] @[typeCode="DRIV"](#) Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32722).
  - b. **SHALL** contain exactly one [1..1] [Diagnostic Study, Recommended \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.24:2017-08-01) (CONF:3346-32723).
77. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32730) such that it
- a. **SHALL** contain exactly one [1..1] @[typeCode="DRIV"](#) Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32731).
  - b. **SHALL** contain exactly one [1..1] [Encounter, Order](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.27:2017-05-01) (CONF:3346-32732).
78. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32733) such that it

- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32734).
  - b. **SHALL** contain exactly one [1..1] Encounter, Performed (v2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.5:2017-08-01) (CONF:3346-32735).
79. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32736) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32737).
  - b. **SHALL** contain exactly one [1..1] Encounter, Recommended (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.28:2017-05-01) (CONF:3346-32738).
80. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32757) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32758).
  - b. **SHALL** contain exactly one [1..1] Intervention, Order (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.35:2017-05-01) (CONF:3346-32759).
81. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32760) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32761).
  - b. **SHALL** contain exactly one [1..1] Intervention, Performed (v2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.36:2017-08-01) (CONF:3346-32762).
82. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32763) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32764).
  - b. **SHALL** contain exactly one [1..1] Intervention, Recommended (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.37:2017-05-01) (CONF:3346-32765).
83. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32775) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32776).
  - b. **SHALL** contain exactly one [1..1] Laboratory Test, Order (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.41:2017-05-01) (CONF:3346-32777).
84. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32778) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32779).

- b. **SHALL** contain exactly one [1..1] [Laboratory Test, Performed \(V2\)](#)  
 (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.42:2017-08-01)  
 (CONF:3346-32780).
85. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32781) such that it
- a. **SHALL** contain exactly one [1..1] @**typeCode**="DRIV" Is Derived From (CONF:3346-32782).
  - b. **SHALL** contain exactly one [1..1] [Laboratory Test, Recommended](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.43:2017-05-01) (CONF:3346-32783).
86. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32787) such that it
- a. **SHALL** contain exactly one [1..1] @**typeCode**="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32788).
  - b. **SHALL** contain exactly one [1..1] [Medication, Active \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.44:2017-08-01) (CONF:3346-32789).
87. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32790) such that it
- a. **SHALL** contain exactly one [1..1] @**typeCode**="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32791).
  - b. **SHALL** contain exactly one [1..1] [Medication, Administered \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.45:2017-08-01) (CONF:3346-32792).
88. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-33949) such that it
- a. **SHALL** contain exactly one [1..1] @**typeCode**="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-33950).
  - b. **SHALL** contain exactly one [1..1] [Immunization, Administered \(V2\)](#)  
 (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.112:2017-08-01)  
 (CONF:3346-33951).
89. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32797) such that it
- a. **SHALL** contain exactly one [1..1] @**typeCode**="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32803).
  - b. **SHALL** contain exactly one [1..1] [Medication, Discharge \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.48:2017-08-01) (CONF:3346-32804).
90. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32798) such that it
- a. **SHALL** contain exactly one [1..1] @**typeCode**="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32805).
  - b. **SHALL** contain exactly one [1..1] [Medication, Order \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.51:2017-08-01) (CONF:3346-32806).
91. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-33955) such that it

- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-33956).
  - b. **SHALL** contain exactly one [1..1] Immunization, Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.113:2017-08-01) (CONF:3346-34037).
92. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32799) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32807).
  - b. **SHALL** contain exactly one [1..1] Medication, Dispensed (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.49:2017-08-01) (CONF:3346-32808).
93. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32811) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32821).
  - b. **SHALL** contain exactly one [1..1] Patient Care Experience (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.52:2017-05-01) (CONF:3346-32822).
94. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32812) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CONF:3346-32823).
  - b. **SHALL** contain exactly one [1..1] Patient Characteristic (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.53:2017-08-01) (CONF:3346-32824).
95. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32813) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32825).
  - b. **SHALL** contain exactly one [1..1] Patient Characteristic Clinical Trial Participant (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.6:2017-05-01) (CONF:3346-32826).
96. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32814) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32827).
  - b. **SHALL** contain exactly one [1..1] Patient Characteristic Birth Date (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.54:2017-05-01) (CONF:3346-32828).
97. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32815) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32829).

- b. **SHALL** contain exactly one [1..1] Patient Characteristic Ethnicity (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.56:2017-05-01) (CONF:3346-32830).
98. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32816) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32831).
  - b. **SHALL** contain exactly one [1..1] Patient Characteristic Expired (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.57:2017-05-01) (CONF:3346-32832).
99. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32817) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32833).
  - b. **SHALL** contain exactly one [1..1] Patient Characteristic Payer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.58:2017-05-01) (CONF:3346-32834).
100. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32818) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32835).
  - b. **SHALL** contain exactly one [1..1] Patient Characteristic Race (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.59:2017-05-01) (CONF:3346-32836).
101. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32819) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32837).
  - b. **SHALL** contain exactly one [1..1] Patient Characteristic Sex (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.55:2017-05-01) (CONF:3346-32838).
102. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32844) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32845).
  - b. **SHALL** contain exactly one [1..1] Physical Exam, Order (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.61:2017-05-01) (CONF:3346-32846).
103. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32847) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32848).
  - b. **SHALL** contain exactly one [1..1] Physical Exam, Performed (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.62:2017-08-01) (CONF:3346-32849).

104. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32850) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32851).
  - b. **SHALL** contain exactly one [1..1] Physical Exam, Recommended (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.63:2017-05-01) (CONF:3346-32852).
105. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32856) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32857).
  - b. **SHALL** contain exactly one [1..1] Procedure, Performed (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.67:2017-08-01) (CONF:3346-32858).
106. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32859) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32860).
  - b. **SHALL** contain exactly one [1..1] Procedure, Recommended (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.68:2017-05-01) (CONF:3346-32861).
107. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32862) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32863).
  - b. **SHALL** contain exactly one [1..1] Procedure, Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.66:2017-08-01) (CONF:3346-32864).
108. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32868) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32869).
  - b. **SHALL** contain exactly one [1..1] Provider Care Experience (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.70:2017-05-01) (CONF:3346-32870).
109. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32871) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32872).
  - b. **SHALL** contain exactly one [1..1] Provider Characteristic (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.71:2017-08-01) (CONF:3346-32873).
110. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-32996) such that it

- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32997).
  - b. **SHALL** contain exactly one [1..1] [Substance, Administered \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.73:2017-08-01) (CONF:3346-32998).
111. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-33005) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-33006).
  - b. **SHALL** contain exactly one [1..1] [Substance, Order \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.77:2017-08-01) (CONF:3346-33007).
112. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-33011) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-33012).
  - b. **SHALL** contain exactly one [1..1] [Substance, Recommended \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.78:2017-08-01) (CONF:3346-33013).
113. **MAY** contain zero or more [0..\*] **entry** (CONF:3346-34058) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34059).
  - b. **SHALL** contain exactly one [1..1] [Symptom \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.116:2017-08-01) (CONF:3346-34113).

## 4.2 Measure Description Section

[measureDescriptionSection: identifier urn:oid:2.16.840.1.113883.10.20.28.2.3  
(open) ]

**Table 5: Measure Description Section Contexts**

Contained By:	Contains:
<u><a href="#">QDM Templates for CQL-Based HQMF Header (V2)</a></u> (optional)	

The Measure Description Section is used to provide a more detailed or embellished description, such as one containing images and/or flow diagrams, than that provided in QualityMeasureDocument.text.

**Table 6: Measure Description Section Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
measureDescriptionSection (identifier: urn:oid:2.16.840.1.113883.10.20.28.2.3)					
templateId	1..1	SHALL		<a href="#">87-18897</a>	
item	1..*	SHALL		<a href="#">87-18898</a>	
@root	1..1	SHALL		<a href="#">87-18899</a>	2.16.840.1.113883.10.20.28.2.3
id	0..1	MAY		<a href="#">87-18913</a>	
code	1..1	SHALL		<a href="#">87-18914</a>	
@code	1..1	SHALL		<a href="#">87-19064</a>	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 74045-6
@codeSystem	1..1	SHALL		<a href="#">87-30102</a>	urn:oid:2.16.840.1.113883.6.1 (LOINC)
title	1..1	SHALL		<a href="#">87-18918</a>	
@value	1..1	SHALL		<a href="#">87-18919</a>	Measure Description Section
text	1..1	SHALL		<a href="#">87-18920</a>	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:87-18897).
  - a. This templateId **SHALL** contain at least one [1..\*] **item** (CONF:87-18898) such that it
    - i. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.2.3"** (CONF:87-18899).
2. **MAY** contain zero or one [0..1] **id** (CONF:87-18913).
3. **SHALL** contain exactly one [1..1] **code** (CONF:87-18914).
  - a. This code **SHALL** contain exactly one [1..1] **@code="74045-6"** Measure Description (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1 **STATIC**) (CONF:87-19064).
  - b. This code **SHALL** contain exactly one [1..1] **@codeSystem** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:87-30102).
4. **SHALL** contain exactly one [1..1] **title** (CONF:87-18918).
  - a. This title **SHALL** contain exactly one [1..1] **@value="Measure Description Section"** (CONF:87-18919).
5. **SHALL** contain exactly one [1..1] **text** (CONF:87-18920).

**Figure 2: Measure Description Section Example**

```
<component>
  <measureDescriptionSection>
    <templateId>
      <item root="2.16.840.1.113883.10.20.28.2.3"/>
    </templateId>
    <code code="74045-6" codeSystem="2.16.840.1.113883.6.1">
      <displayName value="Measure Description"/>
    </code>
    <title value="Measure Description Section"/>
    <text value="...."/>
  </measureDescriptionSection>
</component>
```

### 4.3 Measure Observations Section

[measureObservationsSection: identifier  
urn:oid:2.16.840.1.113883.10.20.28.2.4 (open) ]

**Table 7: Measure Observations Section Contexts**

Contained By:	Contains:
<a href="#">QDM Templates for CQL-Based HQMF Header (V2)</a> (optional)	

The Measure Observations section defines computations (e.g., time from check in to antibiotic administration) used to score particular aspects of performance. Measure observations are used in ratio and continuous variable eMeasures.

**Table 8: Measure Observations Section Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
measureObservationsSection (identifier: urn:oid:2.16.840.1.113883.10.20.28.2.4)					
templateId	1..1	SHALL		<a href="#">87-18901</a>	
item	1..*	SHALL		<a href="#">87-18902</a>	
@root	1..1	SHALL		<a href="#">87-18903</a>	2.16.840.1.113883.10.20.28.2.4
id	0..1	MAY		<a href="#">87-18904</a>	
code	1..1	SHALL		<a href="#">87-18905</a>	
@code	1..1	SHALL		<a href="#">87-18906</a>	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 57027-5
@codeSystem	1..1	SHALL		<a href="#">87-30103</a>	urn:oid:2.16.840.1.113883.6.1 (LOINC)
title	1..1	SHALL		<a href="#">87-18910</a>	
@value	1..1	SHALL		<a href="#">87-18965</a>	Measure Observations Section
text	1..1	SHALL		<a href="#">87-18911</a>	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:87-18901).
  - a. This templateId **SHALL** contain at least one [1..\*] **item** (CONF:87-18902) such that it
    - i. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.2.4"** (CONF:87-18903).
2. **MAY** contain zero or one [0..1] **id** (CONF:87-18904).
3. **SHALL** contain exactly one [1..1] **code** (CONF:87-18905).
  - a. This code **SHALL** contain exactly one [1..1] **@code="57027-5"** Measure Observation (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1 **STATIC**) (CONF:87-18906).
  - b. This code **SHALL** contain exactly one [1..1] **@codeSystem** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:87-30103).
4. **SHALL** contain exactly one [1..1] **title** (CONF:87-18910).
  - a. This title **SHALL** contain exactly one [1..1] **@value="Measure Observations Section"** (CONF:87-18965).
5. **SHALL** contain exactly one [1..1] **text** (CONF:87-18911).

**Figure 3: Measure Observations Section Example**

```
<component>
  <measureObservationSection>
    <templateId>
      <item root="2.16.840.1.113883.10.20.28.2.4"/>
    </templateId>
    <code code="57027-5" codeSystem="2.16.840.1.113883.6.1">
      <displayName value="Measure Observation"/>
    </code>
    <title value="Measure Observation Section"/>
    <text value="...."/>
  </measureObservationSection>
</component>
```

#### 4.4 Population Criteria Section (V2)

[populationCriteriaSection: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.2.7:2017-08-01 (open) ]

**Table 9: Population Criteria Section (V2) Contexts**

Contained By:	Contains:
<a href="#">QDM Templates for CQL-Based HQMF Header (V2)</a> (required)	

The Population Criteria Section is used to formalize a measure's population types (e.g., initial population, numerator, denominator).

Please refer to Volume 1 and Volume 2 of this IG for additional constraints and examples for the Population Criteria Section.

**Table 10: Population Criteria Section (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
populationCriteriaSection (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.2.7:2017-08-01)					
templateId	1..1	SHALL		<a href="#">3346-18774</a>	
item	1..*	SHALL		<a href="#">3346-18775</a>	
@root	1..1	SHALL		<a href="#">3346-18776</a>	2.16.840.1.113883.10.20.28.2.7
@extension	1..1	SHALL		<a href="#">3346-34633</a>	2017-08-01
id	0..1	MAY		<a href="#">3346-18960</a>	
code	1..1	SHALL		<a href="#">3346-19059</a>	
@code	1..1	SHALL		<a href="#">3346-19060</a>	57026-7
@codeSystem	1..1	SHALL		<a href="#">3346-30092</a>	urn:oid:2.16.840.1.113883.6.1 (LOINC)
title	1..1	SHALL		<a href="#">3346-18781</a>	
@value	1..1	SHALL		<a href="#">3346-18782</a>	Population Criteria Section
text	1..1	SHALL		<a href="#">3346-18961</a>	
component	1..*	SHALL		<a href="#">3346-29995</a>	
initialPopulationCriteria	1..1	SHALL		<a href="#">3346-29996</a>	
code	1..1	SHALL		<a href="#">3346-30022</a>	
@code	1..1	SHALL		<a href="#">3346-30023</a>	IPOP
@codeSystem	1..1	SHALL		<a href="#">3346-30093</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
precondition	1..*	SHALL		<a href="#">3346-34868</a>	
criteriaReference	1..1	SHALL		<a href="#">3346-34869</a>	
id	1..1	SHALL		<a href="#">3346-34870</a>	
@root	1..1	SHALL		<a href="#">3346-34886</a>	
@extension	1..1	SHALL		<a href="#">3346-34887</a>	

component	0..*	MAY		<a href="#">3346-30024</a>	
numeratorCriteria	1..1	SHALL		<a href="#">3346-30025</a>	
code	1..1	SHALL		<a href="#">3346-30028</a>	
@code	1..1	SHALL		<a href="#">3346-30029</a>	NUMER
@codeSystem	1..1	SHALL		<a href="#">3346-30094</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
precondition	1..*	SHALL		<a href="#">3346-34871</a>	
criteriaReference	1..1	SHALL		<a href="#">3346-34872</a>	
id	1..1	SHALL		<a href="#">3346-34873</a>	
@root	1..1	SHALL		<a href="#">3346-34888</a>	
@extension	1..1	SHALL		<a href="#">3346-34889</a>	
component	0..*	MAY		<a href="#">3346-30026</a>	
denominatorCriteria	1..1	SHALL		<a href="#">3346-30027</a>	
code	1..1	SHALL		<a href="#">3346-30030</a>	
@code	1..1	SHALL		<a href="#">3346-30031</a>	DENOM
@codeSystem	1..1	SHALL		<a href="#">3346-30095</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
precondition	1..*	SHALL		<a href="#">3346-34874</a>	
criteriaReference	1..1	SHALL		<a href="#">3346-34875</a>	
id	1..1	SHALL		<a href="#">3346-34876</a>	
@root	1..1	SHALL		<a href="#">3346-34890</a>	
@extension	1..1	SHALL		<a href="#">3346-34891</a>	
component	0..*	MAY		<a href="#">3346-30032</a>	
measurePopulationCriteria	1..1	SHALL		<a href="#">3346-30033</a>	
code	1..1	SHALL		<a href="#">3346-30034</a>	
@code	1..1	SHALL		<a href="#">3346-</a>	MSRPOPL

				<a href="#">30035</a>	
@codeSystem	1..1	SHALL		<a href="#">3346-30096</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
precondition	1..*	SHALL		<a href="#">3346-34877</a>	
criteriaReference	1..1	SHALL		<a href="#">3346-34878</a>	
id	1..1	SHALL		<a href="#">3346-34879</a>	
@root	1..1	SHALL		<a href="#">3346-34892</a>	
@extension	1..1	SHALL		<a href="#">3346-34893</a>	
component	0..*	MAY		<a href="#">3346-30036</a>	
denominatorExceptionCriteria	1..1	SHALL		<a href="#">3346-30037</a>	
code	1..1	SHALL		<a href="#">3346-30038</a>	
@code	1..1	SHALL		<a href="#">3346-30039</a>	DENEXCEP
@codeSystem	1..1	SHALL		<a href="#">3346-30097</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
precondition	1..*	SHALL		<a href="#">3346-34880</a>	
criteriaReference	1..1	SHALL		<a href="#">3346-34881</a>	
id	1..1	SHALL		<a href="#">3346-34882</a>	
@root	1..1	SHALL		<a href="#">3346-34894</a>	
@extension	1..1	SHALL		<a href="#">3346-34895</a>	
component	0..*	MAY		<a href="#">3346-30040</a>	
denominatorExclusionCriteria	1..1	SHALL		<a href="#">3346-30041</a>	
code	1..1	SHALL		<a href="#">3346-30042</a>	
@code	1..1	SHALL		<a href="#">3346-30043</a>	DENEX
@codeSystem	1..1	SHALL		<a href="#">3346-30098</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
precondition	1..*	SHALL		<a href="#">3346-34883</a>	
criteriaReference	1..1	SHALL		<a href="#">3346-34884</a>	

<a href="#">id</a>	1..1	SHALL		<a href="#">3346-34885</a>	
<a href="#">@root</a>	1..1	SHALL		<a href="#">3346-34896</a>	
<a href="#">@extension</a>	1..1	SHALL		<a href="#">3346-34897</a>	
<a href="#">component</a>	0..*	MAY		<a href="#">3346-30044</a>	
<a href="#">numeratorExclusionCriteria</a>	1..1	SHALL		<a href="#">3346-30045</a>	
<a href="#">code</a>	1..1	SHALL		<a href="#">3346-30046</a>	
<a href="#">@code</a>	1..1	SHALL		<a href="#">3346-30047</a>	NUMEX
<a href="#">@codeSystem</a>	1..1	SHALL		<a href="#">3346-30099</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
<a href="#">precondition</a>	1..*	SHALL		<a href="#">3346-34898</a>	
<a href="#">criteriaReference</a>	1..1	SHALL		<a href="#">3346-34899</a>	
<a href="#">id</a>	1..1	SHALL		<a href="#">3346-34900</a>	
<a href="#">@root</a>	1..1	SHALL		<a href="#">3346-34904</a>	
<a href="#">@extension</a>	1..1	SHALL		<a href="#">3346-34905</a>	
<a href="#">component</a>	0..*	MAY		<a href="#">3346-30048</a>	
<a href="#">measurePopulationExclusionCriteria</a>	1..1	SHALL		<a href="#">3346-30049</a>	
<a href="#">code</a>	1..1	SHALL		<a href="#">3346-30050</a>	
<a href="#">@code</a>	1..1	SHALL		<a href="#">3346-30051</a>	MSRPOPLEX
<a href="#">@codeSystem</a>	1..1	SHALL		<a href="#">3346-30100</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
<a href="#">precondition</a>	1..*	SHALL		<a href="#">3346-34901</a>	
<a href="#">criteriaReference</a>	1..1	SHALL		<a href="#">3346-34902</a>	
<a href="#">id</a>	1..1	SHALL		<a href="#">3346-34903</a>	
<a href="#">@root</a>	1..1	SHALL		<a href="#">3346-34906</a>	
<a href="#">@extension</a>	1..1	SHALL		<a href="#">3346-34907</a>	

component	0..*	MAY		<a href="#">3346-30052</a>	
stratifierCriteria	1..1	SHALL		<a href="#">3346-30053</a>	
code	0..1	MAY		<a href="#">3346-30054</a>	
@code	1..1	SHALL		<a href="#">3346-30055</a>	STRAT
@codeSystem	1..1	SHALL		<a href="#">3346-30101</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
precondition	1..*	SHALL		<a href="#">3346-34634</a>	
criteriaReference	1..1	SHALL		<a href="#">3346-34635</a>	
id	1..1	SHALL		<a href="#">3346-34644</a>	
@root	1..1	SHALL		<a href="#">3346-34645</a>	
@extension	1..1	SHALL		<a href="#">3346-34646</a>	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-18774).
  - a. This templateId **SHALL** contain at least one [1..\*] **item** (CONF:3346-18775) such that it
    - i. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.2.7"** (CONF:3346-18776).
    - ii. **SHALL** contain exactly one [1..1] **@extension="2017-08-01"** (CONF:3346-34633).
2. **MAY** contain zero or one [0..1] **id** (CONF:3346-18960).
3. **SHALL** contain exactly one [1..1] **code** (CONF:3346-19059).
  - a. This code **SHALL** contain exactly one [1..1] **@code="57026-7"** Population Criteria (CONF:3346-19060).
  - b. This code **SHALL** contain exactly one [1..1] **@codeSystem** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3346-30092).
4. **SHALL** contain exactly one [1..1] **title** (CONF:3346-18781).
  - a. This title **SHALL** contain exactly one [1..1] **@value="Population Criteria Section"** (CONF:3346-18782).
5. **SHALL** contain exactly one [1..1] **text** (CONF:3346-18961).
6. **SHALL** contain at least one [1..\*] **component** (CONF:3346-29995) such that it
  - a. **SHALL** contain exactly one [1..1] **initialPopulationCriteria** (CONF:3346-29996).
    - i. This initialPopulationCriteria **SHALL** contain exactly one [1..1] **code** (CONF:3346-30022).
      1. This code **SHALL** contain exactly one [1..1] **@code="IPOP"** Initial Population (CONF:3346-30023).

2. This code **SHALL** contain exactly one [1..1] **@codeSystem**  
 (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4)  
 (CONF:3346-30093).
- ii. This initialPopulationCriteria **SHALL** contain at least one [1..\*] **precondition**  
 (CONF:3346-34868).
  1. Such preconditions **SHALL** contain exactly one [1..1]  
**criteriaReference** (CONF:3346-34869).
    - a. This criteriaReference **SHALL** contain exactly one [1..1] **id**  
 (CONF:3346-34870).
      - i. This id **SHALL** contain exactly one [1..1] **@root**  
 (CONF:3346-34886).
      - ii. This id **SHALL** contain exactly one [1..1] **@extension**  
 (CONF:3346-34887).
7. **MAY** contain zero or more [0..\*] **component** (CONF:3346-30024) such that it
  - a. **SHALL** contain exactly one [1..1] **numeratorCriteria** (CONF:3346-30025).
    - i. This numeratorCriteria **SHALL** contain exactly one [1..1] **code** (CONF:3346-30028).
      1. This code **SHALL** contain exactly one [1..1] **@code="NUMER"**  
 Numerator (CONF:3346-30029).
      2. This code **SHALL** contain exactly one [1..1] **@codeSystem**  
 (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4)  
 (CONF:3346-30094).
    - ii. This numeratorCriteria **SHALL** contain at least one [1..\*] **precondition**  
 (CONF:3346-34871).
      1. Such preconditions **SHALL** contain exactly one [1..1]  
**criteriaReference** (CONF:3346-34872).
        - a. This criteriaReference **SHALL** contain exactly one [1..1] **id**  
 (CONF:3346-34873).
          - i. This id **SHALL** contain exactly one [1..1] **@root**  
 (CONF:3346-34888).
          - ii. This id **SHALL** contain exactly one [1..1] **@extension**  
 (CONF:3346-34889).
  8. **MAY** contain zero or more [0..\*] **component** (CONF:3346-30026) such that it
    - a. **SHALL** contain exactly one [1..1] **denominatorCriteria** (CONF:3346-30027).
      - i. This denominatorCriteria **SHALL** contain exactly one [1..1] **code** (CONF:3346-30030).
        1. This code **SHALL** contain exactly one [1..1] **@code="DENOM"**  
 Denominator (CONF:3346-30031).
        2. This code **SHALL** contain exactly one [1..1] **@codeSystem**  
 (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4)  
 (CONF:3346-30095).
      - ii. This denominatorCriteria **SHALL** contain at least one [1..\*] **precondition**  
 (CONF:3346-34874).
        1. Such preconditions **SHALL** contain exactly one [1..1]  
**criteriaReference** (CONF:3346-34875).

- a. This criteriaReference **SHALL** contain exactly one [1..1] **id** (CONF:3346-34876).
    - i. This id **SHALL** contain exactly one [1..1] **@root** (CONF:3346-34890).
    - ii. This id **SHALL** contain exactly one [1..1] **@extension** (CONF:3346-34891).
9. **MAY** contain zero or more [0..\*] **component** (CONF:3346-30032) such that it
- a. **SHALL** contain exactly one [1..1] **measurePopulationCriteria** (CONF:3346-30033).
    - i. This measurePopulationCriteria **SHALL** contain exactly one [1..1] **code** (CONF:3346-30034).
      - 1. This code **SHALL** contain exactly one [1..1] **@code="MSRPOPL"** Measure Population (CONF:3346-30035).
      - 2. This code **SHALL** contain exactly one [1..1] **@codeSystem** (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30096).
    - ii. This measurePopulationCriteria **SHALL** contain at least one [1..\*] **precondition** (CONF:3346-34877).
      - 1. Such preconditions **SHALL** contain exactly one [1..1] **criteriaReference** (CONF:3346-34878).
        - a. This criteriaReference **SHALL** contain exactly one [1..1] **id** (CONF:3346-34879).
          - i. This id **SHALL** contain exactly one [1..1] **@root** (CONF:3346-34892).
          - ii. This id **SHALL** contain exactly one [1..1] **@extension** (CONF:3346-34893).
10. **MAY** contain zero or more [0..\*] **component** (CONF:3346-30036) such that it
- a. **SHALL** contain exactly one [1..1] **denominatorExceptionCriteria** (CONF:3346-30037).
    - i. This denominatorExceptionCriteria **SHALL** contain exactly one [1..1] **code** (CONF:3346-30038).
      - 1. This code **SHALL** contain exactly one [1..1] **@code="DENEXCEP"** Denominator Exception (CONF:3346-30039).
      - 2. This code **SHALL** contain exactly one [1..1] **@codeSystem** (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30097).
    - ii. This denominatorExceptionCriteria **SHALL** contain at least one [1..\*] **precondition** (CONF:3346-34880).
      - 1. Such preconditions **SHALL** contain exactly one [1..1] **criteriaReference** (CONF:3346-34881).
        - a. This criteriaReference **SHALL** contain exactly one [1..1] **id** (CONF:3346-34882).
          - i. This id **SHALL** contain exactly one [1..1] **@root** (CONF:3346-34894).
          - ii. This id **SHALL** contain exactly one [1..1] **@extension** (CONF:3346-34895).

11. **MAY** contain zero or more [0..\*] **component** (CONF:3346-30040) such that it
  - a. **SHALL** contain exactly one [1..1] **denominatorExclusionCriteria** (CONF:3346-30041).
    - i. This denominatorExclusionCriteria **SHALL** contain exactly one [1..1] **code** (CONF:3346-30042).
      1. This code **SHALL** contain exactly one [1..1] @code="DENEX" Denominator Exclusion (CONF:3346-30043).
      2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30098).
    - ii. This denominatorExclusionCriteria **SHALL** contain at least one [1..\*] **precondition** (CONF:3346-34883).
      1. Such preconditions **SHALL** contain exactly one [1..1] **criteriaReference** (CONF:3346-34884).
        - a. This criteriaReference **SHALL** contain exactly one [1..1] **id** (CONF:3346-34885).
          - i. This id **SHALL** contain exactly one [1..1] @root (CONF:3346-34896).
          - ii. This id **SHALL** contain exactly one [1..1] @extension (CONF:3346-34897).
  12. **MAY** contain zero or more [0..\*] **component** (CONF:3346-30044) such that it
    - a. **SHALL** contain exactly one [1..1] **numeratorExclusionCriteria** (CONF:3346-30045).
      - i. This numeratorExclusionCriteria **SHALL** contain exactly one [1..1] **code** (CONF:3346-30046).
        1. This code **SHALL** contain exactly one [1..1] @code="NUMEX" Numerator Exclusion (CONF:3346-30047).
        2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30099).
      - ii. This numeratorExclusionCriteria **SHALL** contain at least one [1..\*] **precondition** (CONF:3346-34898).
        1. Such preconditions **SHALL** contain exactly one [1..1] **criteriaReference** (CONF:3346-34899).
          - a. This criteriaReference **SHALL** contain exactly one [1..1] **id** (CONF:3346-34900).
            - i. This id **SHALL** contain exactly one [1..1] @root (CONF:3346-34904).
            - ii. This id **SHALL** contain exactly one [1..1] @extension (CONF:3346-34905).
    13. **MAY** contain zero or more [0..\*] **component** (CONF:3346-30048) such that it
      - a. **SHALL** contain exactly one [1..1] **measurePopulationExclusionCriteria** (CONF:3346-30049).
        - i. This measurePopulationExclusionCriteria **SHALL** contain exactly one [1..1] **code** (CONF:3346-30050).

1. This code **SHALL** contain exactly one [1..1] @code="MSRPOPLEX" Measure Population Exclusions (CONF:3346-30051).
  2. This code **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30100).
- ii. This measurePopulationExclusionCriteria **SHALL** contain at least one [1..\*] **precondition** (CONF:3346-34901).
    1. Such preconditions **SHALL** contain exactly one [1..1] **criteriaReference** (CONF:3346-34902).
      - a. This criteriaReference **SHALL** contain exactly one [1..1] **id** (CONF:3346-34903).
        - i. This id **SHALL** contain exactly one [1..1] @root (CONF:3346-34906).
        - ii. This id **SHALL** contain exactly one [1..1] @extension (CONF:3346-34907).
14. **MAY** contain zero or more [0..\*] **component** (CONF:3346-30052) such that it
- a. **SHALL** contain exactly one [1..1] **stratifierCriteria** (CONF:3346-30053).
    - i. This stratifierCriteria **MAY** contain zero or one [0..1] **code** (CONF:3346-30054).
      1. The code, if present, **SHALL** contain exactly one [1..1] @code="STRAT" Stratification (CONF:3346-30055).
      2. The code, if present, **SHALL** contain exactly one [1..1] @codeSystem (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30101).
    - ii. This stratifierCriteria **SHALL** contain at least one [1..\*] **precondition** (CONF:3346-34634).
      1. Such preconditions **SHALL** contain exactly one [1..1] **criteriaReference** (CONF:3346-34635).
        - a. This criteriaReference **SHALL** contain exactly one [1..1] **id** (CONF:3346-34644).
          - i. This id **SHALL** contain exactly one [1..1] @root (CONF:3346-34645).
          - ii. This id **SHALL** contain exactly one [1..1] @extension (CONF:3346-34646).

## 5 ENTRY

### 5.1 Admission Source

[Role: identifier urn:hl7ii:2.16.840.1.113883.10.20.28.4.123:2017-05-01  
(open)]

**Table 11: Admission Source Contexts**

Contained By:	Contains:
<a href="#">Encounter, Performed (V2)</a> (optional)	

This template represents the QDM attribute: Admission Source.

The location from which the patient was admitted (e.g., physician referral, facility from which the patient was transferred).

**Table 12: Admission Source Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
Role (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.123:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-34344</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = SDLOC
templateId	1..1	SHALL		<a href="#">3335-34340</a>	
item	1..1	SHALL		<a href="#">3335-34341</a>	
@root	1..1	SHALL		<a href="#">3335-34345</a>	2.16.840.1.113883.10.20.28.3.123
@extension	1..1	SHALL		<a href="#">3335-34530</a>	2017-05-01
code	1..1	SHALL		<a href="#">3335-34342</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-34346</a>	

1. **SHALL** contain exactly one [1..1] **@classCode="SDLOC"** Service Delivery Location (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3335-34344).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-34340) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-34341).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.3.123"** (CONF:3335-34345).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-05-01"** (CONF:3335-34530).
  3. **SHALL** contain exactly one [1..1] **code** (CONF:3335-34342).

- a. This code **SHOULD** contain zero or one [0..1] @valueSet (CONF:3335-34346).

**Figure 4: Admission Source Example**

```
<role classCode="SDLOC">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.123" extension="2017-05-01"/>
  </templateId>
  <code valueSet="{{$QDMElementValueSetOID}}"/>
</role>
```

## 5.2 Adverse Event (V2)

[observationCriteria: identifier  
 urn:hl7ii:2.16.840.1.113883.10.20.28.4.120:2017-08-01 (open) ]

**Table 13: Adverse Event (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Facility Location</a> <a href="#">Severity Observation (V2)</a>

This template represents the QDM data type: Adverse Event.

Adverse Event is used to define any untoward medical occurrence associated with the clinical care delivery, whether or not considered drug related.

Timing: The Prevalence Period references the time from the onset date to the abatement date.

**Table 14: Adverse Event (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.120:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-34210</a>	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		<a href="#">3346-34211</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..0	SHALL NOT		<a href="#">3346-34758</a>	
templateId	1..1	SHALL		<a href="#">3346-34183</a>	
item	1..1	SHALL		<a href="#">3346-34184</a>	
@root	1..1	SHALL		<a href="#">3346-34194</a>	2.16.840.1.113883.10.20.28.4.1 20
@extension	1..1	SHALL		<a href="#">3346-34531</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-34212</a>	
code	1..1	SHALL		<a href="#">3346-34185</a>	
@code	1..1	SHALL		<a href="#">3346-34196</a>	ASSERTION
@codeSystem	1..1	SHALL		<a href="#">3346-34197</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
title	1..1	SHALL		<a href="#">3346-34213</a>	
statusCode	1..1	SHALL		<a href="#">3346-34186</a>	
@code	1..1	SHALL		<a href="#">3346-34198</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-34187</a>	
low	0..1	MAY		<a href="#">3346-34199</a>	
high	0..1	MAY		<a href="#">3346-34200</a>	
value	1..1	SHALL	CD	<a href="#">3346-34188</a>	
@code	1..1	SHALL		<a href="#">3346-34201</a>	281647001
@codeSystem	1..1	SHALL		<a href="#">3346-34202</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
participation	1..1	SHALL		<a href="#">3346-</a>	

				<a href="#">34189</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34207</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM
role	1..1	SHALL		<a href="#">3346-34190</a>	
@classCode	1..1	SHALL		<a href="#">3346-34206</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = MANU
playingEntity	1..1	SHALL		<a href="#">3346-34191</a>	
@classCode	1..1	SHALL		<a href="#">3346-34204</a>	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = MMAT
@determinerCode	1..1	SHALL		<a href="#">3346-34205</a>	urn:oid:2.16.840.1.113883.5.30 (HL7EntityDeterminer) = KIND
code	1..1	SHALL		<a href="#">3346-34192</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-34203</a>	
participation	0..1	MAY		<a href="#">3346-34692</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34694</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3346-34695</a>	
role	1..1	SHALL		<a href="#">3346-34693</a>	
@classCode	1..1	SHALL		<a href="#">3346-34696</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3346-34697</a>	
participation	0..*	MAY		<a href="#">3346-34500</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34501</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = LOC
role	1..1	SHALL		<a href="#">3346-34502</a>	<a href="#">Facility Location (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.92:2017-05-01</a>
outboundRelationship	0..1	MAY		<a href="#">3346-34497</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34498</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = REFR
observationCriteria	1..1	SHALL		<a href="#">3346-34499</a>	<a href="#">Severity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.93:2017-08-01</a>
outboundRelationship	0..1	MAY		<a href="#">3346-34682</a>	
@typeCode	1..1	SHALL		<a href="#">3346-</a>	urn:oid:2.16.840.1.113883.5.10

				<a href="#">34686</a>	02 (HL7ActRelationshipType) = REF.R
observationCriteria	1..1	SHALL		<a href="#">3346-34683</a>	
@classCode	1..1	SHALL		<a href="#">3346-34687</a>	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		<a href="#">3346-34688</a>	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
code	1..1	SHALL		<a href="#">3346-34684</a>	
@code	1..1	SHALL		<a href="#">3346-34689</a>	ASSERTION
@codeSystem	1..1	SHALL		<a href="#">3346-34690</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
value	1..1	SHALL	CD	<a href="#">3346-34685</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-34691</a>	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3346-34210).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-34211).
3. **SHALL NOT** contain [0..0] **@actionNegationInd** (CONF:3346-34758).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-34183) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-34184).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.120"** (CONF:3346-34194).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-08-01"** (CONF:3346-34531).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-34212).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3346-34185).
  - a. This code **SHALL** contain exactly one [1..1] **@code="ASSERTION"** Assertion (CONF:3346-34196).
  - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.5.4"** (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-34197).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3346-34213).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-34186).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-34198).
9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-34187) such that it  
Note: QDM Attribute: Relevant Period (The Relevant Period references the time from the adverse event began to the time the adverse event completed)

- a. **MAY** contain zero or one [0..1] **low** (CONF:3346-34199).  
Note: StartTime – the time the adverse event began
  - b. **MAY** contain zero or one [0..1] **high** (CONF:3346-34200).  
Note: StopTime – the time the adverse event completed
10. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3346-34188).
- a. This value **SHALL** contain exactly one [1..1] @code="281647001" Adverse Reaction (CONF:3346-34201).
  - b. This value **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3346-34202).
11. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-34189) such that it
- Note: Substance
- a. **SHALL** contain exactly one [1..1] @typeCode="CSM" Consumable (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34207).
  - b. **SHALL** contain exactly one [1..1] **role** (CONF:3346-34190).
    - i. This role **SHALL** contain exactly one [1..1] @classCode="MANU" Manufactured (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-34206).
    - ii. This role **SHALL** contain exactly one [1..1] **playingEntity** (CONF:3346-34191).
      - 1. This playingEntity **SHALL** contain exactly one [1..1] @classCode="MMAT" Manufactured Material (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:3346-34204).
      - 2. This playingEntity **SHALL** contain exactly one [1..1] @determinerCode="KIND" Kind (CodeSystem: HL7EntityDeterminer urn:oid:2.16.840.1.113883.5.30) (CONF:3346-34205).
      - 3. This playingEntity **SHALL** contain exactly one [1..1] **code** (CONF:3346-34192).

Note: QDM Attribute: Code

    - a. This code **SHOULD** contain zero or one [0..1] @valueSet (CONF:3346-34203).

12. **MAY** contain zero or one [0..1] **participation** (CONF:3346-34692) such that it

    - a. **SHALL** contain exactly one [1..1] @typeCode="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34694).
    - b. **SHALL** contain exactly one [1..1] **time** (CONF:3346-34695).  
Note: QDM Attribute: Author dateTime
    - c. **SHALL** contain exactly one [1..1] **role** (CONF:3346-34693).
      - i. This role **SHALL** contain exactly one [1..1] @classCode="ROL" Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-34696).
      - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3346-34697).

13. **MAY** contain zero or more [0..\*] **participation** (CONF:3346-34500) such that it

Note: QDM Attribute: Facility Location

- a. **SHALL** contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-34501).
  - b. **SHALL** contain exactly one [1..1] Facility Location (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.92:2017-05-01) (CONF:3346-34502).
14. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34497) such that it  
 Note: QDM Attribute: Severity
- a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34498).
  - b. **SHALL** contain exactly one [1..1] Severity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-08-01) (CONF:3346-34499).
15. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34682) such that it  
 Note: QDM Attribute: Type (The characterization of the reaction (e.g., hypersensitivity, rash, gastroenteric symptoms, etc.)
- a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34686).
  - b. **SHALL** contain exactly one [1..1] **observationCriteria** (CONF:3346-34683).
    - i. This observationCriteria **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3346-34687).
    - ii. This observationCriteria **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-34688).
    - iii. This observationCriteria **SHALL** contain exactly one [1..1] **code** (CONF:3346-34684).
      - 1. This code **SHALL** contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:3346-34689).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-34690).
    - iv. This observationCriteria **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3346-34685).
      - 1. This value **SHOULD** contain zero or one [0..1] @valueSet (CONF:3346-34691).

**Figure 5: Adverse Event (V2) Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.120" extension="2017-08-01"/>
  </templateId>
  <id root="69da3f12-e963-4f6f-baed-3e59cf9b58c8"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" codeSystemName="ActCode"/>
  <title value="Adverse Event"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" code="281647001" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED-CT">
    <displayName value="Adverse Reaction"/>
  </value>
  <participation typeCode="CSM">
    <role classCode="MANU">
      <playingEntity classCode="MMAT" determinerCode="KIND">
        <code valueSet="{$QDMElementValueSetOID}"/>
      </playingEntity>
    </role>
  </participation>
</observationCriteria>
```

### 5.3 Allergy Intolerance (V2)

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.119:2017-08-01 (open)]

**Table 15: Allergy Intolerance (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Severity Observation (V2)</a>

This template represents the QDM data type: Allergy/Intolerance.

Allergy is used to address immune-mediated reactions to a substance such as type 1 hypersensitivity reactions, other allergy-like reactions, including pseudo-allergy.

Intolerance is a record of a clinical assessment of a propensity, or a potential risk to an individual, to have a non-immune mediated adverse reaction on future exposure to the specified substance, or class of substance.

Timing: The Prevalence Period references the time from the onset date to the abatement date.

**Table 16: Allergy Intolerance (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.119:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-34241</a>	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		<a href="#">3346-34242</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..0	SHALL NOT		<a href="#">3346-34759</a>	
templateId	1..1	SHALL		<a href="#">3346-34215</a>	
item	1..1	SHALL		<a href="#">3346-34216</a>	
@root	1..1	SHALL		<a href="#">3346-34228</a>	2.16.840.1.113883.10.20.28.4.1 19
@extension	1..1	SHALL		<a href="#">3346-34532</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-34243</a>	
code	1..1	SHALL		<a href="#">3346-34217</a>	
@code	1..1	SHALL		<a href="#">3346-34229</a>	ASSERTION
@codeSystem	1..1	SHALL		<a href="#">3346-34230</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
title	1..1	SHALL		<a href="#">3346-34244</a>	
statusCode	1..1	SHALL		<a href="#">3346-34218</a>	
@code	1..1	SHALL		<a href="#">3346-34231</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-34219</a>	
low	0..1	MAY		<a href="#">3346-34232</a>	
high	0..1	MAY		<a href="#">3346-34233</a>	
value	1..1	SHALL	CD	<a href="#">3346-34220</a>	
@code	1..1	SHALL		<a href="#">3346-34234</a>	106190000
@codeSystem	1..1	SHALL		<a href="#">3346-34235</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
participation	1..1	SHALL		<a href="#">3346-</a>	

				<a href="#">34221</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34240</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM
role	1..1	SHALL		<a href="#">3346-34222</a>	
@classCode	1..1	SHALL		<a href="#">3346-34239</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = MANU
playingEntity	1..1	SHALL		<a href="#">3346-34223</a>	
@classCode	1..1	SHALL		<a href="#">3346-34237</a>	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = MMAT
@determinerCode	1..1	SHALL		<a href="#">3346-34238</a>	urn:oid:2.16.840.1.113883.5.30 (HL7EntityDeterminer) = KIND
code	1..1	SHALL		<a href="#">3346-34224</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-34236</a>	
participation	0..1	MAY		<a href="#">3346-34710</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34713</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3346-34711</a>	
low	1..1	SHALL		<a href="#">3346-34714</a>	
role	1..1	SHALL		<a href="#">3346-34712</a>	
@classCode	1..1	SHALL		<a href="#">3346-34715</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3346-34716</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-34214</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34226</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = REFR
observationCriteria	1..1	SHALL		<a href="#">3346-34225</a>	<u>Severity Observation (V2)</u> <u>(identifier:</u> <u>urn:hl7ii:2.16.840.1.113883.10.</u> <u>20.28.4.93:2017-08-01</u>
outboundRelationship	0..1	MAY		<a href="#">3346-34704</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34709</a>	REFR
observationCriteria	1..1	SHALL		<a href="#">3346-34705</a>	
@classCode	1..1	SHALL		<a href="#">3346-34707</a>	OBS

@moodCode	1..1	SHALL		<a href="#">3346-34708</a>	EVN
code	1..1	SHALL		<a href="#">3346-34706</a>	
@code	1..1	SHALL		<a href="#">3346-34698</a>	ASSERTION
@codeSystem	1..1	SHALL		<a href="#">3346-34699</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
value	1..1	SHALL	CD	<a href="#">3346-34700</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-34701</a>	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3346-34241).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-34242).
3. **SHALL NOT** contain [0..0] **@actionNegationInd** (CONF:3346-34759).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-34215) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-34216).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.119"** (CONF:3346-34228).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-08-01"** (CONF:3346-34532).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-34243).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3346-34217).
  - a. This code **SHALL** contain exactly one [1..1] **@code="ASSERTION"** Assertion (CONF:3346-34229).
  - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.5.4"** (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-34230).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3346-34244).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-34218).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-34231).
9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-34219) such that it
 

Note: QDM Attribute: Prevalence Period (The Prevalence Period references the time from the onset date to the abatement date)

  - a. **MAY** contain zero or one [0..1] **low** (CONF:3346-34232).
 

Note: Onset Date
  - b. **MAY** contain zero or one [0..1] **high** (CONF:3346-34233).
 

Note: Abatement Date
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:3346-34220).

- a. This value **SHALL** contain exactly one [1..1] @code="106190000" Allergy (CONF:3346-34234).
  - b. This value **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3346-34235).
11. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-34221) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="CSM" Consumable (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34240).
  - b. **SHALL** contain exactly one [1..1] **role** (CONF:3346-34222).
    - i. This role **SHALL** contain exactly one [1..1] @classCode="MANU" Manufactured (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-34239).
    - ii. This role **SHALL** contain exactly one [1..1] **playingEntity** (CONF:3346-34223).
      - 1. This playingEntity **SHALL** contain exactly one [1..1] @classCode="MMAT" Manufactured Material (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:3346-34237).
      - 2. This playingEntity **SHALL** contain exactly one [1..1] @determinerCode="KIND" Kind (CodeSystem: HL7EntityDeterminer urn:oid:2.16.840.1.113883.5.30) (CONF:3346-34238).
      - 3. This playingEntity **SHALL** contain exactly one [1..1] **code** (CONF:3346-34224).
- Note: QDM Attribute: Code
- a. This code **SHOULD** contain zero or one [0..1] @valueSet (CONF:3346-34236).
12. **MAY** contain zero or one [0..1] **participation** (CONF:3346-34710) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34713).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3346-34711).
    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3346-34714).
- Note: QDM Attribute: Author dateTime
- c. **SHALL** contain exactly one [1..1] **role** (CONF:3346-34712).
    - i. This role **SHALL** contain exactly one [1..1] @classCode="ROL" Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-34715).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3346-34716).
13. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34214) such that it
- Note: QDM Attribute: Severity
- a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34226).

- b. **SHALL** contain exactly one [1..1] **Severity Observation (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-08-01) (CONF:3346-34225).
14. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34704) such that it Note: QDM Attribute: Type (The characterization of the reaction (e.g., hypersensitivity, rash, gastroenteric symptoms, etc.)
- a. **SHALL** contain exactly one [1..1] @**typeCode**="REFR" Refers To (CONF:3346-34709).
  - b. **SHALL** contain exactly one [1..1] **observationCriteria** (CONF:3346-34705).
    - i. This observationCriteria **SHALL** contain exactly one [1..1] @**classCode**="OBS" (CONF:3346-34707).
    - ii. This observationCriteria **SHALL** contain exactly one [1..1] @**moodCode**="EVN" (CONF:3346-34708).
    - iii. This observationCriteria **SHALL** contain exactly one [1..1] **code** (CONF:3346-34706).
      - 1. This code **SHALL** contain exactly one [1..1] @**code**="ASSERTION" Assertion (CONF:3346-34698).
      - 2. This code **SHALL** contain exactly one [1..1] @**codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-34699).
    - iv. This observationCriteria **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3346-34700).
      - 1. This value **SHOULD** contain zero or one [0..1] @**valueSet** (CONF:3346-34701).

**Figure 6: Allergy Intolerance (V2) Example**

```

<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.119" extension="2017-08-01"/>
  </templateId>
  <id root="dd055113-6d52-4b3f-928e-235f8e52c4c0"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" codeSystemName="ActCode"/>
  <title value="Allergy Intolerance"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" code="106190000" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED-CT">
    <displayName value="Allergy"/>
  </value>
  <participation typeCode="CSM">
    <role classCode="MANU">
      <playingEntity classCode="MMAT" determinerCode="KIND">
        <code valueSet="{$QDMElementValueSetOID}"/>
      </playingEntity>
    </role>
  </participation>
</observationCriteria>

```

## 5.4 Assessment, Performed (V2)

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.117:2017-08-01 (open) ]

**Table 17: Assessment, Performed (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Component</a> <a href="#">Reason</a> <a href="#">Related To</a>

This template represents the QDM data type: Assessment, Performed.

Assessment is a resource used to define specific observations that clinicians use to guide treatment of the patient. An assessment can be a single question, or observable entity with an expected response, an organized collection of questions intended to solicit information from patients, providers or other individuals, or a single observable entity that is part of such a collection of questions. The Assessment Performed template represents the completion of an assessment.

Timing: The time the assessment is completed; author time.

**Table 18: Assessment, Performed (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.117:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-34142</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3346-34143</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..1	MAY		<a href="#">3346-34144</a>	
templateId	1..1	SHALL		<a href="#">3346-34126</a>	
item	1..1	SHALL		<a href="#">3346-34127</a>	
@root	1..1	SHALL		<a href="#">3346-34134</a>	2.16.840.1.113883.10.20.28.4.1 17
@extension	1..1	SHALL		<a href="#">3346-34254</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-34145</a>	
code	1..1	SHALL		<a href="#">3346-34128</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-34136</a>	
title	1..1	SHALL		<a href="#">3346-34146</a>	
statusCode	1..1	SHALL		<a href="#">3346-34129</a>	
@code	1..1	SHALL		<a href="#">3346-34137</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	0..1	MAY		<a href="#">3346-34147</a>	
methodCode	0..1	MAY		<a href="#">3346-34246</a>	
item	0..1	SHOULD		<a href="#">3346-34247</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-34249</a>	
participation	0..1	MAY		<a href="#">3346-34735</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34738</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3346-34736</a>	
low	1..1	SHALL		<a href="#">3346-34739</a>	

role	1..1	SHALL		<a href="#">3346-34737</a>	
@classCode	1..1	SHALL		<a href="#">3346-34741</a>	ROL
id	0..1	MAY		<a href="#">3346-34740</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-34245</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34250</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3346-34248</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.88:2017-05-01</a>
outboundRelationship	0..*	MAY		<a href="#">3346-34608</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34609</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = REFR
observationCriteria	1..1	SHALL		<a href="#">3346-34610</a>	<a href="#">Component (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.121:2017-05-01</a>
outboundRelationship	0..*	MAY		<a href="#">3346-34732</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34733</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = REFR
observationCriteria	1..1	SHALL		<a href="#">3346-34734</a>	<a href="#">Related To (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.127:2017-08-01</a>

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CONF:3346-34142).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood  
urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-34143).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3346-34144).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-34126) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-34127).
    - i. This item **SHALL** contain exactly one [1..1]  
**@root="2.16.840.1.113883.10.20.28.4.117"** (CONF:3346-34134).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-08-01"** (CONF:3346-34254).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-34145).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3346-34128).  
Note: QDM Attribute: Code
  - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-34136).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3346-34146).

8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-34129).
  - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-34137).
9. **MAY** contain zero or one [0..1] **value** (CONF:3346-34147).
 

Note: QDM Attribute: Result
10. **MAY** contain zero or one [0..1] **methodCode** (CONF:3346-34246).
 

Note: QDM Attribute: Method

  - a. The methodCode, if present, **SHOULD** contain zero or one [0..1] **item** (CONF:3346-34247).
    - i. The item, if present, **SHOULD** contain zero or one [0..1] @valueSet (CONF:3346-34249).
11. **MAY** contain zero or one [0..1] **participation** (CONF:3346-34735) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34738).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3346-34736).
 

Note: QDM Attribute: Author dateTime (The time the assessment is completed)

    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3346-34739).
12. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34245) such that it
 

Note: QDM Attribute: Reason

  - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34250).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3346-34248).
13. **MAY** contain zero or more [0..\*] **outboundRelationship** (CONF:3346-34608) such that it
 

Note: QDM Attribute: Component

  - a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34609).
  - b. **SHALL** contain exactly one [1..1] **Component** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.121:2017-05-01) (CONF:3346-34610).
14. **MAY** contain zero or more [0..\*] **outboundRelationship** (CONF:3346-34732) such that it
 

Note: QDM Attribute: Related To

  - a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34733).

- b. **SHALL** contain exactly one [1..1] **Related To** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01) (CONF:3346-34734).

**Figure 7: Assessment, Performed (V2) Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.117" extension="2017-08-01"/>
  </templateId>
  <id root="08f25bc3-5eff-49a5-b2ec-f66f1027574c"/>
  <code valueSet="{$QDMElementValueSetOID}"/>
  <title value="Assessment, Performed"/>
  <statusCode code="completed"/>
</observationCriteria>
```

## 5.5 Assessment, Recommended

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.118:2017-05-01 (open)]

**Table 19: Assessment, Recommended Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a>

This template represents the QDM data type: Assessment, Recommended.

Assessment is a resource used to define specific observations that clinicians use to guide treatment of the patient. An assessment can be a single question, or observable entity with an expected response, an organized collection of questions intended to solicit information from patients, providers or other individuals, or a single observable entity that is part of such a collection of questions. This template represents a recommendation to perform an assessment.

All QDM datatypes referring to recommendations address the time that the recommendation occurs, a single point in time. Vendors have expressed concerns that recommendations are not necessarily captured or managed in a standard manner as part of structured data capture in clinical workflow; many are documented as part of assessments in narrative text. Measure developers should address feasibility of clinical workflow to capture recommendations when evaluating measures.

Timing: The time the recommendation is authored (i.e., provided to the patient).

**Table 20: Assessment, Recommended Constraints Overview**

<b>XPath</b>	<b>Card.</b>	<b>Verb</b>	<b>Data Type</b>	<b>CONF #</b>	<b>Value</b>
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.118:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-34165</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3335-34166</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = INT
@actionNegationInd	0..1	MAY		<a href="#">3335-34167</a>	
templateId	1..1	SHALL		<a href="#">3335-34149</a>	
item	1..1	SHALL		<a href="#">3335-34150</a>	
@root	1..1	SHALL		<a href="#">3335-34157</a>	2.16.840.1.113883.10.20.28.4.1 18
@extension	1..1	SHALL		<a href="#">3335-34273</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-34168</a>	
code	1..1	SHALL		<a href="#">3335-34151</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-34159</a>	
title	1..1	SHALL		<a href="#">3335-34169</a>	
statusCode	1..1	SHALL		<a href="#">3335-34152</a>	
@code	1..1	SHALL		<a href="#">3335-34160</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
methodCode	0..1	MAY		<a href="#">3335-34265</a>	
item	0..1	SHOULD		<a href="#">3335-34266</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-34268</a>	
participation	0..1	MAY		<a href="#">3335-34270</a>	
@typeCode	1..1	SHALL		<a href="#">3335-34274</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3335-34271</a>	
low	1..1	SHALL		<a href="#">3335-34275</a>	
role	1..1	SHALL		<a href="#">3335-34272</a>	

@classCode	1..1	SHALL		<a href="#">3335-34276</a>	ROL
id	0..1	MAY		<a href="#">3335-34277</a>	
outboundRelationship	0..1	MAY		<a href="#">3335-34264</a>	
@typeCode	1..1	SHALL		<a href="#">3335-34269</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3335-34267</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.88:2017-05-01</a>

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CONF:3335-34165).
2. **SHALL** contain exactly one [1..1] **@moodCode="INT"** intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-34166).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3335-34167).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-34149).
  - a. This templateId **SHALL** contain exactly one [1..1] **item** (CONF:3335-34150).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.118"** (CONF:3335-34157).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-05-01"** (CONF:3335-34273).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3335-34168).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3335-34151).  
Note: QDM Attribute: Code
  - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3335-34159).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3335-34169).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-34152).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code="active"** Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-34160).
9. **MAY** contain zero or one [0..1] **methodCode** (CONF:3335-34265).  
Note: QDM Attribute: Method
  - a. The methodCode, if present, **SHOULD** contain zero or one [0..1] **item** (CONF:3335-34266).
    - i. The item, if present, **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3335-34268).
10. **MAY** contain zero or one [0..1] **participation** (CONF:3335-34270) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-34274).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3335-34271).

- i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3335-34275).  
Note: QDM Attribute: Author Time - the time the recommendation is authored (i.e., provided to the patient)
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3335-34272).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CONF:3335-34276).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3335-34277).
11. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3335-34264) such that it  
Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-34269).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3335-34267).

**Figure 8: Assessment, Recommended Example**

```
<observationCriteria classCode="OBS" moodCode="INT">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.118" extension="2017-05-01"/>
  </templateId>
  <id root="904c1629-8a5d-4a33-846e-994a97a3caf0"/>
  <code valueSet="{$QDMElementValueSetOID}"/>
  <title value="Assessment, Recommended"/>
  <statusCode code="active"/>
</observationCriteria>
```

## 5.6 Care Goal (V2)

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.7:2017-08-01 (open)]

**Table 21: Care Goal (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Related To</a> <a href="#">Target Outcome</a>

This template represents the QDM data type: Care Goal.

Care Goal represents a defined target or measure to be achieved in the process of patient care, that is, an expected outcome. A typical goal is expressed as a change in status expected at a defined future time. That change can be an observation represented by other QDM categories (diagnostic tests, laboratory tests, symptoms, etc.) scheduled for some time in the future and with a particular value. A goal can be found in the plan of care (care plan), the structure used by all stakeholders, including the patient, to define the management actions for the various conditions, problems, or issues identified for the target of the plan. This structure, through which the goals and care-planning actions and processes can be organized, planned,

communicated, and checked for completion, is represented in the QDM categories as a Record Artifact. A time/date stamp is required. Specifically, a care plan is composed of the following elements:

- Problem, which is managed by other QDM standard categories (condition/diagnosis/problem) and their related data elements.
- Procedure, which is managed by other standard categories and their related data elements. Note that procedures are a continuum of interventions ranging from actions patients can do for themselves to those that can be performed by others (caregivers or clinical professionals), including detailed complex surgical procedures requiring highly trained physicians, nurses, and state-of-the-art facilities.
- Goal, which is what is expected to happen.
- Outcome, which is what happened. An outcome can be shown by other QDM standard categories and their related data elements.

**Table 22: Care Goal (V2) Constraints Overview**

<b>XPath</b>	<b>Card.</b>	<b>Verb</b>	<b>Data Type</b>	<b>CONF #</b>	<b>Value</b>
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.7:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-27869</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3346-27870</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = GOL
@actionNegationInd	0..0	SHALL NOT		<a href="#">3346-34760</a>	
templateId	1..1	SHALL		<a href="#">3346-27872</a>	
item	1..1	SHALL		<a href="#">3346-28447</a>	
@root	1..1	SHALL		<a href="#">3346-28448</a>	2.16.840.1.113883.10.20.28.4.7
@extension	1..1	SHALL		<a href="#">3346-33051</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-32479</a>	
code	1..1	SHALL		<a href="#">3346-27873</a>	
@code	1..1	SHALL		<a href="#">3346-27874</a>	ASSERTION
@codeSystem	1..1	SHALL		<a href="#">3346-27875</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
title	1..1	SHALL		<a href="#">3346-32480</a>	
statusCode	1..1	SHALL		<a href="#">3346-32481</a>	
@code	1..1	SHALL		<a href="#">3346-32482</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-32488</a>	
low	0..1	MAY		<a href="#">3346-32489</a>	
high	0..1	MAY		<a href="#">3346-32490</a>	
value	1..1	SHALL	CD	<a href="#">3346-27876</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-32483</a>	
outboundRelationship	0..*	MAY		<a href="#">3346-33032</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34743</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) =

					REFR
observationCriteria	1..1	SHALL		<a href="#">3346-34744</a>	<a href="#">Related To (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01)</a>
outboundRelationship	0..1	MAY		<a href="#">3346-34742</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34745</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observationCriteria	1..1	SHALL		<a href="#">3346-34746</a>	<a href="#">Target Outcome (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.128:2017-08-01)</a>

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CONF:3346-27869).
2. **SHALL** contain exactly one [1..1] **@moodCode**="GOL" Goal (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-27870).
3. **SHALL NOT** contain [0..0] **@actionNegationInd** (CONF:3346-34760).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-27872) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-28447).
    - i. This item **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.28.4.7" (CONF:3346-28448).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension**="2017-08-01" (CONF:3346-33051).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-32479).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3346-27873).
  - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" (CONF:3346-27874).
  - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-27875).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3346-32480).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-32481).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="active" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-32482).
9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-32488) such that it
 

Note: QDM Attribute: Relevant Period (The Relevant Period references the period between Start Time and Stop Time)

  - a. **MAY** contain zero or one [0..1] **low** (CONF:3346-32489).
 

Note: Start dateTIme (when the goal is recorded, and therefore should be considered effective)
  - b. **MAY** contain zero or one [0..1] **high** (CONF:3346-32490).
 

Note: Stop dateTIme (when the target outcome is expected to be met)
10. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3346-27876).
 

Note: QDM Attribute: Code

  - a. This value **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-32483).

11. **MAY** contain zero or more [0..\*] **outboundRelationship** (CONF:3346-33032) such that it  
Note: QDM Attribute: Related To

- a. **SHALL** contain exactly one [1..1] @typeCode="REFR" refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34743).
- b. **SHALL** contain exactly one [1..1] Related To (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01) (CONF:3346-34744).

12. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34742) such that it  
Note: QDM Attribute: Target Outcome

- a. **SHALL** contain exactly one [1..1] @typeCode="REFR" refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34745).
- b. **SHALL** contain exactly one [1..1] Target Outcome (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.128:2017-08-01) (CONF:3346-34746).

**Figure 9: Care Goal (V2) Example**

```
<observationCriteria classCode="OBS" moodCode="GOL">
    <templateId>
        <item root="2.16.840.1.113883.10.20.28.4.7" extension="2017-08-01"/>
    </templateId>
    <id root="f0a729a3-6fe8-4e79-acee-b4dd16b3e755"/>
    <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
    <title value="Care Goal"/>
    <statusCode code="active"/>
    <value xsi:type="CD" valueSet="{$QDMElementValueSetOID}"/>
</observationCriteria>
```

## 5.7 Cause

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.105:2017-05-01 (open) ]

**Table 23: Cause Contexts**

Contained By:	Contains:
<u>Patient Characteristic Expired</u> (optional)	

This template represents the QDM attribute: Cause.

This represents the recorded cause of death.

**Table 24: Cause Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.105:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-33456</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3335-33457</a>	EVN
templateId	1..1	SHALL		<a href="#">3335-33453</a>	
item	1..1	SHALL		<a href="#">3335-33454</a>	
@root	1..1	SHALL		<a href="#">3335-33458</a>	2.16.840.1.113883.10.20.28.4.105
@extension	1..1	SHALL		<a href="#">3335-34647</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-33459</a>	
code	1..1	SHALL		<a href="#">3335-33455</a>	
@code	1..1	SHALL		<a href="#">3335-33460</a>	42752001
@codeSystem	1..1	SHALL		<a href="#">3335-33461</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
title	1..1	SHALL		<a href="#">3335-33463</a>	
value	1..1	SHALL	CD	<a href="#">3335-33462</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-34663</a>	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CONF:3335-33456).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CONF:3335-33457).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-33453) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-33454).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.105"** (CONF:3335-33458).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-05-01"** (CONF:3335-34647).
4. **SHALL** contain exactly one [1..1] **id** (CONF:3335-33459).
5. **SHALL** contain exactly one [1..1] **code** (CONF:3335-33455).
  - a. This code **SHALL** contain exactly one [1..1] **@code="42752001"** Due to (CONF:3335-33460).

- b. This code **SHALL** contain exactly one [1..1] `@codeSystem="2.16.840.1.113883.6.96"` (CodeSystem: SNOMED CT `urn:oid:2.16.840.1.113883.6.96`) (CONF:3335-33461).
- 6. **SHALL** contain exactly one [1..1] **title** (CONF:3335-33463).
- 7. **SHALL** contain exactly one [1..1] **value** with `@xsi:type="CD"` (CONF:3335-33462).
  - a. This value **SHOULD** contain zero or one [0..1] `@valueSet` (CONF:3335-34663).

**Figure 10: Cause Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.105" extension="2017-08-01"/>
  </templateId>
  <id root="302625d2-e41a-4d51-ba11-af0dfc81a11b"/>
  <code code="42752001" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <displayName value="Due to"/>
  </code>
  <title value="Cause"/>
  <value xsi:type="CD" valueSet="{$QDMElementValueSetOID}"/>
</observationCriteria>
```

## 5.8 Communication: From Patient to Provider (V2)

[actCriteria: identifier urn:hl7ii:2.16.840.1.113883.10.20.28.4.8:2017-08-01  
(open)]

**Table 25: Communication: From Patient to Provider (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a> <a href="#">Related To</a>

This template represents the QDM data type: Communication: From Patient to Provider.

This represents a communication initiated by the patient and received by the provider.

Timing: The time the communication occurs, or is sent; author time.

**Table 26: Communication: From Patient to Provider (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
actCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.8:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-27877</a>	ACT
@moodCode	1..1	SHALL		<a href="#">3346-27878</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..1	MAY		<a href="#">3346-31929</a>	
templateId	1..1	SHALL		<a href="#">3346-27879</a>	
item	1..1	SHALL		<a href="#">3346-31930</a>	
@root	1..1	SHALL		<a href="#">3346-31931</a>	2.16.840.1.113883.10.20.28.4.8
@extension	1..1	SHALL		<a href="#">3346-33638</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-31932</a>	
code	1..1	SHALL		<a href="#">3346-33473</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-33474</a>	
title	1..1	SHALL		<a href="#">3346-31933</a>	
statusCode	1..1	SHALL		<a href="#">3346-31934</a>	
@code	1..1	SHALL		<a href="#">3346-31935</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-31936</a>	
low	1..1	SHALL		<a href="#">3346-31937</a>	
participation	1..1	SHALL		<a href="#">3346-27883</a>	
@typeCode	1..1	SHALL		<a href="#">3346-27884</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
role	1..1	SHALL		<a href="#">3346-31939</a>	
@classCode	1..1	SHALL		<a href="#">3346-31940</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = PAT
participation	1..1	SHALL		<a href="#">3346-27887</a>	
@typeCode	1..1	SHALL		<a href="#">3346-27888</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = IRCP

role	1..1	SHALL		<a href="#">3346-31941</a>	
@classCode	1..1	SHALL		<a href="#">3346-31942</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = ASSIGNED
code	1..1	SHALL		<a href="#">3346-31943</a>	
@code	1..1	SHALL		<a href="#">3346-31944</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 158965000
@codeSystem	1..1	SHALL		<a href="#">3346-31945</a>	2.16.840.1.113883.6.96
outboundRelationship	0..1	MAY		<a href="#">3346-33468</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33471</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3346-33472</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01)</a>
outboundRelationship	0..*	MAY		<a href="#">3346-34748</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34750</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observationCriteria	1..1	SHALL		<a href="#">3346-34751</a>	<a href="#">Related To (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01)</a>

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** Act (CONF:3346-27877).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-27878).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3346-31929).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-27879) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-31930).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.8"** (CONF:3346-31931).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-08-01"** (CONF:3346-33638).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-31932).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3346-33473).  
Note: QDM Attribute: Code
  - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-33474).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3346-31933).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-31934).

- a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-31935).
- 9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-31936) such that it
  - a. **SHALL** contain exactly one [1..1] **low** (CONF:3346-31937).
 

Note: QDM Attribute: Author dateTime (The time the communication occurs, or is sent)
- 10. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-27883) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-27884).
  - b. **SHALL** contain exactly one [1..1] **role** (CONF:3346-31939).
    - i. This role **SHALL** contain exactly one [1..1] @classCode="PAT" Patient (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-31940).
- 11. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-27887) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="IRCP" Information Recipient (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-27888).
  - b. **SHALL** contain exactly one [1..1] **role** (CONF:3346-31941).
    - i. This role **SHALL** contain exactly one [1..1] @classCode="ASSIGNED" Assigned (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-31942).
    - ii. This role **SHALL** contain exactly one [1..1] **code** (CONF:3346-31943).
      - 1. This code **SHALL** contain exactly one [1..1] @code="158965000" Medical practitioner (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3346-31944).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" SNOMED-CT (CONF:3346-31945).
- 12. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-33468) such that it
 

Note: QDM Attribute: Reason

  - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-33471).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3346-33472).
- 13. **MAY** contain zero or more [0..\*] **outboundRelationship** (CONF:3346-34748) such that it
 

Note: QDM Attribute: Related To

  - a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34750).
  - b. **SHALL** contain exactly one [1..1] **Related To** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01) (CONF:3346-34751).

**Figure 11: Communication: From Patient to Provider (V2) Example**

```
<actCriteria classCode="ACT" moodCode="EVN">
    <templateId>
        <item root="2.16.840.1.113883.10.20.28.4.8" extension="2017-08-01"/>
    </templateId>
    <id root="6bf11fc2-78f9-4517-bafa-7988b350e188"/>
    <code valueSet="{$QDMElementValueSetOID}"/>
    <title value="Communication: From Patient to Provider"/>
    <statusCode code="completed"/>
    <participation typeCode="AUT">
        <role classCode="PAT"/>
    </participation>
    <participation typeCode="IRCP">
        <role classCode="ASSIGNED">
            <code code="158965000" codeSystem="2.16.840.1.113883.6.96">
                <displayName value="Medical Practitioner"/>
            </code>
        </role>
    </participation>
</actCriteria>
```

## 5.9 Communication: From Provider to Patient (V2)

[actCriteria: identifier urn:hl7ii:2.16.840.1.113883.10.20.28.4.9:2017-08-01  
(open)]

**Table 27: Communication: From Provider to Patient (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a> <a href="#">Related To</a>

This template represents the QDM data type: Communication: From Provider to Patient.

This represents the provision of any communication to the patient. (e.g., results, findings, plans for care, medical advice, instructions, educational resources, appointments).

Timing: The time the communication occurs, or is sent; author time.

**Table 28: Communication: From Provider to Patient (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
actCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.9:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-32075</a>	ACT
@moodCode	1..1	SHALL		<a href="#">3346-32076</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..1	MAY		<a href="#">3346-32077</a>	
templateId	1..1	SHALL		<a href="#">3346-32078</a>	
item	1..1	SHALL		<a href="#">3346-32079</a>	
@root	1..1	SHALL		<a href="#">3346-32080</a>	2.16.840.1.113883.10.20.28.4.9
@extension	1..1	SHALL		<a href="#">3346-33639</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-32081</a>	
code	1..1	SHALL		<a href="#">3346-33521</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-33522</a>	
title	1..1	SHALL		<a href="#">3346-32082</a>	
statusCode	1..1	SHALL		<a href="#">3346-32083</a>	
@code	1..1	SHALL		<a href="#">3346-32084</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-32085</a>	
low	1..1	SHALL		<a href="#">3346-32086</a>	
participation	1..1	SHALL		<a href="#">3346-32088</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32089</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = IRCP
role	1..1	SHALL		<a href="#">3346-32090</a>	
@classCode	1..1	SHALL		<a href="#">3346-32091</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = PAT
participation	1..1	SHALL		<a href="#">3346-32092</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32093</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT

role	1..1	SHALL		<a href="#">3346-32094</a>	
@classCode	1..1	SHALL		<a href="#">3346-32095</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = ASSIGNED
code	1..1	SHALL		<a href="#">3346-32096</a>	
@code	1..1	SHALL		<a href="#">3346-32097</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 158965000
@codeSystem	1..1	SHALL		<a href="#">3346-32098</a>	2.16.840.1.113883.6.96
outboundRelationship	0..1	MAY		<a href="#">3346-33516</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33519</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3346-33520</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01)</a>
outboundRelationship	0..*	MAY		<a href="#">3346-34850</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34851</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observationCriteria	1..1	SHALL		<a href="#">3346-34852</a>	<a href="#">Related To (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01)</a>

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** Act (CONF:3346-32075).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-32076).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3346-32077).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-32078) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-32079).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.9"** (CONF:3346-32080).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-08-01"** (CONF:3346-33639).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-32081).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3346-33521).  
Note: QDM Attribute: Code
  - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-33522).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3346-32082).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-32083).

- a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-32084).
- 9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-32085) such that it
  - a. **SHALL** contain exactly one [1..1] **low** (CONF:3346-32086).
 

Note: QDM Attribute: Author dateTime (The time the communication occurs, or is sent)
- 10. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-32088) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="IRCP" Information Recipient (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-32089).
  - b. **SHALL** contain exactly one [1..1] **role** (CONF:3346-32090).
    - i. This role **SHALL** contain exactly one [1..1] @classCode="PAT" Patient (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-32091).
- 11. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-32092) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-32093).
  - b. **SHALL** contain exactly one [1..1] **role** (CONF:3346-32094).
    - i. This role **SHALL** contain exactly one [1..1] @classCode="ASSIGNED" Assigned (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-32095).
    - ii. This role **SHALL** contain exactly one [1..1] **code** (CONF:3346-32096).
      - 1. This code **SHALL** contain exactly one [1..1] @code="158965000" Medical practitioner (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3346-32097).
      - 2. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" SNOMED-CT (CONF:3346-32098).
- 12. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-33516) such that it
 

Note: QDM Attribute: Reason

  - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-33519).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3346-33520).
- 13. **MAY** contain zero or more [0..\*] **outboundRelationship** (CONF:3346-34850) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34851).
  - b. **SHALL** contain exactly one [1..1] **Related To** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01) (CONF:3346-34852).

Note: QDM Attribute: Related To

**Figure 12: Communication: From Provider to Patient (V2) Example**

```
<actCriteria classCode="ACT" moodCode="EVN">
    <templateId>
        <item root="2.16.840.1.113883.10.20.28.4.9" extension="2017-08-01"/>
    </templateId>
    <id root="779f04e6-60f0-4c34-987f-7e6188907a5c"/>
    <code valueSet="{$QDMElementValueSetOID}"/>
    <title value="Communication: From Provider to Patient"/>
    <statusCode code="completed"/>
    <participation typeCode="IRCP">
        <role classCode="PAT"/>
    </participation>
    <participation typeCode="AUT">
        <role classCode="ASSIGNED">
            <code code="158965000" codeSystem="2.16.840.1.113883.6.96">
                <displayName value="Medical Practitioner"/>
            </code>
        </role>
    </participation>
</actCriteria>
```

## 5.10 Communication: From Provider to Provider (V2)

[actCriteria: identifier urn:hl7ii:2.16.840.1.113883.10.20.28.4.10:2017-08-01 (open)]

**Table 29: Communication: From Provider to Provider (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a> <a href="#">Related To</a>

This template represents the QDM data type: Communication: From Provider to Provider.

This represents the provision of any communication from one clinician to another regarding findings, assessments, plans of care, consultative advice, instructions, educational resources, etc.

Timing: The time the communication occurs, or is sent; author time.

**Table 30: Communication: From Provider to Provider (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
actCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.10:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-32127</a>	ACT
@moodCode	1..1	SHALL		<a href="#">3346-32128</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..1	MAY		<a href="#">3346-32129</a>	
templateId	1..1	SHALL		<a href="#">3346-32130</a>	
item	1..1	SHALL		<a href="#">3346-32131</a>	
@root	1..1	SHALL		<a href="#">3346-32132</a>	2.16.840.1.113883.10.20.28.3.1 0
@extension	1..1	SHALL		<a href="#">3346-33640</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-32133</a>	
code	1..1	SHALL		<a href="#">3346-33524</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-33525</a>	
title	1..1	SHALL		<a href="#">3346-32134</a>	
statusCode	1..1	SHALL		<a href="#">3346-32135</a>	
@code	1..1	SHALL		<a href="#">3346-32136</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-32137</a>	
low	1..1	SHALL		<a href="#">3346-32138</a>	
participation	1..1	SHALL		<a href="#">3346-32140</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32141</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = IRCP
role	1..1	SHALL		<a href="#">3346-32142</a>	
@classCode	1..1	SHALL		<a href="#">3346-32143</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = ASSIGNED
code	1..1	SHALL		<a href="#">3346-32144</a>	
@code	1..1	SHALL		<a href="#">3346-32145</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 158965000

@codeSystem	1..1	SHALL		<a href="#">3346-32146</a>	2.16.840.1.113883.6.96
participation	1..1	SHALL		<a href="#">3346-32147</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32148</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
role	1..1	SHALL		<a href="#">3346-32149</a>	
@classCode	1..1	SHALL		<a href="#">3346-32150</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = ASSIGNED
code	1..1	SHALL		<a href="#">3346-32151</a>	
@code	1..1	SHALL		<a href="#">3346-32152</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 158965000
@codeSystem	1..1	SHALL		<a href="#">3346-32153</a>	2.16.840.1.113883.6.96
outboundRelationship	0..1	MAY		<a href="#">3346-33053</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33054</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3346-33055</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01</a>
outboundRelationship	0..*	MAY		<a href="#">3346-34853</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34854</a>	REFR
observationCriteria	1..1	SHALL		<a href="#">3346-34855</a>	<a href="#">Related To (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01</a>

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** Act (CONF:3346-32127).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-32128).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3346-32129).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-32130) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-32131).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.3.10"** (CONF:3346-32132).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-08-01"** (CONF:3346-33640).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-32133).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3346-33524).  
Note: QDM Attribute: Code

- a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-33525).
- 7. **SHALL** contain exactly one [1..1] **title** (CONF:3346-32134).
- 8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-32135).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-32136).
- 9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-32137) such that it
  - a. **SHALL** contain exactly one [1..1] **low** (CONF:3346-32138).
 

Note: QDM Attribute: Author dateTime (The time the communication occurs, or is sent)
- 10. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-32140) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode="IRCP"** Information Recipient (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-32141).
  - b. **SHALL** contain exactly one [1..1] **role** (CONF:3346-32142).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="ASSIGNED"** Assigned (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-32143).
    - ii. This role **SHALL** contain exactly one [1..1] **code** (CONF:3346-32144).
      - 1. This code **SHALL** contain exactly one [1..1] **@code="158965000"** Medical Practitioner (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3346-32145).
      - 2. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.6.96"** SNOMED-CT (CONF:3346-32146).
- 11. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-32147) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-32148).
  - b. **SHALL** contain exactly one [1..1] **role** (CONF:3346-32149).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="ASSIGNED"** Assigned (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-32150).
    - ii. This role **SHALL** contain exactly one [1..1] **code** (CONF:3346-32151).
      - 1. This code **SHALL** contain exactly one [1..1] **@code="158965000"** Medical practitioner (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3346-32152).
      - 2. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.6.96"** SNOMED-CT (CONF:3346-32153).
- 12. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-33053) such that it
 

Note: QDM Attribute: Reason

  - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-33054).

- b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3346-33055).
13. **MAY** contain zero or more [0..\*] **outboundRelationship** (CONF:3346-34853) such that it Note: QDM Attribute: Related To
- a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers to (CONF:3346-34854).
  - b. **SHALL** contain exactly one [1..1] **Related To** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01) (CONF:3346-34855).

**Figure 13: Communication: From Provider to Provider (V2) Example**

```
<actCriteria classCode="ACT" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.10" extension="2017-08-01"/>
  </templateId>
  <id root="9c74ac9b-2507-4193-a010-584b31f3f29a"/>
  <code valueSet="{$QDMElementValueSetOID}"/>
  <title value="Communication: From Provider to Provider"/>
  <statusCode code="completed"/>
  <participation typeCode="IRCP">
    <role classCode="ASSIGNED">
      <code code="158965000" codeSystem="2.16.840.1.113883.6.96">
        <displayName value="Medical Practitioner"/>
      </code>
    </role>
  </participation>
  <participation typeCode="AUT">
    <role classCode="ASSIGNED">
      <code code="158965000" codeSystem="2.16.840.1.113883.6.96">
        <displayName value="Medical Practitioner"/>
      </code>
    </role>
  </participation>
</actCriteria>
```

## 5.11 Component

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.121:2017-05-01 (open) ]

**Table 31: Component Contexts**

Contained By:	Contains:
<a href="#">Assessment, Performed (V2)</a> (optional)	
<a href="#">Diagnostic Study, Performed (V2)</a> (optional)	
<a href="#">Procedure, Performed (V2)</a> (optional)	
<a href="#">Physical Exam, Performed (V2)</a> (optional)	

This template represents the QDM attribute: Components.

Components represent elements included or documented as part of evaluations or test panels. Examples include: specific questions included in assessments, tests included in a laboratory test panel, observations included in a cardiac exam during a physical examination.

**Table 32: Component Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.121:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-34576</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3335-34577</a>	EVN
templateId	1..1	SHALL		<a href="#">3335-34570</a>	
item	1..1	SHALL		<a href="#">3335-34571</a>	
@root	1..1	SHALL		<a href="#">3335-34573</a>	2.16.840.1.113883.10.20.28.4.121
@extension	1..1	SHALL		<a href="#">3335-34580</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-34578</a>	
code	1..1	SHALL		<a href="#">3335-34572</a>	
title	1..1	SHALL		<a href="#">3335-34607</a>	
value	1..1	SHALL		<a href="#">3335-34579</a>	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CONF:3335-34576).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CONF:3335-34577).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-34570) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-34571).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.121"** (CONF:3335-34573).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-05-01"** (CONF:3335-34580).
4. **SHALL** contain exactly one [1..1] **id** (CONF:3335-34578).
5. **SHALL** contain exactly one [1..1] **code** (CONF:3335-34572).  
Note: Code
6. **SHALL** contain exactly one [1..1] **title** (CONF:3335-34607).
7. **SHALL** contain exactly one [1..1] **value** (CONF:3335-34579).  
Note: Result

**Figure 14: Component Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.121" extension="2017-05-01"/>
  </templateId>
  <id root="dccce626-74a2-41ef-9add-60070b6bb936"/>
  <code code="32412-9" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC">
    <displayName value="5 minute Apgar Heart rate"/>
  </code>
  <title value="Component"/>
  <value xsi:type="CD" valueSet="${QDMElementValueSetOID}"/>
</observationCriteria>
```

### 5.11.1 Laboratory Test Component

[observationCriteria: identifier  
urn:h17ii:2.16.840.1.113883.10.20.28.4.126:2017-05-01 (open) ]

**Table 33: Laboratory Test Component Contexts**

Contained By:	Contains:
<a href="#">Laboratory Test, Performed (V2)</a> (optional)	<a href="#">Laboratory Test Reference Range</a>

This template represents the QDM attribute: Component (for Laboratory Test, Performed).

**Table 34: Laboratory Test Component Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.126:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-34588</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3335-34589</a>	EVN
templateId	1..1	SHALL		<a href="#">3335-34581</a>	
item	1..1	SHALL		<a href="#">3335-34582</a>	
@root	1..1	SHALL		<a href="#">3335-34584</a>	2.16.840.1.113883.10.20.28.4.126
@extension	1..1	SHALL		<a href="#">3335-34585</a>	2017-05-01
outboundRelationship	0..1	MAY		<a href="#">3335-34604</a>	
@typeCode	1..1	SHALL		<a href="#">3335-34605</a>	REFR
observationCriteria	1..1	SHALL		<a href="#">3335-34616</a>	<a href="#">Laboratory Test Reference Range (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.124:2017-05-01)</a>

1. Conforms to [Component](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.121:2017-05-01).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CONF:3335-34588).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CONF:3335-34589).
4. **SHALL** contain exactly one [1..1] templateId (CONF:3335-34581) such that it
  - a. **SHALL** contain exactly one [1..1] item (CONF:3335-34582).
    - i. This item **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.28.4.126" (CONF:3335-34584).
    - ii. This item **SHALL** contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-34585).
5. **MAY** contain zero or one [0..1] outboundRelationship (CONF:3335-34604) such that it
 Note: Reference Range
  - a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers To (CONF:3335-34605).
  - b. **SHALL** contain exactly one [1..1] [Laboratory Test Reference Range](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.124:2017-05-01) (CONF:3335-34616).

**Figure 15: Laboratory Test Component Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.121" extension="2017-05-01"/>
  </templateId>
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.126" extension="2017-05-01"/>
  </templateId>
  <id root="edd94e15-dc95-49d6-8a65-74cb2b87c93b"/>
  <code code="2339-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC">
    <displayName value="Glucose [Mass/?volume] in Blood"/>
  </code>
  <title value="Cause"/>
  <value xsi:type="CD" valueSet="${QDMElementValueSetOID}"/>
</observationCriteria>
```

## 5.12 Device, Applied

[procedureCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.13:2017-05-01 (open) ]

**Table 35: Device, Applied Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a>

This template represents the QDM data type: Device, Applied.

This represents the application of an instrument, apparatus, implement, machine, contrivance, implant, in-vitro reagent, or other similar or related article, including a component part or accessory, intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease and that is not dependent on being metabolized to achieve any of its primary intended purposes.

Timing: The Relevant Period addresses: startTime – When the device is inserted or first used; stopTime – when the device is removed or last used.

**Table 36: Device, Applied Constraints Overview**

<b>XPath</b>	<b>Card.</b>	<b>Verb</b>	<b>Data Type</b>	<b>CONF #</b>	<b>Value</b>
procedureCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.13:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-31302</a>	PROC
@moodCode	1..1	SHALL		<a href="#">3335-31303</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..1	MAY		<a href="#">3335-31304</a>	
templateId	1..1	SHALL		<a href="#">3335-31305</a>	
item	1..1	SHALL		<a href="#">3335-31306</a>	
@root	1..1	SHALL		<a href="#">3335-31307</a>	2.16.840.1.113883.10.20.28.4.1 3
@extension	1..1	SHALL		<a href="#">3335-33361</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-31308</a>	
code	1..1	SHALL		<a href="#">3335-31517</a>	
@code	1..1	SHALL		<a href="#">3335-33062</a>	360030002
@codeSystem	1..1	SHALL		<a href="#">3335-33063</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
title	1..1	SHALL		<a href="#">3335-31309</a>	
statusCode	1..1	SHALL		<a href="#">3335-31310</a>	
@code	1..1	SHALL		<a href="#">3335-31311</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3335-31312</a>	
low	0..1	MAY		<a href="#">3335-31313</a>	
high	0..1	MAY		<a href="#">3335-31314</a>	
approachSiteCode	0..1	MAY		<a href="#">3335-33359</a>	
item	0..1	SHOULD		<a href="#">3335-33360</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-33362</a>	
targetSiteCode	0..1	MAY		<a href="#">3335-31485</a>	

item	0..1	SHOULD		<a href="#">3335-33060</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-33061</a>	
participation	1..1	SHALL		<a href="#">3335-31315</a>	
@typeCode	1..1	SHALL		<a href="#">3335-31316</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DEV
role	1..1	SHALL		<a href="#">3335-31317</a>	
@classCode	1..1	SHALL		<a href="#">3335-31318</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU
playingDevice	1..1	SHALL		<a href="#">3335-31319</a>	
@classCode	1..1	SHALL		<a href="#">3335-31320</a>	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = DEV
@determinerCode	1..1	SHALL		<a href="#">3335-31321</a>	urn:oid:2.16.840.1.113883.5.30 (HL7EntityDeterminer) = KIND
code	1..1	SHALL		<a href="#">3335-31322</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-31323</a>	
participation	1..1	SHALL		<a href="#">3335-34503</a>	
@typeCode	1..1	SHALL		<a href="#">3335-34506</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3335-34504</a>	
low	1..1	SHALL		<a href="#">3335-34507</a>	
role	1..1	SHALL		<a href="#">3335-34505</a>	
@classCode	1..1	SHALL		<a href="#">3335-34508</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3335-34509</a>	
outboundRelationship	0..1	MAY		<a href="#">3335-31330</a>	
@typeCode	1..1	SHALL		<a href="#">3335-31331</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3335-31332</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.88:2017-05-01</a>

1. **SHALL** contain exactly one [1..1] @classCode="PROC" Procedure (CONF:3335-31302).

2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-31303).
3. **MAY** contain zero or one [0..1] @actionNegationInd (CONF:3335-31304).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] templateId (CONF:3335-31305) such that it
  - a. **SHALL** contain exactly one [1..1] item (CONF:3335-31306).
    - i. This item **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.28.4.13" (CONF:3335-31307).
    - ii. This item **SHALL** contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33361).
5. **SHALL** contain exactly one [1..1] id (CONF:3335-31308).
6. **SHALL** contain exactly one [1..1] code (CONF:3335-31517).
  - a. This code **SHALL** contain exactly one [1..1] @code="360030002" Application of Device (CONF:3335-33062).
  - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3335-33063).
7. **SHALL** contain exactly one [1..1] title (CONF:3335-31309).
8. **SHALL** contain exactly one [1..1] statusCode (CONF:3335-31310).
  - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-31311).
9. **MAY** contain zero or one [0..1] effectiveTime (CONF:3335-31312) such that it  
Note: QDM Attribute: Relevant Period
  - a. **MAY** contain zero or one [0..1] low (CONF:3335-31313).  
Note: startTime (When the device is inserted or first used)
  - b. **MAY** contain zero or one [0..1] high (CONF:3335-31314).  
Note: stopTime (When the device is removed or last used)
10. **MAY** contain zero or one [0..1] approachSiteCode (CONF:3335-33359).  
Note: QDM Attribute: Anatomical Approach Site
  - a. The approachSiteCode, if present, **SHOULD** contain zero or one [0..1] item (CONF:3335-33360).
    - i. The item, if present, **SHOULD** contain zero or one [0..1] @valueSet (CONF:3335-33362).
11. **MAY** contain zero or one [0..1] targetSiteCode (CONF:3335-31485).  
Note: QDM Attribute: Anatomical Location Site
  - a. The targetSiteCode, if present, **SHOULD** contain zero or one [0..1] item (CONF:3335-33060).
    - i. The item, if present, **SHOULD** contain zero or one [0..1] @valueSet (CONF:3335-33061).
12. **SHALL** contain exactly one [1..1] participation (CONF:3335-31315) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="DEV" Device (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-31316).
  - b. **SHALL** contain exactly one [1..1] role (CONF:3335-31317).

- i. This role **SHALL** contain exactly one [1..1] **@classCode="MANU"** Manufactured Product (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3335-31318).
  - ii. This role **SHALL** contain exactly one [1..1] **playingDevice** (CONF:3335-31319).
    - 1. This playingDevice **SHALL** contain exactly one [1..1] **@classCode="DEV"** Device (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:3335-31320).
    - 2. This playingDevice **SHALL** contain exactly one [1..1] **@determinerCode="KIND"** Kind (CodeSystem: HL7EntityDeterminer urn:oid:2.16.840.1.113883.5.30) (CONF:3335-31321).
    - 3. This playingDevice **SHALL** contain exactly one [1..1] **code** (CONF:3335-31322).
- Note: QDM Attribute: Code
- a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3335-31323).
13. **SHALL** contain exactly one [1..1] **participation** (CONF:3335-34503) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-34506).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3335-34504).
    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3335-34507).
- Note: QDM Attribute: Author date
- c. **SHALL** contain exactly one [1..1] **role** (CONF:3335-34505).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3335-34508).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3335-34509).
14. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3335-31330) such that it
- Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-31331).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3335-31332).

**Figure 16: Device, Applied Example**

```
<procedureCriteria classCode="PROC" moodCode="EVN">
    <templateId>
        <item root="2.16.840.1.113883.10.20.28.4.13" extension="2017-05-01"/>
    </templateId>
    <id root="0dd19511-ce93-4490-9b9a-8cf3d967cf94"/>
    <code code="360030002" codeSystem="2.16.840.1.113883.6.96">
        <displayName value="Application of Device"/>
    </code>
    <title value="Device, Applied"/>
    <statusCode code="completed"/>
    <participation typeCode="DEV">
        <role classCode="MANU">
            <playingDevice classCode="DEV" determinerCode="KIND">
                <code valueSet="{$QDMElementValueSetOID}"/>
            </playingDevice>
        </role>
    </participation>
</procedureCriteria>
```

## 5.13 Device, Order

[supplyCriteria: identifier urn:hl7ii:2.16.840.1.113883.10.20.28.4.15:2017-05-01 (open)]

**Table 37: Device, Order Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a>

This template represents the QDM data type: Device, Order.

Device represents an order for an instrument, apparatus, implement, machine, contrivance, implant, in-vitro reagent, or other similar or related article, including a component part or accessory, intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease and that is not dependent on being metabolized to achieve any of its primary intended purposes.

Timing: The time the order is signed; author time

**Table 38: Device, Order Constraints Overview**

<b>XPath</b>	<b>Card.</b>	<b>Verb</b>	<b>Data Type</b>	<b>CONF #</b>	<b>Value</b>
supplyCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.15:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-29840</a>	SPLY
@moodCode	1..1	SHALL		<a href="#">3335-29841</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = RQO
@actionNegationInd	0..1	MAY		<a href="#">3335-31002</a>	
templateId	1..1	SHALL		<a href="#">3335-29842</a>	
item	1..1	SHALL		<a href="#">3335-29843</a>	
@root	1..1	SHALL		<a href="#">3335-29844</a>	2.16.840.1.113883.10.20.28.4.1 5
@extension	1..1	SHALL		<a href="#">3335-33642</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-29845</a>	
title	1..1	SHALL		<a href="#">3335-29846</a>	
statusCode	1..1	SHALL		<a href="#">3335-31003</a>	
@code	1..1	SHALL		<a href="#">3335-31004</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
participation	1..1	SHALL		<a href="#">3335-29847</a>	
@typeCode	1..1	SHALL		<a href="#">3335-29848</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DEV
role	1..1	SHALL		<a href="#">3335-29849</a>	
@classCode	1..1	SHALL		<a href="#">3335-29850</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = MANU
playingDevice	1..1	SHALL		<a href="#">3335-29851</a>	
@classCode	1..1	SHALL		<a href="#">3335-29852</a>	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = DEV
@determinerCode	1..1	SHALL		<a href="#">3335-29853</a>	urn:oid:2.16.840.1.113883.5.30 (HL7EntityDeterminer) = KIND
code	1..1	SHALL		<a href="#">3335-29854</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-29855</a>	
participation	0..1	MAY		<a href="#">3335-33475</a>	

@typeCode	1..1	SHALL		<a href="#">3335-33477</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3335-33476</a>	
low	1..1	SHALL		<a href="#">3335-33478</a>	
role	1..1	SHALL		<a href="#">3335-33569</a>	
@classCode	1..1	SHALL		<a href="#">3335-33570</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3335-33571</a>	
outboundRelationship	0..1	MAY		<a href="#">3335-29888</a>	
@typeCode	1..1	SHALL		<a href="#">3335-29892</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3335-29889</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01</a>

1. **SHALL** contain exactly one [1..1] **@classCode="SPLY"** Supply (CONF:3335-29840).
2. **SHALL** contain exactly one [1..1] **@moodCode="RQO"** Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-29841).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3335-31002).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-29842) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-29843).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.15"** (CONF:3335-29844).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-05-01"** (CONF:3335-33642).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3335-29845).
6. **SHALL** contain exactly one [1..1] **title** (CONF:3335-29846).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-31003).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code="active"** Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-31004).
8. **SHALL** contain exactly one [1..1] **participation** (CONF:3335-29847) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode="DEV"** Device (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-29848).
  - b. **SHALL** contain exactly one [1..1] **role** (CONF:3335-29849).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="MANU"** Manufactured Product (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3335-29850).

- ii. This role **SHALL** contain exactly one [1..1] **playingDevice** (CONF:3335-29851).
  - 1. This playingDevice **SHALL** contain exactly one [1..1] **@classCode="DEV"** Device (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:3335-29852).
  - 2. This playingDevice **SHALL** contain exactly one [1..1] **@determinerCode="KIND"** Kind (CodeSystem: HL7EntityDeterminer urn:oid:2.16.840.1.113883.5.30) (CONF:3335-29853).
  - 3. This playingDevice **SHALL** contain exactly one [1..1] **code** (CONF:3335-29854).

Note: QDM Attribute: Code

  - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3335-29855).
- 9. **MAY** contain zero or one [0..1] **participation** (CONF:3335-33475) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-33477).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3335-33476).
    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3335-33478).  
Note: QDM Attribute: Author dateTime (The time the order is signed)
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3335-33569).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3335-33570).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3335-33571).
- 10. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3335-29888) such that it  
Note: QDM Attribute: Reason
  - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-29892).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3335-29889).

**Figure 17: Device, Order Example**

```
<supplyCriteria classCode="SPLY" moodCode="RQO">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.15" extension="2017-05-01"/>
  </templateId>
  <id root="5ab17ed3-166c-4265-9c61-d254e30c8e83"/>
  <title value="Device, Order"/>
  <statusCode code="active"/>
  <participation typeCode="DEV">
    <role classCode="MANU">
      <playingDevice classCode="DEV" determinerCode="KIND">
        <code valueSet="{$QDMElementValueSetOID}"/>
      </playingDevice>
    </role>
  </participation>
</supplyCriteria>
```

## 5.14 Device, Recommended

[supplyCriteria: identifier urn:hl7ii:2.16.840.1.113883.10.20.28.4.16:2017-05-01 (open)]

**Table 39: Device, Recommended Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2) (optional)</a>	<a href="#">Reason</a>

This template represents the QDM data type: Device, Recommended.

Device represents a recommendation for an instrument, apparatus, implement, machine, contrivance, implant, in-vitro reagent, or other similar or related article, including a component part or accessory, intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease and that is not dependent on being metabolized to achieve any of its primary intended purposes.

Timing: The time the recommendation is authored (i.e., provided to the patient).

All QDM datatypes referring to recommendations address the time that the recommendation occurs, a single point in time. Vendors have expressed concerns that recommendations are not necessarily captured or managed in a standard manner as part of structured data capture in clinical workflow; many are documented as part of assessments in narrative text. Measure developers should address feasibility of clinical workflow to capture recommendations when evaluating measures.

**Table 40: Device, Recommended Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
supplyCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.16:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-31708</a>	SPLY
@moodCode	1..1	SHALL		<a href="#">3335-31709</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = INT
@actionNegationInd	0..1	MAY		<a href="#">3335-31710</a>	
templateId	1..1	SHALL		<a href="#">3335-31711</a>	
item	1..1	SHALL		<a href="#">3335-31712</a>	
@root	1..1	SHALL		<a href="#">3335-31713</a>	2.16.840.1.113883.10.20.28.4.1 6
@extension	1..1	SHALL		<a href="#">3335-33699</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-31714</a>	
title	1..1	SHALL		<a href="#">3335-31715</a>	
statusCode	1..1	SHALL		<a href="#">3335-31716</a>	
@code	1..1	SHALL		<a href="#">3335-31717</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
participation	1..1	SHALL		<a href="#">3335-31721</a>	
@typeCode	1..1	SHALL		<a href="#">3335-31722</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DEV
role	1..1	SHALL		<a href="#">3335-31723</a>	
@classCode	1..1	SHALL		<a href="#">3335-31724</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = MANU
playingDevice	1..1	SHALL		<a href="#">3335-31725</a>	
@classCode	1..1	SHALL		<a href="#">3335-31726</a>	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = DEV
@determinerCode	1..1	SHALL		<a href="#">3335-31727</a>	urn:oid:2.16.840.1.113883.5.30 (HL7EntityDeterminer) = KIND
code	1..1	SHALL		<a href="#">3335-31728</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-31729</a>	
participation	0..1	MAY		<a href="#">3335-34322</a>	

@typeCode	1..1	SHALL		<a href="#">3335-34325</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3335-34323</a>	
low	1..1	SHALL		<a href="#">3335-34326</a>	
role	1..1	SHALL		<a href="#">3335-34324</a>	
@classCode	1..1	SHALL		<a href="#">3335-34327</a>	ROL
id	0..1	MAY		<a href="#">3335-34328</a>	
outboundRelationship	0..1	MAY		<a href="#">3335-31736</a>	
@typeCode	1..1	SHALL		<a href="#">3335-31737</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3335-31738</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.88:2017-05-01</a>

1. **SHALL** contain exactly one [1..1] **@classCode="SPLY"** Supply (CONF:3335-31708).
2. **SHALL** contain exactly one [1..1] **@moodCode="INT"** Intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-31709).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3335-31710).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-31711) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-31712).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.16"** (CONF:3335-31713).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-05-01"** (CONF:3335-33699).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3335-31714).
6. **SHALL** contain exactly one [1..1] **title** (CONF:3335-31715).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-31716).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code="active"** Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-31717).
8. **SHALL** contain exactly one [1..1] **participation** (CONF:3335-31721) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode="DEV"** Device (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-31722).
  - b. **SHALL** contain exactly one [1..1] **role** (CONF:3335-31723).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="MANU"** Manufactured Product (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3335-31724).

- ii. This role **SHALL** contain exactly one [1..1] **playingDevice** (CONF:3335-31725).
    - 1. This playingDevice **SHALL** contain exactly one [1..1] **@classCode="DEV"** Device (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:3335-31726).
    - 2. This playingDevice **SHALL** contain exactly one [1..1] **@determinerCode="KIND"** Kind (CodeSystem: HL7EntityDeterminer urn:oid:2.16.840.1.113883.5.30) (CONF:3335-31727).
    - 3. This playingDevice **SHALL** contain exactly one [1..1] **code** (CONF:3335-31728).  
Note: QDM Attribute: Code
      - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3335-31729).
9. **MAY** contain zero or one [0..1] **participation** (CONF:3335-34322) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-34325).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3335-34323).
    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3335-34326).  
Note: QDM Attribute: Author dateTime (The time the recommendation is authored (i.e., provided to the patient))
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3335-34324).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CONF:3335-34327).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3335-34328).
10. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3335-31736) such that it  
Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-31737).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3335-31738).

**Figure 18: Device, Recommended Example**

```
<supplyCriteria classCode="SPLY" moodCode="INT">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.16" extension="2017-05-01"/>
  </templateId>
  <id root="5ab17ed3-166c-426d-9c61-d254e30c9e87"/>
  <title value="Device, Recommended"/>
  <statusCode code="active"/>
  <participation typeCode="DEV">
    <role classCode="MANU">
      <playingDevice classCode="DEV" determinerCode="KIND">
        <code valueSet="{$QDMElementValueSetOID}"/>
      </playingDevice>
    </role>
  </participation>
</supplyCriteria>
```

## 5.15 Diagnosis (V2)

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.110:2017-08-01 (open) ]

**Table 41: Diagnosis (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional) <a href="#">Encounter, Performed (V2)</a> (optional)	<a href="#">Severity Observation (V2)</a>

Condition/Diagnosis/Problem represents a practitioner's identification of a patient's disease, illness, injury, or condition. This category contains a single datatype to represent all of these concepts: Diagnosis. A practitioner determines the diagnosis by means of examination, diagnostic test results, patient history, and/or family history. Diagnoses are usually considered unfavorable, but may also represent neutral or favorable conditions that affect a patient's plan of care (e.g., pregnancy).

The QDM does not prescribe the source of diagnosis data in the EHR. Diagnoses may be found in a patient's problem list, encounter diagnosis list, claims data, or other sources within the EHR. The preferred terminology for diagnoses is SNOMEDCT, but diagnoses may also be encoded using ICD9/10.

The Diagnosis datatype should not be used for differential diagnoses or rule out diagnoses (neither of which are currently supported by the QDM).

The onset datetime corresponds to the implicit start datetime of the datatype and the abatement datetime corresponds to the implicit stop datetime of the datatype. If the abatement datetime is null, then the diagnosis is considered to still be active. When this datatype is used with timing relationships, the criterion is looking for an active diagnosis for the time frame indicated by the timing relationships.

Timing: The Prevalence Period references the time from the onset date to the abatement date.

**Table 42: Diagnosis (V2) Constraints Overview**

<b>XPath</b>	<b>Card.</b>	<b>Verb</b>	<b>Data Type</b>	<b>CONF #</b>	<b>Value</b>
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.110:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-33768</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3346-33769</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..0	SHALL NOT		<a href="#">3346-34702</a>	
templateId	1..1	SHALL		<a href="#">3346-33770</a>	
item	1..1	SHALL		<a href="#">3346-33771</a>	
@root	1..1	SHALL		<a href="#">3346-33776</a>	2.16.840.1.113883.10.20.28.4.1 10
@extension	1..1	SHALL		<a href="#">3346-34321</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-33777</a>	
code	1..1	SHALL		<a href="#">3346-33772</a>	
@code	1..1	SHALL		<a href="#">3346-33778</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 282291009
@codeSystem	1..1	SHALL		<a href="#">3346-33779</a>	2.16.840.1.113883.6.96
title	1..1	SHALL		<a href="#">3346-33780</a>	
statusCode	1..1	SHALL		<a href="#">3346-33773</a>	
@code	1..1	SHALL		<a href="#">3346-33781</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-33774</a>	
low	0..1	MAY		<a href="#">3346-33782</a>	
high	0..1	MAY		<a href="#">3346-33783</a>	
value	1..1	SHALL	CD	<a href="#">3346-33775</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-33784</a>	
targetSiteCode	0..1	MAY		<a href="#">3346-33785</a>	
item	0..*	SHOULD		<a href="#">3346-33786</a>	

@valueSet	0..1	SHOULD		<a href="#">3346-33788</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-33787</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33789</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REF_R
observationCriteria	1..1	SHALL		<a href="#">3346-33790</a>	<a href="#">Severity Observation (V2)</a> <a href="#">(identifier:</a> <a href="#">urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-08-01</a>

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CONF:3346-33768).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-33769).
3. **SHALL NOT** contain [0..0] **@actionNegationInd** (CONF:3346-34702).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-33770) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-33771).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.110"** (CONF:3346-33776).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-08-01"** (CONF:3346-34321).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-33777).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3346-33772).
  - a. This code **SHALL** contain exactly one [1..1] **@code="282291009"** Diagnosis (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3346-33778).
  - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.6.96"** (SNOMED CT) (CONF:3346-33779).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3346-33780).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-33773).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-33781).
9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-33774) such that it
 

Note: QDM Attribute: Prevalence Period (The Prevalence Period references the time from the onset date to the abatement date)

  - a. **MAY** contain zero or one [0..1] **low** (CONF:3346-33782).
 

Note: Onset dateTime
  - b. **MAY** contain zero or one [0..1] **high** (CONF:3346-33783).
 

Note: Abatement dateTime
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:3346-33775).
  - a. This value **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-33784).
11. **MAY** contain zero or one [0..1] **targetSiteCode** (CONF:3346-33785).
 

Note: QDM attribute: Anatomical Location Site

- a. The targetSiteCode, if present, **SHOULD** contain zero or more [0..\*] **item** (CONF:3346-33786).
    - i. The item, if present, **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-33788).
12. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-33787) such that it Note: QDM Attribute: Severity
- a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-33789).
  - b. **SHALL** contain exactly one [1..1] **Severity Observation (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-08-01) (CONF:3346-33790).

**Figure 19: Diagnosis (V2) Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.110" extension="2017-08-01"/>
  </templateId>
  <id root="9e4e810d-3c3e-461e-86f8-6fe7a0b1ca2b"/>
  <code code="282291009" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <displayName value="Diagnosis"/>
  </code>
  <title value="Diagnosis"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" valueSet="{$QDMElementValueSetOID}"/>
</observationCriteria>
```

## 5.16 Diagnostic Study, Order (V2)

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.22:2017-08-01 (open) ]

**Table 43: Diagnostic Study, Order (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a>

This template represents the QDM data type: Diagnostic Study, Order.

Diagnostic Study represents any kind of medical test performed as a specific test or series of steps to aid in diagnosing or detecting disease (e.g., to establish a diagnosis, measure the progress or recovery from disease, confirm that a person is free from disease). The QDM defines diagnostic studies as those that are not performed in organizations that perform testing on samples of human blood, tissue, or other substance from the body. Diagnostic studies may make use of digital images and textual reports. Such studies include but are not limited to imaging studies, cardiology studies (electrocardiogram, treadmill stress testing), pulmonary-function testing, vascular laboratory testing, and others.

Diagnostic Study, Order represents that a diagnostic study has been ordered.

Timing: The time the order is signed; author time.

**Table 44: Diagnostic Study, Order (V2) Constraints Overview**

<b>XPath</b>	<b>Card.</b>	<b>Verb</b>	<b>Data Type</b>	<b>CONF #</b>	<b>Value</b>
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.22:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-30105</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3346-30106</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = RQO
@actionNegationInd	0..1	MAY		<a href="#">3346-30485</a>	
templateId	1..1	SHALL		<a href="#">3346-30108</a>	
item	1..1	SHALL		<a href="#">3346-30109</a>	
@root	1..1	SHALL		<a href="#">3346-30117</a>	2.16.840.1.113883.10.20.28.4.2 2
@extension	1..1	SHALL		<a href="#">3346-33643</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-30110</a>	
code	1..1	SHALL		<a href="#">3346-30111</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-30126</a>	
title	1..1	SHALL		<a href="#">3346-30112</a>	
statusCode	1..1	SHALL		<a href="#">3346-30232</a>	
@code	1..1	SHALL		<a href="#">3346-30233</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
methodCode	0..1	MAY		<a href="#">3346-30115</a>	
item	0..1	SHOULD		<a href="#">3346-30116</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-30908</a>	
participation	0..1	MAY		<a href="#">3346-33480</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33482</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3346-33481</a>	
low	1..1	SHALL		<a href="#">3346-33483</a>	
role	1..1	SHALL		<a href="#">3346-33572</a>	

@classCode	1..1	SHALL		<a href="#">3346-33573</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = ROL
id	1..1	SHALL		<a href="#">3346-33574</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-30124</a>	
@typeCode	1..1	SHALL		<a href="#">3346-30912</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3346-30125</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01)</a>

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CONF:3346-30105).
2. **SHALL** contain exactly one [1..1] **@moodCode="RQO"** Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3346-30106).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3346-30485).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-30108) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-30109).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.22"** (CONF:3346-30117).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-08-01"** (CONF:3346-33643).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-30110).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3346-30111).  
Note: QDM Attribute: Code
  - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-30126).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3346-30112).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-30232).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code="active"** Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-30233).
9. **MAY** contain zero or one [0..1] **methodCode** (CONF:3346-30115).  
Note: QDM Attribute: Method
  - a. The methodCode, if present, **SHOULD** contain zero or one [0..1] **item** (CONF:3346-30116).
    - i. The item, if present, **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-30908).
10. **MAY** contain zero or one [0..1] **participation** (CONF:3346-33480) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-33482).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3346-33481).
    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3346-33483).  
Note: QDM Attribute: Author dateTime (The time the order is signed)

- c. **SHALL** contain exactly one [1..1] **role** (CONF:3346-33572).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-33573).
    - ii. This role **SHALL** contain exactly one [1..1] **id** (CONF:3346-33574).
11. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-30124) such that it Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-30912).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3346-30125).

**Figure 20: Diagnostic Study, Order (V2) Example**

```
<observationCriteria classCode="OBS" moodCode="RQO">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.22" extension="2017-08-01"/>
  </templateId>
  <id root="628e7169-c8eb-448e-9d74-a59dc02844e9" />
  <code valueSet="{$QDMElementValueSetOID}"/>
  <title value="Diagnostic Study, Order"/>
  <statusCode code="active"/>
</observationCriteria>
```

## 5.17 Diagnostic Study, Performed (V2)

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.23:2017-08-01 (open) ]

**Table 45: Diagnostic Study, Performed (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Component</a> <a href="#">Facility Location</a> <a href="#">Reason</a> <a href="#">Result (V2)</a> <a href="#">Status (V2)</a>

This template represents the QDM data type: Diagnostic Study, Performed.

Diagnostic Study represents any kind of medical test performed as a specific test or series of steps to aid in diagnosing or detecting disease (e.g., to establish a diagnosis, measure the progress or recovery from disease, confirm that a person is free from disease). The QDM defines diagnostic studies as those that are not performed in organizations that perform testing on samples of human blood, tissue, or other substance from the body. Diagnostic studies may make use of digital images and textual reports. Such studies include but are not limited to

imaging studies, cardiology studies (electrocardiogram, treadmill stress testing), pulmonary-function testing, vascular laboratory testing, and others.

The QDM defines diagnostic studies as those that are not performed in organizations that perform testing on samples of human blood, tissue, or other substance from the body. Diagnostic studies may make use of digital images and textual reports. Such studies include but are not limited to imaging studies, cardiology studies (electrocardiogram, treadmill stress testing), pulmonary-function testing, vascular laboratory testing, and others.

Timing: The Relevant Period addresses: startTime – when the diagnostic study is initiated; stopTime – when the diagnostic study is completed.

Examples:

- Initiation of a treadmill stress test to the time the treadmill stress test has completed
- Initiation of the ultrasound study until completion of the ultrasound study

QDM Attributes: Result and Result dateTime are represented using the Result (V2) template.

**Table 46: Diagnostic Study, Performed (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.23:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-30775</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3346-30776</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..1	MAY		<a href="#">3346-30777</a>	
templateId	1..1	SHALL		<a href="#">3346-30778</a>	
item	1..1	SHALL		<a href="#">3346-30779</a>	
@root	1..1	SHALL		<a href="#">3346-30780</a>	2.16.840.1.113883.10.20.28.4.2 3
@extension	1..1	SHALL		<a href="#">3346-33605</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-30781</a>	
code	1..1	SHALL		<a href="#">3346-30782</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-30783</a>	
title	1..1	SHALL		<a href="#">3346-30784</a>	
statusCode	1..1	SHALL		<a href="#">3346-30785</a>	
@code	1..1	SHALL		<a href="#">3346-30786</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-30787</a>	
low	0..1	MAY		<a href="#">3346-30788</a>	
high	0..1	MAY		<a href="#">3346-30789</a>	
value	0..0	SHALL NOT		<a href="#">3346-34764</a>	
methodCode	0..1	MAY		<a href="#">3346-30790</a>	
item	0..1	SHOULD		<a href="#">3346-30791</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-30917</a>	
participation	0..1	MAY		<a href="#">3346-30792</a>	

@typeCode	1..1	SHALL		<a href="#">3346-30993</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = LOC
role	1..1	SHALL		<a href="#">3346-30992</a>	<a href="#">Facility Location (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.92:2017-05-01)</a>
participation	0..1	MAY		<a href="#">3346-34510</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34513</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3346-34511</a>	
low	1..1	SHALL		<a href="#">3346-34514</a>	
role	1..1	SHALL		<a href="#">3346-34512</a>	
@classCode	1..1	SHALL		<a href="#">3346-34515</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3346-34516</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-30799</a>	
@typeCode	1..1	SHALL		<a href="#">3346-30921</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3346-30800</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01)</a>
outboundRelationship	0..1	MAY		<a href="#">3346-34763</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34765</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = VALUE
observationCriteria	1..1	SHALL		<a href="#">3346-34766</a>	<a href="#">Result (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01)</a>
outboundRelationship	0..1	MAY		<a href="#">3346-33365</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34614</a>	REFR
observationCriteria	1..1	SHALL		<a href="#">3346-33366</a>	<a href="#">Status (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-08-01)</a>
outboundRelationship	0..*	MAY		<a href="#">3346-34611</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34612</a>	REFR
observationCriteria	1..1	SHALL		<a href="#">3346-34613</a>	<a href="#">Component (identifier: urn:hl7ii:2.16.840.1.113883.10.</a>

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CONF:3346-30775).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3346-30776).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3346-30777).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-30778) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-30779).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.23"** (CONF:3346-30780).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-08-01"** (CONF:3346-33605).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-30781).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3346-30782).
  - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-30783).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3346-30784).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-30785).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-30786).
9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-30787) such that it  
Note: QDM Attribute: Relevant Period
  - a. **MAY** contain zero or one [0..1] **low** (CONF:3346-30788).  
Note: startTime (When the diagnostic study is initiated)
  - b. **MAY** contain zero or one [0..1] **high** (CONF:3346-30789).  
Note: stopTime (When the diagnostic study is completed)
10. **SHALL NOT** contain [0..0] **value** (CONF:3346-34764).  
Note: Use the Result (V2) template to represent Result
11. **MAY** contain zero or one [0..1] **methodCode** (CONF:3346-30790).  
Note: QDM Attribute: Method
  - a. The methodCode, if present, **SHOULD** contain zero or one [0..1] **item** (CONF:3346-30791).
    - i. The item, if present, **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-30917).
12. **MAY** contain zero or one [0..1] **participation** (CONF:3346-30792) such that it  
Note: QDM Attribute: Facility Location
  - a. **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30993).
  - b. **SHALL** contain exactly one [1..1] **Facility Location** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.92:2017-05-01) (CONF:3346-30992).
13. **MAY** contain zero or one [0..1] **participation** (CONF:3346-34510) such that it  
Note: QDM Attribute: Facility Location

- a. **SHALL** contain exactly one [1..1] @**typeCode**="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34513).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3346-34511).
    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3346-34514).  
Note: QDM Attribute: Author Time
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3346-34512).
    - i. This role **SHALL** contain exactly one [1..1] @**classCode**="ROL" Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-34515).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3346-34516).
14. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-30799) such that it  
Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] @**typeCode**="RSON" Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-30921).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3346-30800).
15. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34763) such that it  
Note: QDM Attribute: Result, QDM Attribute: Result dateTime
- a. **SHALL** contain exactly one [1..1] @**typeCode**="VALUE" has value (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34765).
  - b. **SHALL** contain exactly one [1..1] **Result (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01) (CONF:3346-34766).
16. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-33365) such that it  
Note: QDM Attribute: Status
- a. **SHALL** contain exactly one [1..1] @**typeCode**="REFR" Refers To (CONF:3346-34614).
  - b. **SHALL** contain exactly one [1..1] **Status (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-08-01) (CONF:3346-33366).
17. **MAY** contain zero or more [0..\*] **outboundRelationship** (CONF:3346-34611) such that it  
Note: QDM Attribute: Component
- a. **SHALL** contain exactly one [1..1] @**typeCode**="REFR" Refers To (CONF:3346-34612).
  - b. **SHALL** contain exactly one [1..1] **Component** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.121:2017-05-01) (CONF:3346-34613).

**Figure 21: Diagnostic Study, Performed (V2) Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.23" extension="2017-08-01"/>
  </templateId>
  <id root="f584ead4-808b-43c2-93e3-b8606e156233"/>
  <code valueSet="{$QDMElementValueSetOID}"/>
  <title value="Diagnostic Study, Performed"/>
  <statusCode code="completed"/>
</observationCriteria>
```

## 5.18 Diagnostic Study, Recommended (V2)

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.24:2017-08-01 (open)]

**Table 47: Diagnostic Study, Recommended (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	

This template represents the QDM data type: Diagnostic Study, Recommended.

Diagnostic Study represents any kind of medical test performed as a specific test or series of steps to aid in diagnosing or detecting disease (e.g., to establish a diagnosis, measure the progress or recovery from disease, confirm that a person is free from disease). The QDM defines diagnostic studies as those that are not performed in organizations that perform testing on samples of human blood, tissue, or other substance from the body. Diagnostic studies may make use of digital images and textual reports. Such studies include but are not limited to imaging studies, cardiology studies (electrocardiogram, treadmill stress testing), pulmonary-function testing, vascular laboratory testing, and others.

Timing: The time the order is signed; author time.

All QDM datatypes referring to recommendations address the time that the recommendation occurs, a single point in time. Vendors have expressed concerns that recommendations are not necessarily captured or managed in a standard manner as part of structured data capture in clinical workflow; many are documented as part of assessments in narrative text. Measure developers should address feasibility of clinical workflow to capture recommendations when evaluating measures.

**Table 48: Diagnostic Study, Recommended (V2) Constraints Overview**

<b>XPath</b>	<b>Card.</b>	<b>Verb</b>	<b>Data Type</b>	<b>CONF #</b>	<b>Value</b>
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.24:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-30572</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3346-30573</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = INT
@actionNegationInd	0..1	MAY		<a href="#">3346-30574</a>	
templateId	1..1	SHALL		<a href="#">3346-30575</a>	
item	1..1	SHALL		<a href="#">3346-30576</a>	
@root	1..1	SHALL		<a href="#">3346-30577</a>	2.16.840.1.113883.10.20.28.4.2 4
@extension	1..1	SHALL		<a href="#">3346-33751</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-30578</a>	
code	1..1	SHALL		<a href="#">3346-30579</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-30580</a>	
title	1..1	SHALL		<a href="#">3346-30581</a>	
statusCode	1..1	SHALL		<a href="#">3346-30582</a>	
@code	1..1	SHALL		<a href="#">3346-30583</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
methodCode	0..1	MAY		<a href="#">3346-30587</a>	
item	0..1	SHOULD		<a href="#">3346-30588</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-30913</a>	
participation	0..1	MAY		<a href="#">3346-34329</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34331</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3346-34330</a>	
low	1..1	SHALL		<a href="#">3346-34332</a>	
role	1..1	SHALL		<a href="#">3346-34333</a>	

@classCode	1..1	SHALL		<a href="#">3346-34334</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3346-34335</a>	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CONF:3346-30572).
2. **SHALL** contain exactly one [1..1] **@moodCode="INT"** Intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3346-30573).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3346-30574).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-30575) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-30576).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.24"** (CONF:3346-30577).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-08-01"** (CONF:3346-33751).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-30578).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3346-30579).  
Note: QDM Attribute: Code
  - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-30580).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3346-30581).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-30582).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code="active"** Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-30583).
9. **MAY** contain zero or one [0..1] **methodCode** (CONF:3346-30587).  
Note: QDM Attribute: Method
  - a. The methodCode, if present, **SHOULD** contain zero or one [0..1] **item** (CONF:3346-30588).
    - i. The item, if present, **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-30913).
10. **MAY** contain zero or one [0..1] **participation** (CONF:3346-34329) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34331).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3346-34330).
    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3346-34332).  
Note: QDM Attribute: Author dateTime (The time the recommendation is authored)
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3346-34333).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-34334).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3346-34335).

**Figure 22: Diagnostic Study, Recommended (V2) Example**

```
<observationCriteria classCode="OBS" moodCode="INT">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.24" extension="2017-08-01"/>
  </templateId>
  <id root="f584ead4-808b-43c2-93e3-b8606e156233"/>
  <code valueSet="{$QDMElementValueSetOID}"/>
  <title value="Diagnostic Study, Recommended"/>
  <statusCode code="active"/>
</observationCriteria>
```

## 5.19 Dosage

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.125:2017-05-01 (open) ]

**Table 49: Dosage Contexts**

Contained By:	Contains:
<a href="#">Medication, Dispensed (V2)</a> (optional)	

This template represents the QDM attribute: Dosage.

Details of how medication is/is to be taken, i.e., the quantity (mg, cc, tablets) to be taken at a single administration.

**Table 50: Dosage Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.125:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-34423</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3335-34424</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
templateId	1..1	SHALL		<a href="#">3335-34420</a>	
item	1..1	SHALL		<a href="#">3335-34421</a>	
@root	1..1	SHALL		<a href="#">3335-34425</a>	2.16.840.1.113883.10.20.28.4.1 25
@extension	1..1	SHALL		<a href="#">3335-34650</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-34426</a>	
code	1..1	SHALL		<a href="#">3335-34422</a>	
@code	1..1	SHALL		<a href="#">3335-34427</a>	260911001
@codeSystem	1..1	SHALL		<a href="#">3335-34428</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
title	1..1	SHALL		<a href="#">3335-34429</a>	
value	1..1	SHALL	PQ	<a href="#">3335-34430</a>	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CONF:3335-34423).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood  
urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-34424).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-34420).
  - a. This templateId **SHALL** contain exactly one [1..1] **item** (CONF:3335-34421).
    - i. This item **SHALL** contain exactly one [1..1]  
**@root="2.16.840.1.113883.10.20.28.4.125"** (CONF:3335-34425).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-05-01"** (CONF:3335-34650).
4. **SHALL** contain exactly one [1..1] **id** (CONF:3335-34426).
5. **SHALL** contain exactly one [1..1] **code** (CONF:3335-34422).
  - a. This code **SHALL** contain exactly one [1..1] **@code="260911001"** Dosage (CONF:3335-34427).

- b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3335-34428).
- 6. **SHALL** contain exactly one [1..1] **title** (CONF:3335-34429).
- 7. **SHALL** contain exactly one [1..1] **value** with @xsi:type="PQ" (CONF:3335-34430).

**Figure 23: Dosage Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.125" extension="2017-05-01"/>
  </templateId>
  <id root="a77fb848-5778-4948-a3df-cf9ae40997c4"/>
  <code code="260911001" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <displayName value="Dosage"/>
  </code>
  <title value="Dosage"/>
  <value xsi:type="PQ" value="200" unit="mg"/>
</observationCriteria>
```

## 5.20 Encounter, Order

[EncounterCriteria: identifier  
 urn:hl7ii:2.16.840.1.113883.10.20.28.4.27:2017-05-01 (open) ]

**Table 51: Encounter, Order Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Facility Location</a> <a href="#">Reason</a>

This template represents the QDM data type: Encounter, Order.

This template describes an order for an encounter. It describes the ordered interactions between the patient and clinicians. Interactions include in-person encounters, telephone conversations, and email exchanges.

Timing: The time the order is signed; author time.

**Table 52: Encounter, Order Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
EncounterCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.27:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-30860</a>	ENC
@moodCode	1..1	SHALL		<a href="#">3335-30861</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = RQO
@actionNegationInd	0..1	MAY		<a href="#">3335-30862</a>	
templateId	1..1	SHALL		<a href="#">3335-30863</a>	
item	1..1	SHALL		<a href="#">3335-30864</a>	
@root	1..1	SHALL		<a href="#">3335-30865</a>	2.16.840.1.113883.10.20.28.4.2 7
@extension	1..1	SHALL		<a href="#">3335-33645</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-30866</a>	
code	1..1	SHALL		<a href="#">3335-30867</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-30868</a>	
title	1..1	SHALL		<a href="#">3335-30869</a>	
statusCode	1..1	SHALL		<a href="#">3335-30870</a>	
@code	0..1	SHALL		<a href="#">3335-30871</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
participation	0..1	MAY		<a href="#">3335-30875</a>	
@typeCode	1..1	SHALL		<a href="#">3335-30876</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = LOC
role	1..1	SHALL		<a href="#">3335-30877</a>	<a href="#">Facility Location (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.92:2017-05-01</a>
participation	0..1	MAY		<a href="#">3335-33485</a>	
@typeCode	1..1	SHALL		<a href="#">3335-33487</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3335-33486</a>	
low	1..1	SHALL		<a href="#">3335-33488</a>	
role	1..1	SHALL		<a href="#">3335-33575</a>	

@classCode	1..1	SHALL		<a href="#">3335-33576</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3335-33577</a>	
outboundRelationship	0..1	MAY		<a href="#">3335-30878</a>	
@typeCode	1..1	SHALL		<a href="#">3335-30879</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3335-30880</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01)</a>

1. **SHALL** contain exactly one [1..1] **@classCode**="ENC" Encounter (CONF:3335-30860).
2. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-30861).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3335-30862).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-30863) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-30864).
    - i. This item **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.28.4.27" (CONF:3335-30865).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension**="2017-05-01" (CONF:3335-33645).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3335-30866).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3335-30867).  
Note: QDM Attribute: Code
  - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3335-30868).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3335-30869).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-30870).
  - a. This statusCode **SHALL** contain zero or one [0..1] **@code**="active" Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-30871).
9. **MAY** contain zero or one [0..1] **participation** (CONF:3335-30875) such that it  
Note: QDM Attribute: Facility Location
  - a. **SHALL** contain exactly one [1..1] **@typeCode**="LOC" Location (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3335-30876).
  - b. **SHALL** contain exactly one [1..1] **Facility Location** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.92:2017-05-01) (CONF:3335-30877).
10. **MAY** contain zero or one [0..1] **participation** (CONF:3335-33485) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode**="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-33487).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3335-33486).

- i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3335-33488).  
Note: QDM Attribute: Author dateTime (The time the order is signed)
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3335-33575).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3335-33576).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3335-33577).
11. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3335-30878) such that it  
Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-30879).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3335-30880).

**Figure 24: Encounter, Order Example**

```
<encounterCriteria classCode="ENC" moodCode="RQO">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.27" extension="2017-05-01"/>
  </templateId>
  <id root="c4cb3abb-1e2e-4b3a-97c1-de1685b7da02"/>
  <code valueSet="{$QDMElementValueSetOID}"/>
  <title value="Encounter, Order"/>
  <statusCode code="active"/>
</encounterCriteria>
```

## 5.21 Encounter, Performed (V2)

[EncounterCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.5:2017-08-01 (open)]

**Table 53: Encounter, Performed (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Admission Source</a> <a href="#">Diagnosis (V2)</a> <a href="#">Facility Location</a> <a href="#">Principal Diagnosis</a> <a href="#">Reason</a>

This template represents the QDM data type: Encounter, Performed.

An encounter is an identifiable grouping of healthcare-related activities characterized by the entity relationship between the subject of care and a healthcare provider; such grouping is determined by the healthcare provider. A patient encounter represents interaction between a healthcare provider and a patient with a face-to-face patient visit to a clinician's office, or any

electronically remote interaction with a clinician for any form of diagnostic treatment or therapeutic event.

This template represents an encounter that is completed.

Timing: The Relevant Period addresses: startTime – The time the encounter began (admission time); stopTime – The time the encounter ended (discharge time).

**Table 54: Encounter, Performed (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
EncounterCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.5:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-31005</a>	ENC
@moodCode	1..1	SHALL		<a href="#">3346-31006</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..1	MAY		<a href="#">3346-31007</a>	
templateId	1..1	SHALL		<a href="#">3346-31008</a>	
item	1..1	SHALL		<a href="#">3346-31009</a>	
@root	1..1	SHALL		<a href="#">3346-31010</a>	2.16.840.1.113883.10.20.28.4.5
@extension	1..1	SHALL		<a href="#">3346-33397</a>	2017-05-01
id	1..1	SHALL		<a href="#">3346-31011</a>	
code	1..1	SHALL		<a href="#">3346-31012</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-31013</a>	
title	1..1	SHALL		<a href="#">3346-31014</a>	
statusCode	1..1	SHALL		<a href="#">3346-31015</a>	
@code	1..1	SHALL		<a href="#">3346-31016</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-31017</a>	
low	0..1	MAY		<a href="#">3346-31018</a>	
high	0..1	MAY		<a href="#">3346-31019</a>	
lengthOfStayQuantity	0..1	MAY		<a href="#">3346-31033</a>	
dischargeDispositionCode	0..1	MAY		<a href="#">3346-31034</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-33105</a>	
participation	0..*	MAY		<a href="#">3346-31021</a>	
@typeCode	1..1	SHALL		<a href="#">3346-31022</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = LOC

role	1..1	SHALL		<a href="#">3346-31023</a>	Facility Location (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.92:2017-05-01)
participation	0..1	MAY		<a href="#">3346-34371</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34372</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = LOC
role	1..1	SHALL		<a href="#">3346-34373</a>	Admission Source (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.123:2017-05-01)
participation	0..1	MAY		<a href="#">3346-34656</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34659</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3346-34657</a>	
low	1..1	SHALL		<a href="#">3346-34660</a>	
role	1..1	SHALL		<a href="#">3346-34658</a>	
@classCode	1..1	SHALL		<a href="#">3346-34661</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3346-34662</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-31024</a>	
@typeCode	1..1	SHALL		<a href="#">3346-31025</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3346-31026</a>	Reason (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01)
outboundRelationship	0..1	MAY		<a href="#">3346-33756</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33760</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observationCriteria	1..1	SHALL		<a href="#">3346-34374</a>	Principal Diagnosis (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.122:2017-05-01)
outboundRelationship	0..*	MAY		<a href="#">3346-34041</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34045</a>	REFR
observationCriteria	1..1	SHALL		<a href="#">3346-34375</a>	Diagnosis (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.110:2017-08-01)

1. **SHALL** contain exactly one [1..1] **@classCode="ENC"** Encounter (CONF:3346-31005).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-31006).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3346-31007).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-31008) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-31009).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.5"** (CONF:3346-31010).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-05-01"** (CONF:3346-33397).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-31011).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3346-31012).  
Note: QDM Attribute: Code
  - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-31013).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3346-31014).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-31015).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-31016).
9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-31017) such that it  
Note: QDM Attribute: Relevant Period
  - a. **MAY** contain zero or one [0..1] **low** (CONF:3346-31018).  
Note: startTime – The time the encounter began (admission time)
  - b. **MAY** contain zero or one [0..1] **high** (CONF:3346-31019).  
Note: stopTime – The time the encounter ended (discharge time)
10. **MAY** contain zero or one [0..1] **lengthOfStayQuantity** (CONF:3346-31033).  
Note: QDM Attribute: Length of Stay
11. **MAY** contain zero or one [0..1] **dischargeDispositionCode** (CONF:3346-31034).  
Note: QDM Attribute: Discharge status
  - a. The dischargeDispositionCode, if present, **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-33105).
12. **MAY** contain zero or more [0..\*] **participation** (CONF:3346-31021) such that it  
Note: QDM Attribute: Facility Locations
  - a. **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-31022).
  - b. **SHALL** contain exactly one [1..1] **Facility Location** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.92:2017-05-01) (CONF:3346-31023).
13. **MAY** contain zero or one [0..1] **participation** (CONF:3346-34371) such that it  
Note: QDM Attribute: Admission Source
  - a. **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-34372).

- b. **SHALL** contain exactly one [1..1] **Admission Source** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.123:2017-05-01) (CONF:3346-34373).
14. **MAY** contain zero or one [0..1] **participation** (CONF:3346-34656) such that it
- a. **SHALL** contain exactly one [1..1] @**typeCode**="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34659).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3346-34657).
    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3346-34660).  
Note: QDM Attribute: Author dateTime (The Author dateTime addresses when an Encounter is documented. Documentation can occur at the beginning, during, at the end or subsequent to the end of an Encounter. The Author dateTime should be used only if the Relevant Period cannot be obtained)
    - c. **SHALL** contain exactly one [1..1] **role** (CONF:3346-34658).
      - i. This role **SHALL** contain exactly one [1..1] @**classCode**="ROL" Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-34661).
      - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3346-34662).
15. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-31024) such that it  
Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] @**typeCode**="RSON" Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-31025).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3346-31026).
16. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-33756) such that it  
Note: QDM Attribute: Principal Diagnosis
- a. **SHALL** contain exactly one [1..1] @**typeCode**="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-33760).
  - b. **SHALL** contain exactly one [1..1] **Principal Diagnosis** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.122:2017-05-01) (CONF:3346-34374).
17. **MAY** contain zero or more [0..\*] **outboundRelationship** (CONF:3346-34041) such that it  
Note: QDM Attribute: Diagnoses
- a. **SHALL** contain exactly one [1..1] @**typeCode**="REFR" (CONF:3346-34045).
  - b. **SHALL** contain exactly one [1..1] **Diagnosis (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.110:2017-08-01) (CONF:3346-34375).

**Figure 25: Encounter, Performed (V2) Example**

```

<encounterCriteria classCode="ENC" moodCode="EVN">
    <templateId>
        <item root="2.16.840.1.113883.10.20.28.4.5" extension="2017-08-01"/>
    </templateId>
    <id root="d7fbe089-ff04-4f58-b604-cb6d5ebce4cc"/>
    <code valueSet="{$QDMElementValueSetOID}"/>
    <title value="Encounter, Performed"/>
    <statusCode code="completed"/>
    <outboundRelationship typeCode="REFR">
        <actCriteria classCode="ACT" moodCode="EVN">
            <id root="9f751ae5-edb2-4fb3-b49c-d0f0fdef3999"/>
            <code code="52534-5" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC">
                <displayName value="Principal Diagnosis"/>
            </code>
            <title value="Encounter Principal Diagnosis"/>
            <outboundRelationship typeCode="SUBJ">
                <observationCriteria classCode="OBS" moodCode="EVN">
                    <templateId>
                        <item root="2.16.840.1.113883.10.20.28.3.110"/>
                    </templateId>
                    <id root="9e4e810d-3c3e-461e-86f8-6fe7a0b1ca2b"/>
                    <code code="282291009" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
                        <displayName value="Diagnosis"/>
                    </code>
                    <title value="Diagnosis"/>
                    <statusCode code="completed"/>
                    <value xsi:type="CD" valueSet="{$PrincipalDxValueSet}"/>
                </observationCriteria>
            </outboundRelationship>
        </actCriteria>
    </outboundRelationship>
</encounterCriteria>

```

## 5.22 Encounter, Recommended

[EncounterCriteria: identifier  
 urn:hl7ii:2.16.840.1.113883.10.20.28.4.28:2017-05-01 (open)]

**Table 55: Encounter, Recommended Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Facility Location</a> <a href="#">Reason</a>

This template represents the QDM data type: Encounter, Recommended.

This template describes a recommendation for an encounter. It describes the recommended interactions between the patient and clinicians. Interactions include in-person encounters, telephone conversations, and email exchanges.

**Timing:** The time the recommendation is authored (i.e., provided to the patient).

All QDM datatypes referring to recommendations address the time that the recommendation occurs, a single point in time. Vendors have expressed concerns that recommendations are not necessarily captured or managed in a standard manner as part of structured data capture in clinical workflow; many are documented as part of assessments in narrative text. Measure developers should address feasibility of clinical workflow to capture recommendations when evaluating measures.

**Table 56: Encounter, Recommended Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
EncounterCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.28:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-30854</a>	ENC
@moodCode	1..1	SHALL		<a href="#">3335-30518</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = INT
@actionNegationInd	0..1	MAY		<a href="#">3335-30855</a>	
templateId	1..1	SHALL		<a href="#">3335-30519</a>	
item	1..1	SHALL		<a href="#">3335-30520</a>	
@root	1..1	SHALL		<a href="#">3335-30521</a>	2.16.840.1.113883.10.20.28.4.28
@extension	1..1	SHALL		<a href="#">3335-33694</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-30522</a>	
code	1..1	SHALL		<a href="#">3335-30523</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-30856</a>	
title	1..1	SHALL		<a href="#">3335-30526</a>	
statusCode	1..1	SHALL		<a href="#">3335-30857</a>	
@code	0..1	SHALL		<a href="#">3335-30858</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
participation	0..1	MAY		<a href="#">3335-30532</a>	
@typeCode	1..1	SHALL		<a href="#">3335-30859</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = LOC
role	1..1	SHALL		<a href="#">3335-30533</a>	<a href="#">Facility Location (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.92:2017-05-01)</a>
participation	0..1	MAY		<a href="#">3335-34377</a>	
@typeCode	1..1	SHALL		<a href="#">3335-34380</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3335-34378</a>	
low	1..1	SHALL		<a href="#">3335-34381</a>	
role	1..1	SHALL		<a href="#">3335-34379</a>	

id	0..1	MAY		<a href="#">3335-34382</a>	
outboundRelationship	0..1	MAY		<a href="#">3335-30534</a>	
@typeCode	1..1	SHALL		<a href="#">3335-30535</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3335-30536</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01)</a>

1. **SHALL** contain exactly one [1..1] **@classCode**="ENC" Encounter (CONF:3335-30854).
2. **SHALL** contain exactly one [1..1] **@moodCode**="INT" Intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-30518).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3335-30855).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-30519) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-30520).
    - i. This item **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.28.4.28" (CONF:3335-30521).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension**="2017-05-01" (CONF:3335-33694).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3335-30522).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3335-30523).
  - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3335-30856).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3335-30526).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-30857).
  - a. This statusCode **SHALL** contain zero or one [0..1] **@code**="active" Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-30858).
9. **MAY** contain zero or one [0..1] **participation** (CONF:3335-30532) such that it  
Note: QDM Attribute: Facility Location
  - a. **SHALL** contain exactly one [1..1] **@typeCode**="LOC" Location (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3335-30859).
  - b. **SHALL** contain exactly one [1..1] **Facility Location** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.92:2017-05-01) (CONF:3335-30533).
10. **MAY** contain zero or one [0..1] **participation** (CONF:3335-34377) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode**="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-34380).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3335-34378).
    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3335-34381).  
Note: QDM Attribute: Author Time
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3335-34379).
    - i. This role **MAY** contain zero or one [0..1] **id** (CONF:3335-34382).

11. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3335-30534) such that it

Note: QDM Attribute: Reason

- a. **SHALL** contain exactly one [1..1] @**typeCode**="RSON" Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-30535).
- b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3335-30536).

**Figure 26: Encounter, Recommended Example**

```
<encounterCriteria classCode="ENC" moodCode="INT">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.28" extension="2017-05-01"/>
  </templateId>
  <id root="0c2f3978-f615-4138-af4f-59ef78b46c62"/>
  <code valueSet="{$QDMElementValueSetOID}"/>
  <title value="Encounter, Recommended"/>
  <statusCode code="active"/>
</encounterCriteria>
```

## 5.23 Facility Location

[Role: identifier urn:hl7ii:2.16.840.1.113883.10.20.28.4.92:2017-05-01  
(open) ]

**Table 57: Facility Location Contexts**

Contained By:	Contains:
<a href="#">Encounter, Order</a> (optional) <a href="#">Encounter, Recommended</a> (optional) <a href="#">Adverse Event (V2)</a> (optional) <a href="#">Diagnostic Study, Performed (V2)</a> (optional) <a href="#">Encounter, Performed (V2)</a> (optional)	

This template represents the QDM attribute: Facility Location.

The particular location of a facility in which the diagnostic study or encounter occurs or occurred. Examples include, but are not limited to, intensive care units (ICUs), non-ICUs, burn critical-care unit, neonatal ICU, and respiratory-care unit.

The Location Period addresses: StartTime = the time the patient arrived at the location; StopTime = the time the patient departed from the location.

**Table 58: Facility Location Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
Role (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.92:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-30514</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = SDLOC
templateId	1..1	SHALL		<a href="#">3335-30515</a>	
item	1..1	SHALL		<a href="#">3335-30516</a>	
@root	1..1	SHALL		<a href="#">3335-30517</a>	2.16.840.1.113883.10.20.28.4.92
@extension	1..1	SHALL		<a href="#">3335-34376</a>	2017-05-01
code	0..1	SHOULD		<a href="#">3335-30900</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-30901</a>	
effectiveTime	0..1	MAY		<a href="#">3335-31926</a>	
low	0..1	MAY		<a href="#">3335-31927</a>	
high	0..1	MAY		<a href="#">3335-31928</a>	

1. **SHALL** contain exactly one [1..1] **@classCode="SDLOC"** Service Delivery Location (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3335-30514).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-30515) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-30516).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.92"** (CONF:3335-30517).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-05-01"** (CONF:3335-34376).
3. **SHOULD** contain zero or one [0..1] **code** (CONF:3335-30900).
  - a. The code, if present, **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3335-30901).
4. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3335-31926) such that it
 

Note: QDM Attribute: Location Period

  - a. **MAY** contain zero or one [0..1] **low** (CONF:3335-31927).  
Note: Facility Location Arrival Datetime (The time the patient arrived at the location)
  - b. **MAY** contain zero or one [0..1] **high** (CONF:3335-31928).  
Note: Facility Location Departure Datetime (The time the patient departed from the location)

**Figure 27: Facility Location Example**

```
<role classCode="SDLOC">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.92" extension="2017-05-01"/>
  </templateId>
  <code valueSet="{$QDMElementValueSetOID}"/>
</role>
```

## 5.24 Family History

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.111:2017-05-01 (open) ]

**Table 59: Family History Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	

Family History represents a diagnosis or problem experienced by a family member of the patient. Typically, a family history will not contain very much detail, but the simple identification of a diagnosis or problem in the patient's family history may be relevant to the care of the patient.

Timing: The time the family history item is authored (i.e., entered into the record).

**Table 60: Family History Constraints Overview**

<b>XPath</b>	<b>Card.</b>	<b>Verb</b>	<b>Data Type</b>	<b>CONF #</b>	<b>Value</b>
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.111:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-33797</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3335-33798</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..0	SHALL NOT		<a href="#">3335-34703</a>	
templateId	1..1	SHALL		<a href="#">3335-33791</a>	
item	1..1	SHALL		<a href="#">3335-33792</a>	
@root	1..1	SHALL		<a href="#">3335-33799</a>	2.16.840.1.113883.10.20.28.4.1 11
@extension	0..1	MAY		<a href="#">3335-34383</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-33800</a>	
code	1..1	SHALL		<a href="#">3335-33793</a>	
@code	0..1	SHALL		<a href="#">3335-33801</a>	10157-6
@codeSystem	1..1	SHALL		<a href="#">3335-33802</a>	2.16.840.1.113883.6.1
title	1..1	SHALL		<a href="#">3335-33803</a>	
statusCode	1..1	SHALL		<a href="#">3335-33794</a>	
@code	1..1	SHALL		<a href="#">3335-33804</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	<a href="#">3335-33795</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-33805</a>	
participation	0..1	MAY		<a href="#">3335-33796</a>	
@typeCode	1..1	SHALL		<a href="#">3335-33806</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3335-33807</a>	
low	1..1	SHALL		<a href="#">3335-33815</a>	
role	1..1	SHALL		<a href="#">3335-33808</a>	

@classCode	1..1	SHALL		<a href="#">3335-33817</a>	ROL
id	0..1	MAY		<a href="#">3335-33818</a>	
participation	0..1	MAY		<a href="#">3335-33809</a>	
@typeCode	1..1	SHALL		<a href="#">3335-33819</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = SUBJ
role	1..1	SHALL		<a href="#">3335-33810</a>	
@classCode	1..1	SHALL		<a href="#">3335-33820</a>	PRS
code	1..1	SHALL		<a href="#">3335-33811</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-33821</a>	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CONF:3335-33797).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-33798).
3. **SHALL NOT** contain [0..0] **@actionNegationInd** (CONF:3335-34703).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-33791) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-33792).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.111"** (CONF:3335-33799).
    - ii. This item **MAY** contain zero or one [0..1] **@extension="2017-05-01"** (CONF:3335-34383).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3335-33800).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3335-33793).
  - a. This code **SHALL** contain zero or one [0..1] **@code="10157-6"** Family History (CONF:3335-33801).
  - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.6.1"** (LOINC) (CONF:3335-33802).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3335-33803).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-33794).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-33804).
9. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3335-33795).  
Note: QDM Attribute: Code
  - a. This value **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3335-33805).
10. **MAY** contain zero or one [0..1] **participation** (CONF:3335-33796) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-33806).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3335-33807).

- i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3335-33815).  
Note: QDM Attribute: Author dateTime (The time the family history item is authored (i.e., entered into the record))
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3335-33808).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CONF:3335-33817).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3335-33818).
11. **MAY** contain zero or one [0..1] **participation** (CONF:3335-33809) such that it  
Note: QDM Attribute: Relationships
- a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Subject (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-33819).
  - b. **SHALL** contain exactly one [1..1] **role** (CONF:3335-33810).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="PRS"** Person (CONF:3335-33820).
    - ii. This role **SHALL** contain exactly one [1..1] **code** (CONF:3335-33811).
      - 1. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3335-33821).

**Figure 28: Family History Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.111" extension="2017-05-01"/>
  </templateId>
  <id root="bd4673f9-0da9-4491-98ba-a00c4191d518"/>
  <code code="10157-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC">
    <displayName value="Family History"/>
  </code>
  <title value="Family History"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" valueSet="{$QDMElementValueSetOID}"/>
  <participation typeCode="SBJ">
    <role classCode="PRS">
      <code valueSet="{$RelationshipValueSetOID}"/>
    </role>
  </participation>
</observationCriteria>
```

## 5.25 Immunization, Administered (V2)

[substanceAdministrationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.112:2017-08-01 (open)]

**Table 61: Immunization, Administered (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a> <a href="#">Supply</a>

This template represents the QDM data type: Immunization, Administered.

Immunization represents vaccines administered to patients in healthcare settings but does not include non-vaccine agents.

Timing: The time the immunization is administered, i.e., a single point in time, or author datetime.

**Table 62: Immunization, Administered (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
substanceAdministrationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.112:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-33833</a>	SBADM
@moodCode	1..1	SHALL		<a href="#">3346-33834</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..1	MAY		<a href="#">3346-33835</a>	
templateId	1..1	SHALL		<a href="#">3346-33830</a>	
item	1..1	SHALL		<a href="#">3346-33831</a>	
@root	1..1	SHALL		<a href="#">3346-33836</a>	2.16.840.1.113883.10.20.28.4.1 12
@extension	1..1	SHALL		<a href="#">3346-34384</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-33837</a>	
code	1..1	SHALL		<a href="#">3346-33832</a>	
@code	1..1	SHALL		<a href="#">3346-33838</a>	416118004
@codeSystem	1..1	SHALL		<a href="#">3346-33839</a>	2.16.840.1.113883.6.96
title	1..1	SHALL		<a href="#">3346-33840</a>	
statusCode	1..1	SHALL		<a href="#">3346-33841</a>	
@code	1..1	SHALL		<a href="#">3346-33847</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-33842</a>	
low	1..1	SHALL		<a href="#">3346-33848</a>	
routeCode	0..1	MAY		<a href="#">3346-33843</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-33850</a>	
doseQuantity	0..1	MAY		<a href="#">3346-33851</a>	
participation	1..1	SHALL		<a href="#">3346-33844</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33852</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM

role	1..1	SHALL		<a href="#">3346-33845</a>	
@classCode	1..1	SHALL		<a href="#">3346-33853</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU
playingManufacturedMaterial	1..1	SHALL		<a href="#">3346-33846</a>	
@classCode	1..1	SHALL		<a href="#">3346-33854</a>	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = MMAT
@determinerCode	1..1	SHALL		<a href="#">3346-33855</a>	urn:oid:2.16.840.1.113883.5.30 (EntityDeterminer) = KIND
code	1..1	SHALL		<a href="#">3346-33856</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-33858</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-33857</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33859</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3346-33860</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01)</a>
outboundRelationship	0..1	MAY		<a href="#">3346-34491</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34492</a>	REFR
supplyCriteria	1..1	SHALL		<a href="#">3346-34801</a>	<a href="#">Supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01)</a>

1. **SHALL** contain exactly one [1..1] **@classCode="SBADM"** Substance Administration (CONF:3346-33833).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-33834).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3346-33835).  
Note: QDM Attribute: Negation rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-33830) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-33831).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.112"** (CONF:3346-33836).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-08-01"** (CONF:3346-34384).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-33837).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3346-33832).
  - a. This code **SHALL** contain exactly one [1..1] **@code="416118004"** Administration (CONF:3346-33838).

- b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (SNOMED CT) (CONF:3346-33839).
- 7. **SHALL** contain exactly one [1..1] **title** (CONF:3346-33840).
- 8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-33841).
  - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-33847).
- 9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-33842) such that it
  - a. **SHALL** contain exactly one [1..1] **low** (CONF:3346-33848).
 

Note: QDM Attribute: Author dateTime (The time the immunization is administered, i.e., a single point in time))
- 10. **MAY** contain zero or one [0..1] **routeCode** (CONF:3346-33843).
 

Note: QDM Attribute: Route

  - a. The routeCode, if present, **SHOULD** contain zero or one [0..1] @valueSet (CONF:3346-33850).
- 11. **MAY** contain zero or one [0..1] **doseQuantity** (CONF:3346-33851).
 

Note: QDM Attribute: Dosage
- 12. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-33844) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="CSM" Consumable (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-33852).
  - b. **SHALL** contain exactly one [1..1] **role** (CONF:3346-33845).
    - i. This role **SHALL** contain exactly one [1..1] @classCode="MANU" Manufactured (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-33853).
    - ii. This role **SHALL** contain exactly one [1..1] **playingManufacturedMaterial** (CONF:3346-33846).
      - 1. This playingManufacturedMaterial **SHALL** contain exactly one [1..1] @classCode="MMAT" Manufactured Material (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:3346-33854).
      - 2. This playingManufacturedMaterial **SHALL** contain exactly one [1..1] @determinerCode="KIND" Kind (CodeSystem: EntityDeterminer urn:oid:2.16.840.1.113883.5.30) (CONF:3346-33855).
      - 3. This playingManufacturedMaterial **SHALL** contain exactly one [1..1] **code** (CONF:3346-33856).

Note: QDM Attribute: Code

      - a. This code **SHOULD** contain zero or one [0..1] @valueSet (CONF:3346-33858).
- 13. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-33857) such that it
 

Note: QDM Attribute: Reason

  - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-33859).

- b. **SHALL** contain exactly one [1..1] [Reason](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3346-33860).
14. **MAY** contain zero or one [0..1] [outboundRelationship](#) (CONF:3346-34491) such that it Note: QDM Attribute: Supply
- a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers To (CONF:3346-34492).
  - b. **SHALL** contain exactly one [1..1] [Supply](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01) (CONF:3346-34801).

**Figure 29: Immunization, Administered (V2) Example**

```
<substanceAdministrationCriteria classCode="SBADM" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.112" extension="2017-08-01"/>
  </templateId>
  <id root="de28ff02-d2cf-436e-898a-58eb49e15b47"/>
  <code code="416118004" codeSystem="2.16.840.1.113883.6.96">
    <displayName value="Administration"/>
  </code>
  <title value="Immunization, Administered"/>
  <statusCode code="completed"/>
  <participation typeCode="CSM">
    <role classCode="MANU">
      <playingManufacturedMaterial classCode="MMAT" determinerCode="KIND">
        <code valueSet="{$QDMElementValueSetOID}"/>
      </playingManufacturedMaterial>
    </role>
  </participation>
</substanceAdministrationCriteria>
```

## 5.26 Immunization, Order (V2)

[substanceAdministrationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.113:2017-08-01 (open)]

**Table 63: Immunization, Order (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a> <a href="#">Supply</a>

This template represents the QDM data type: Immunization, Order.

Immunization represents vaccines administered to patients in healthcare settings but does not include non-vaccine agents.

Timing: The time the order is signed; author time.

**Table 64: Immunization, Order (V2) Constraints Overview**

<b>XPath</b>	<b>Card.</b>	<b>Verb</b>	<b>Data Type</b>	<b>CONF #</b>	<b>Value</b>
substanceAdministrationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.113:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-34025</a>	SBADM
@moodCode	1..1	SHALL		<a href="#">3346-34026</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = RQO
@actionNegationInd	0..1	MAY		<a href="#">3346-34027</a>	
templateId	1..1	SHALL		<a href="#">3346-34003</a>	
item	1..1	SHALL		<a href="#">3346-34004</a>	
@root	1..1	SHALL		<a href="#">3346-34016</a>	2.16.840.1.113883.10.20.28.4.1 13
@extension	1..1	SHALL		<a href="#">3346-34385</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-34028</a>	
title	1..1	SHALL		<a href="#">3346-34029</a>	
statusCode	1..1	SHALL		<a href="#">3346-34005</a>	
@code	1..1	SHALL		<a href="#">3346-34017</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-34006</a>	
low	0..1	MAY		<a href="#">3346-34018</a>	
routeCode	0..1	MAY		<a href="#">3346-34007</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-34019</a>	
doseQuantity	0..1	MAY		<a href="#">3346-34030</a>	
participation	1..1	SHALL		<a href="#">3346-34008</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34024</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM
role	1..1	SHALL		<a href="#">3346-34009</a>	
@classCode	1..1	SHALL		<a href="#">3346-34020</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = MANU
playingManufacturedMaterial	1..1	SHALL		<a href="#">3346-34010</a>	

@classCode	1..1	SHALL		<a href="#">3346-34022</a>	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = MMAT
@determinerCode	1..1	SHALL		<a href="#">3346-34023</a>	urn:oid:2.16.840.1.113883.5.30 (HL7EntityDeterminer) = KIND
code	1..1	SHALL		<a href="#">3346-34011</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-34021</a>	
participation	0..1	MAY		<a href="#">3346-34012</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34035</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3346-34013</a>	
low	1..1	SHALL		<a href="#">3346-34031</a>	
role	1..1	SHALL		<a href="#">3346-34014</a>	
@classCode	1..1	SHALL		<a href="#">3346-34033</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3346-34034</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-34002</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34036</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3346-34015</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.88:2017-05-01</a>
outboundRelationship	0..1	MAY		<a href="#">3346-34494</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34495</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = REFR
supplyCriteria	1..1	SHALL		<a href="#">3346-34802</a>	<a href="#">Supply (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.129:2017-08-01</a>

1. **SHALL** contain exactly one [1..1] **@classCode="SBADM"** Substance Administration (CONF:3346-34025).
2. **SHALL** contain exactly one [1..1] **@moodCode="RQO"** Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-34026).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3346-34027).  
Note: QDM Attribute: Negation rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-34003) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-34004).

- i. This item **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.28.4.113" (CONF:3346-34016).
- ii. This item **SHALL** contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-34385).
- 5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-34028).
- 6. **SHALL** contain exactly one [1..1] **title** (CONF:3346-34029).
- 7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-34005).
  - a. This statusCode **SHALL** contain exactly one [1..1] @code="active" Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-34017).
- 8. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-34006) such that it
  - a. **MAY** contain zero or one [0..1] **low** (CONF:3346-34018).
 

Note: QDM Attribute: Active datetime
- 9. **MAY** contain zero or one [0..1] **routeCode** (CONF:3346-34007).
  - a. The routeCode, if present, **SHOULD** contain zero or one [0..1] @valueSet (CONF:3346-34019).
 

Note: QDM Attribute: Route
- 10. **MAY** contain zero or one [0..1] **doseQuantity** (CONF:3346-34030).
 

Note: QDM Attribute: Dosage
- 11. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-34008) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="CSM" Consumable (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34024).
  - b. **SHALL** contain exactly one [1..1] **role** (CONF:3346-34009).
    - i. This role **SHALL** contain exactly one [1..1] @classCode="MANU" Manufactured (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-34020).
    - ii. This role **SHALL** contain exactly one [1..1] **playingManufacturedMaterial** (CONF:3346-34010).
      - 1. This playingManufacturedMaterial **SHALL** contain exactly one [1..1] @classCode="MMAT" Manufactured Material (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:3346-34022).
      - 2. This playingManufacturedMaterial **SHALL** contain exactly one [1..1] @determinerCode="KIND" Kind (CodeSystem: HL7EntityDeterminer urn:oid:2.16.840.1.113883.5.30) (CONF:3346-34023).
      - 3. This playingManufacturedMaterial **SHALL** contain exactly one [1..1] **code** (CONF:3346-34011).
 

Note: QDM Attribute: Code

        - a. This code **SHOULD** contain zero or one [0..1] @valueSet (CONF:3346-34021).
  - 12. **MAY** contain zero or one [0..1] **participation** (CONF:3346-34012) such that it
    - a. **SHALL** contain exactly one [1..1] @typeCode="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34035).
    - b. **SHALL** contain exactly one [1..1] **time** (CONF:3346-34013).

- i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3346-34031).  
Note: QDM Attribute: Author dateTime (The time the order is signed)
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3346-34014).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-34033).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3346-34034).
13. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34002) such that it  
Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34036).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3346-34015).
14. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34494) such that it  
Note: QDM Attribute: Supply
- a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34495).
  - b. **SHALL** contain exactly one [1..1] **Supply** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01) (CONF:3346-34802).

**Figure 30: Immunization, Order (V2) Example**

```
<substanceAdministrationCriteria classCode="SBADM" moodCode="RQO">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.113" extension="2017-08-01"/>
  </templateId>
  <id root="27beb8e3-7c86-48cf-b430-235b72786dea"/>
  <title value="Immunization, Order"/>
  <statusCode code="active"/>
  <participation typeCode="CSM">
    <role classCode="MANU">
      <playingMaterial classCode="MMAT" determinerCode="KIND">
        <code valueSet="{$QDMElementValueSetOID}"/>
      </playingMaterial>
    </role>
  </participation>
</substanceAdministrationCriteria>
```

## 5.27 Incision Datetime

[ProcedureCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.89:2017-05-01 (open) ]

**Table 65: Incision Datetime Contexts**

Contained By:	Contains:
<a href="#">Procedure, Performed (V2)</a> (optional)	

This template represents the QDM attribute: Incision Datetime.

Incision datetime is the time the incision was made.

**Table 66: Incision Datetime Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
ProcedureCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.89:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-29907</a>	PROC
@moodCode	1..1	SHALL		<a href="#">3335-29908</a>	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		<a href="#">3335-29909</a>	
item	1..1	SHALL		<a href="#">3335-29910</a>	
@root	1..1	SHALL		<a href="#">3335-29911</a>	2.16.840.1.113883.10.20.28.4.89
@extension	1..1	SHALL		<a href="#">3335-33648</a>	2017-05-01
code	1..1	SHALL		<a href="#">3335-29913</a>	
@code	1..1	SHALL		<a href="#">3335-29914</a>	34896006
@codeSystem	1..1	SHALL		<a href="#">3335-29915</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
statusCode	1..1	SHALL		<a href="#">3335-29993</a>	
@code	1..1	SHALL		<a href="#">3335-33152</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3335-29916</a>	
low	0..1	MAY		<a href="#">3335-29917</a>	

1. **SHALL** contain exactly one [1..1] @classCode="PROC" (CONF:3335-29907).

2. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-29908).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-29909) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-29910).
    - i. This item **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.28.4.89" (CONF:3335-29911).
    - ii. This item **SHALL** contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33648).
4. **SHALL** contain exactly one [1..1] **code** (CONF:3335-29913).
  - a. This code **SHALL** contain exactly one [1..1] @code="34896006" Incision (CONF:3335-29914).
  - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3335-29915).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-29993).
  - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3335-33152).
6. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3335-29916) such that it
  - a. **MAY** contain zero or one [0..1] **low** (CONF:3335-29917).

**Figure 31: Incision Datetime Example**

```
<procedureCriteria classCode="PROC" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.89" extension="2017-05-01"/>
  </templateId>
  <code code="34896006" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <displayName value="incision"/>
  </code>
  <statusCode code="completed"/>
  <effectiveTime xsi:type="IVL_TS">
    <low value="201301011000"/>
  </effectiveTime>
</procedureCriteria>
```

## 5.28 Intervention, Order

[actCriteria: identifier urn:hl7ii:2.16.840.1.113883.10.20.28.4.35:2017-05-01 (open)]

**Table 67: Intervention, Order Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a>

This template represents the QDM data type: Intervention, Order

An intervention order is a request by a physician or appropriately licensed care provider to an appropriate provider or facility to perform a service and/or other type of action necessary for care. Examples of this are an order for smoking cessation counseling or physical therapy.

Timing: The time the order is signed; author time

**Table 68: Intervention, Order Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
actCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.35:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-30631</a>	ACT
@moodCode	1..1	SHALL		<a href="#">3335-30632</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = RQO
@actionNegationInd	0..1	MAY		<a href="#">3335-30633</a>	
templateId	1..1	SHALL		<a href="#">3335-30643</a>	
item	1..1	SHALL		<a href="#">3335-30644</a>	
@root	1..1	SHALL		<a href="#">3335-30645</a>	2.16.840.1.113883.10.20.28.4.3 5
@extension	1..1	SHALL		<a href="#">3335-33383</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-30650</a>	
code	1..1	SHALL		<a href="#">3335-30652</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-30653</a>	
title	1..1	SHALL		<a href="#">3335-30651</a>	
statusCode	1..1	SHALL		<a href="#">3335-30654</a>	
@code	1..1	SHALL		<a href="#">3335-30655</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
participation	0..1	MAY		<a href="#">3335-33490</a>	
@typeCode	1..1	SHALL		<a href="#">3335-33492</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3335-33491</a>	
low	1..1	SHALL		<a href="#">3335-33493</a>	
role	1..1	SHALL		<a href="#">3335-33586</a>	
@classCode	1..1	SHALL		<a href="#">3335-33587</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3335-33588</a>	
outboundRelationship	0..1	MAY		<a href="#">3335-30647</a>	

@typeCode	1..1	SHALL		<a href="#">3335-30648</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3335-30649</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01)</a>

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** Act (CONF:3335-30631).
2. **SHALL** contain exactly one [1..1] **@moodCode="RQO"** Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-30632).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3335-30633).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-30643) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-30644).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.35"** (CONF:3335-30645).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-05-01"** (CONF:3335-33383).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3335-30650).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3335-30652).  
Note: QDM Attribute: Code
  - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3335-30653).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3335-30651).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-30654).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code="active"** Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-30655).
9. **MAY** contain zero or one [0..1] **participation** (CONF:3335-33490) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-33492).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3335-33491).
    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3335-33493).  
Note: QDM Attribute: Author dateTime (The time the order is signed)
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3335-33586).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3335-33587).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3335-33588).
10. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3335-30647) such that it  
Note: QDM Attribute: Reason
  - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-30648).

- b. **SHALL** contain exactly one [1..1] [Reason](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3335-30649).

**Figure 32: Intervention, Order Example**

```
<actCriteria classCode="ACT" moodCode="RQO">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.35" extension="2017-05-01"/>
  </templateId>
  <id root="A8951AC3-990F-43E4-970C-1F0F396D203E"/>
  <code valueSet="{$QDMElementValueSetOID}"/>
  <title value="Intervention, Order"/>
  <statusCode code="active"/>
</actCriteria>
```

## 5.29 Intervention, Performed (V2)

[actCriteria: identifier urn:hl7ii:2.16.840.1.113883.10.20.28.4.36:2017-08-01 (open)]

**Table 69: Intervention, Performed (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a> <a href="#">Result (V2)</a> <a href="#">Status (V2)</a>

This template represents the QDM data type: Intervention, Performed.

Intervention performed represents an intervention that has been completed. Intervention represents a course of action intended to achieve a result in the care of persons with health problems that does not involve direct physical contact with a patient.

Timing: The Relevant Period addresses: startTime – The time the intervention begins; stopTime – The time the intervention ends.

**Table 70: Intervention, Performed (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
actCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.36:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-31150</a>	ACT
@moodCode	1..1	SHALL		<a href="#">3346-31151</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..1	MAY		<a href="#">3346-31152</a>	
templateId	1..1	SHALL		<a href="#">3346-31153</a>	
item	1..1	SHALL		<a href="#">3346-31154</a>	
@root	1..1	SHALL		<a href="#">3346-31155</a>	2.16.840.1.113883.10.20.28.4.3 6
@extension	1..1	SHALL		<a href="#">3346-33384</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-31156</a>	
code	1..1	SHALL		<a href="#">3346-31157</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-31158</a>	
title	1..1	SHALL		<a href="#">3346-31159</a>	
statusCode	1..1	SHALL		<a href="#">3346-31160</a>	
@code	1..1	SHALL		<a href="#">3346-31161</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-31162</a>	
low	0..1	MAY		<a href="#">3346-31163</a>	
high	0..1	MAY		<a href="#">3346-31164</a>	
participation	0..1	MAY		<a href="#">3346-34523</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34526</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3346-34524</a>	
low	1..1	SHALL		<a href="#">3346-34527</a>	
role	1..1	SHALL		<a href="#">3346-34525</a>	

@classCode	1..1	SHALL		<a href="#">3346-34528</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3346-34529</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-31171</a>	
@typeCode	1..1	SHALL		<a href="#">3346-31172</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3346-31173</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01)</a>
outboundRelationship	0..1	MAY		<a href="#">3346-33431</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33433</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = VALUE
observationCriteria	1..1	SHALL		<a href="#">3346-33434</a>	<a href="#">Result (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01)</a>
outboundRelationship	0..1	MAY		<a href="#">3346-33432</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33435</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observationCriteria	1..1	SHALL		<a href="#">3346-33436</a>	<a href="#">Status (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-08-01)</a>

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CONF:3346-31150).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-31151).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3346-31152).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-31153) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-31154).
    - i. This item **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.28.4.36" (CONF:3346-31155).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension**="2017-08-01" (CONF:3346-33384).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-31156).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3346-31157).  
Note: QDM Attribute: Code
  - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-31158).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3346-31159).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-31160).

- a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-31161).
9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-31162) such that it  
 Note: QDM Attribute: Relevant Period
  - a. **MAY** contain zero or one [0..1] **low** (CONF:3346-31163).  
 Note: startTime (The time the intervention begins)
  - b. **MAY** contain zero or one [0..1] **high** (CONF:3346-31164).  
 Note: stopTime (The time the intervention ends)
10. **MAY** contain zero or one [0..1] **participation** (CONF:3346-34523) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34526).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3346-34524).
    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3346-34527).  
 Note: QDM Attribute: Author dateTime
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3346-34525).
    - i. This role **SHALL** contain exactly one [1..1] @classCode="ROL" Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-34528).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3346-34529).
11. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-31171) such that it  
 Note: QDM Attribute: Reason
  - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-31172).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3346-31173).
12. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-33431) such that it  
 Note: QDM Attribute: Result
  - a. **SHALL** contain exactly one [1..1] @typeCode="VALUE" Has value (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-33433).
  - b. **SHALL** contain exactly one [1..1] **Result (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01) (CONF:3346-33434).
13. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-33432) such that it  
 Note: QDM Attribute: Status
  - a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-33435).
  - b. **SHALL** contain exactly one [1..1] **Status (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-08-01) (CONF:3346-33436).

**Figure 33: Intervention, Performed (V2) Example**

```
<actCriteria classCode="ACT" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.36" extension="2017-08-01"/>
  </templateId>
  <id root="a2faf205-f9c1-485c-8edc-c9c0021a218c" />
  <code valueSet="{$QDMElementValueSetOID}"/>
  <title value="Intervention, Performed"/>
  <statusCode code="completed"/>
</actCriteria>
```

## 5.30 Intervention, Recommended

[actCriteria: identifier urn:hl7ii:2.16.840.1.113883.10.20.28.4.37:2017-05-01 (open)]

**Table 71: Intervention, Recommended Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a>

This template represents the QDM data type: Intervention, Recommended.

Intervention recommended represents a recommendation for an intervention. Intervention represents a course of action intended to achieve a result in the care of persons with health problems that does not involve direct physical contact with a patient. Examples include patient education and therapeutic communication.

Timing: The time the recommendation is authored (i.e., provided to the patient).

All QDM datatypes referring to recommendations address the time that the recommendation occurs, a single point in time. Vendors have expressed concerns that recommendations are not necessarily captured or managed in a standard manner as part of structured data capture in clinical workflow; many are documented as part of assessments in narrative text. Measure developers should address feasibility of clinical workflow to capture recommendations when evaluating measures.

**Table 72: Intervention, Recommended Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
actCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.37:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-30801</a>	ACT
@moodCode	1..1	SHALL		<a href="#">3335-30802</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = INT
@actionNegationInd	0..1	MAY		<a href="#">3335-30806</a>	
templateId	1..1	SHALL		<a href="#">3335-30803</a>	
item	1..1	SHALL		<a href="#">3335-30804</a>	
@root	1..1	SHALL		<a href="#">3335-30805</a>	2.16.840.1.113883.10.20.28.4.3 7
@extension	1..1	SHALL		<a href="#">3335-33385</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-30807</a>	
code	1..1	SHALL		<a href="#">3335-30808</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-30809</a>	
title	1..1	SHALL		<a href="#">3335-30810</a>	
statusCode	1..1	SHALL		<a href="#">3335-30811</a>	
@code	1..1	SHALL		<a href="#">3335-30812</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
participation	0..1	MAY		<a href="#">3335-34392</a>	
@typeCode	1..1	SHALL		<a href="#">3335-34395</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3335-34393</a>	
low	1..1	SHALL		<a href="#">3335-34396</a>	
role	1..1	SHALL		<a href="#">3335-34394</a>	
@classCode	1..1	SHALL		<a href="#">3335-34534</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3335-34397</a>	
outboundRelationship	0..1	MAY		<a href="#">3335-30817</a>	

@typeCode	1..1	SHALL		<a href="#">3335-30818</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3335-30819</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01)</a>

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** Act (CONF:3335-30801).
2. **SHALL** contain exactly one [1..1] **@moodCode="INT"** Intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-30802).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3335-30806).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-30803) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-30804).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.37"** (CONF:3335-30805).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-05-01"** (CONF:3335-33385).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3335-30807).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3335-30808).  
Note: QDM Attribute: Code
  - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3335-30809).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3335-30810).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-30811).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code="active"** Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-30812).
9. **MAY** contain zero or one [0..1] **participation** (CONF:3335-34392) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-34395).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3335-34393).
    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3335-34396).  
Note: QDM Attribute: Author dateTime (The time the recommendation is authored)
    - ii. **SHALL** contain exactly one [1..1] **role** (CONF:3335-34394).
      - i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3335-34534).
      - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3335-34397).
10. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3335-30817) such that it  
Note: QDM Attribute: Reason
  - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-30818).

- b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3335-30819).

**Figure 34: Intervention, Recommended Example**

```
<actCriteria classCode="ACT" moodCode="INT">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.37" extension="2017-05-01"/>
  </templateId>
  <id root="e242b3ae-d300-4038-a039-f9cd511544c5"/>
  <code valueSet="{$QDMElementValueSetOID}"/>
  <title value="Intervention, Recommended" />
  <statusCode code="active"/>
</actCriteria>
```

## 5.31 Laboratory Test Reference Range

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.124:2017-05-01 (open)]

**Table 73: Laboratory Test Reference Range Contexts**

Contained By:	Contains:
<a href="#">Laboratory Test Component</a> (optional)	
<a href="#">Laboratory Test, Performed (V2)</a> (optional)	

This template represents the QDM attribute: Reference Range Low and High.

Reference Range High: The high bound (inclusive) of values that are considered normal.

Reference Range Low: The low bound (inclusive) of values that are considered normal.

**Table 74: Laboratory Test Reference Range Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.124:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-34406</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3335-34407</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
templateId	1..1	SHALL		<a href="#">3335-34398</a>	
item	1..1	SHALL		<a href="#">3335-34399</a>	
@root	1..1	SHALL		<a href="#">3335-34401</a>	2.16.840.1.113883.10.20.28.4.1 24
@extension	1..1	SHALL		<a href="#">3335-34615</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-34408</a>	
code	1..1	SHALL		<a href="#">3335-34400</a>	
@code	1..1	SHALL		<a href="#">3335-34403</a>	19147-8
@codeSystem	1..1	SHALL		<a href="#">3335-34404</a>	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		<a href="#">3335-34409</a>	
value	1..1	SHALL	IVL_P_Q	<a href="#">3335-34405</a>	
low	0..1	MAY		<a href="#">3335-34410</a>	
high	0..1	MAY		<a href="#">3335-34411</a>	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CONF:3335-34406).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood  
urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-34407).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-34398).
  - a. This templateId **SHALL** contain exactly one [1..1] **item** (CONF:3335-34399).
    - i. This item **SHALL** contain exactly one [1..1]  
**@root="2.16.840.1.113883.10.20.28.4.124"** (CONF:3335-34401).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-05-01"** (CONF:3335-34615).
4. **SHALL** contain exactly one [1..1] **id** (CONF:3335-34408).
5. **SHALL** contain exactly one [1..1] **code** (CONF:3335-34400).

- a. This code **SHALL** contain exactly one [1..1] @code="19147-8" Lab Test Reference Range (CONF:3335-34403).
- b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3335-34404).
- 6. **SHALL** contain exactly one [1..1] **title** (CONF:3335-34409).
- 7. **SHALL** contain exactly one [1..1] **value** with @xsi:type="IVL\_PQ" (CONF:3335-34405).
  - a. This value **MAY** contain zero or one [0..1] **low** (CONF:3335-34410).  
Note: QDM Attribute: Reference Range Low
  - b. This value **MAY** contain zero or one [0..1] **high** (CONF:3335-34411).  
Note: QDM Attribute: Reference Range High

**Figure 35: Laboratory Test Reference Range Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.124" extension="2017-05-01"/>
  </templateId>
  <id root="6a296c27-279f-4bdc-8707-6d030a6839a5"/>
  <code code="19147-8" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC">
    <displayName value="Reference Range"/>
  </code>
  <title value="Laboratory Test Reference Range"/>
  <value xsi:type="IVL_PQ">
    <high value="17.5" unit="g/dL"/>
  </value>
</observationCriteria>
```

## 5.32 Laboratory Test, Order

[ProcedureCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.41:2017-05-01 (open) ]

**Table 75: Laboratory Test, Order Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a>

This template represents the QDM data type: Laboratory Test, Order.

Laboratory Test represents a medical procedure that involves testing a sample of blood, urine, or other substance from the body. Tests can help determine a diagnosis, plan treatment, check to see if treatment is working, or monitor the disease over time. Laboratory tests may be performed on specimens not derived from patients (e.g., electrolytes or contents of water or consumed fluids, cultures of environment, pets, other animals).

Timing: The time the order is signed; author datetime.

**Table 76: Laboratory Test, Order Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
ProcedureCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.41:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-30389</a>	PROC
@moodCode	1..1	SHALL		<a href="#">3335-30390</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = RQO
@actionNegationInd	0..1	MAY		<a href="#">3335-30391</a>	
templateId	1..1	SHALL		<a href="#">3335-30392</a>	
item	1..1	SHALL		<a href="#">3335-30393</a>	
@root	1..1	SHALL		<a href="#">3335-30394</a>	2.16.840.1.113883.10.20.28.4.4 1
@extension	1..1	SHALL		<a href="#">3335-33649</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-30395</a>	
code	1..1	SHALL		<a href="#">3335-30396</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-30397</a>	
title	1..1	SHALL		<a href="#">3335-30398</a>	
statusCode	1..1	SHALL		<a href="#">3335-33109</a>	
@code	1..1	SHALL		<a href="#">3335-33110</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
methodCode	0..1	MAY		<a href="#">3335-30402</a>	
item	1..1	SHALL		<a href="#">3335-30403</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-30404</a>	
participation	0..1	MAY		<a href="#">3335-33495</a>	
@typeCode	1..1	SHALL		<a href="#">3335-33497</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3335-33496</a>	
low	1..1	SHALL		<a href="#">3335-33498</a>	
role	1..1	SHALL		<a href="#">3335-33589</a>	

@classCode	1..1	SHALL		<a href="#">3335-33590</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3335-33591</a>	
outboundRelationship	0..1	MAY		<a href="#">3335-30405</a>	
@typeCode	1..1	SHALL		<a href="#">3335-30406</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3335-30407</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01)</a>

1. **SHALL** contain exactly one [1..1] **@classCode**="PROC" Procedure (CONF:3335-30389).
2. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-30390).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3335-30391).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-30392) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-30393).
    - i. This item **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.28.4.41" (CONF:3335-30394).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension**="2017-05-01" (CONF:3335-33649).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3335-30395).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3335-30396).  
Note: QDM Attribute: Code
  - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3335-30397).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3335-30398).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-33109).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="active" Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-33110).
9. **MAY** contain zero or one [0..1] **methodCode** (CONF:3335-30402).  
Note: QDM Attribute: Method
  - a. The methodCode, if present, **SHALL** contain exactly one [1..1] **item** (CONF:3335-30403).
    - i. This item **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3335-30404).
10. **MAY** contain zero or one [0..1] **participation** (CONF:3335-33495) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode**="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-33497).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3335-33496).
    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3335-33498).  
Note: QDM Attribute: Author dateTime (The time the order is signed)
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3335-33589).

- i. This role **SHALL** contain exactly one [1..1] @classCode="ROL" Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3335-33590).
  - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3335-33591).
11. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3335-30405) such that it Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] @typeCode="RSON" Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-30406).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3335-30407).

**Figure 36: Laboratory Test, Order Example**

```
<procedureCriteria classCode="PROC" moodCode="RQO">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.41" extension="2017-05-01"/>
  </templateId>
  <id root="3a2a37c0-9abe-4c30-a254-8561a75d1cb4"/>
  <code valueSet="{$QDMElementValueSetOID}"/>
  <title value="Laboratory Test, Order"/>
  <statusCode code="active"/>
</procedureCriteria>
```

### 5.33 Laboratory Test, Performed (V2)

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.42:2017-08-01 (open) ]

**Table 77: Laboratory Test, Performed (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Laboratory Test Component</a> <a href="#">Laboratory Test Reference Range</a> <a href="#">Reason</a> <a href="#">Result (V2)</a> <a href="#">Status (V2)</a>

This template represents the QDM data type: Laboratory Test, Performed.

Laboratory Test represents a medical procedure that involves testing a sample of blood, urine, or other substance from the body. Tests can help determine a diagnosis, plan treatment, check to see if treatment is working, or monitor the disease over time. Laboratory tests may be performed on specimens not derived from patients (e.g., electrolytes or contents of water or consumed fluids, cultures of environment, pets, other animals).

**Timing:** The Relevant Period addresses: startTime – When the laboratory test is initiated (i.e., the time the specimen collection begins); stopTime – when the laboratory test is completed (i.e., the time the specimen collection ends).

**QDM Attributes:** Result and Result dateTime are represented using the Result (V2) template.

**Table 78: Laboratory Test, Performed (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.42:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-30364</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3346-33237</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..1	MAY		<a href="#">3346-30365</a>	
templateId	1..1	SHALL		<a href="#">3346-30366</a>	
item	1..1	SHALL		<a href="#">3346-30367</a>	
@root	1..1	SHALL		<a href="#">3346-30368</a>	2.16.840.1.113883.10.20.28.4.4 2
@extension	1..1	SHALL		<a href="#">3346-33373</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-30369</a>	
code	1..1	SHALL		<a href="#">3346-30370</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-30371</a>	
title	1..1	SHALL		<a href="#">3346-30372</a>	
statusCode	1..1	SHALL		<a href="#">3346-30373</a>	
@code	1..1	SHALL		<a href="#">3346-30509</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-30374</a>	
low	0..1	MAY		<a href="#">3346-30375</a>	
high	0..1	MAY		<a href="#">3346-30376</a>	
value	0..0	SHALL NOT		<a href="#">3346-33611</a>	
methodCode	0..1	MAY		<a href="#">3346-30377</a>	
item	1..1	SHALL		<a href="#">3346-30378</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-30379</a>	
participation	1..1	SHALL		<a href="#">3346-34535</a>	

@typeCode	1..1	SHALL		<a href="#">3346-34538</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3346-34536</a>	
low	1..1	SHALL		<a href="#">3346-34539</a>	
role	1..1	SHALL		<a href="#">3346-34537</a>	
@classCode	1..1	SHALL		<a href="#">3346-34540</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3346-34541</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-30380</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34061</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3346-30382</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.88:2017-05-01</a>
outboundRelationship	0..1	MAY		<a href="#">3346-34767</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34768</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = VALUE
observationCriteria	1..1	SHALL		<a href="#">3346-34769</a>	<a href="#">Result (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.101:2017-08-01</a>
outboundRelationship	0..1	MAY		<a href="#">3346-33372</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34618</a>	REFR
observationCriteria	1..1	SHALL		<a href="#">3346-33375</a>	<a href="#">Status (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.94:2017-08-01</a>
outboundRelationship	0..1	MAY		<a href="#">3346-34062</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34066</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFV
observationCriteria	1..1	SHALL		<a href="#">3346-34412</a>	<a href="#">Laboratory Test Reference Range (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.124:2017-05-01</a>
outboundRelationship	0..*	MAY		<a href="#">3346-34617</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34619</a>	REFR

observationCriteria	1..1	SHALL		<a href="#">3346-34620</a>	<a href="#">Laboratory Test Component (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.126:2017-05-01)</a>
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1. **SHALL** contain exactly one [1..1] `@classCode="OBS"` Observation (CONF:3346-30364).
2. **SHALL** contain exactly one [1..1] `@moodCode="EVN"` Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-33237).
3. **MAY** contain zero or one [0..1] `@actionNegationInd` (CONF:3346-30365).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] `templateId` (CONF:3346-30366) such that it
  - a. **SHALL** contain exactly one [1..1] `item` (CONF:3346-30367).
    - i. This item **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.10.20.28.4.42"` (CONF:3346-30368).
    - ii. This item **SHALL** contain exactly one [1..1] `@extension="2017-08-01"` (CONF:3346-33373).
5. **SHALL** contain exactly one [1..1] `id` (CONF:3346-30369).
6. **SHALL** contain exactly one [1..1] `code` (CONF:3346-30370).  
Note: QDM Attribute: Code
  - a. This code **SHOULD** contain zero or one [0..1] `@valueSet` (CONF:3346-30371).
7. **SHALL** contain exactly one [1..1] `title` (CONF:3346-30372).
8. **SHALL** contain exactly one [1..1] `statusCode` (CONF:3346-30373).
  - a. This statusCode **SHALL** contain exactly one [1..1] `@code="completed"` Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-30509).
9. **MAY** contain zero or one [0..1] `effectiveTime` (CONF:3346-30374) such that it  
Note: QDM Attribute: Relevant Period
  - a. **MAY** contain zero or one [0..1] `low` (CONF:3346-30375).  
Note: startTime (When the laboratory test is initiated (i.e., the time the specimen collection begins))
  - b. **MAY** contain zero or one [0..1] `high` (CONF:3346-30376).  
Note: stopTime (When the laboratory test is completed (i.e., the time the specimen collection ends))
10. **SHALL NOT** contain [0..0] `value` (CONF:3346-33611).  
Note: Use Result (V2) template for the QDM Attribute: Result
11. **MAY** contain zero or one [0..1] `methodCode` (CONF:3346-30377).  
Note: QDM Attribute: Method
  - a. The methodCode, if present, **SHALL** contain exactly one [1..1] `item` (CONF:3346-30378).
    - i. This item **SHOULD** contain zero or one [0..1] `@valueSet` (CONF:3346-30379).
12. **SHALL** contain exactly one [1..1] `participation` (CONF:3346-34535) such that it
  - a. **SHALL** contain exactly one [1..1] `@typeCode="AUT"` Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34538).
  - b. **SHALL** contain exactly one [1..1] `time` (CONF:3346-34536).

- i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3346-34539).  
Note: QDM Attribute: Author Datetime
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3346-34537).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-34540).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3346-34541).
13. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-30380) such that it  
Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34061).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3346-30382).
14. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34767) such that it  
Note: QDM Attribute: Result, QDM Attribute: Result dateTime
- a. **SHALL** contain exactly one [1..1] **@typeCode="VALUE"** has value (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34768).
  - b. **SHALL** contain exactly one [1..1] **Result (v2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01) (CONF:3346-34769).
15. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-33372) such that it  
Note: QDM Attribute: Status
- a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers To (CONF:3346-34618).
  - b. **SHALL** contain exactly one [1..1] **Status (v2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-08-01) (CONF:3346-33375).
16. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34062) such that it  
Note: QDM Attribute: Reference Range Low, QDM Attribute: Reference Range High
- a. **SHALL** contain exactly one [1..1] **@typeCode="REFV"** Has Reference Values (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34066).
  - b. **SHALL** contain exactly one [1..1] **Laboratory Test Reference Range** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.124:2017-05-01) (CONF:3346-34412).
17. **MAY** contain zero or more [0..\*] **outboundRelationship** (CONF:3346-34617) such that it  
Note: QDM Attribute: Components
- a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers To (CONF:3346-34619).
  - b. **SHALL** contain exactly one [1..1] **Laboratory Test Component** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.126:2017-05-01) (CONF:3346-34620).

**Figure 37: Laboratory Test, Performed (V2) Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.42" extension="2017-08-01"/>
  </templateId>
  <id root="05f0a7c8-371e-4e77-aad4-22ff9fdf7fa3"/>
  <code valueSet="{$QDMElementValueSetOID}"/>
  <title value="Laboratory Test, Performed"/>
  <statusCode code="completed"/>
</observationCriteria>
```

## 5.34 Laboratory Test, Recommended

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.43:2017-05-01 (open)]

**Table 79: Laboratory Test, Recommended Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a>

This template represents the QDM data type: Laboratory Test, Recommended.

This template represents a recommendation for a laboratory test. Laboratory Test represents a medical procedure that involves testing a sample of blood, urine, or other substance from the body. Tests can help determine a diagnosis, plan treatment, check to see if treatment is working, or monitor the disease over time. Laboratory tests may be performed on specimens not derived from patients (e.g., electrolytes or contents of water or consumed fluids, cultures of environment, pets, other animals).

Timing: The time the recommendation is authored (i.e., provided to the patient).

All QDM datatypes referring to recommendations address the time that the recommendation occurs, a single point in time. Vendors have expressed concerns that recommendations are not necessarily captured or managed in a standard manner as part of structured data capture in clinical workflow; many are documented as part of assessments in narrative text. Measure developers should address feasibility of clinical workflow to capture recommendations when evaluating measures.

**Table 80: Laboratory Test, Recommended Constraints Overview**

<b>XPath</b>	<b>Card.</b>	<b>Verb</b>	<b>Data Type</b>	<b>CONF #</b>	<b>Value</b>
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.43:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-30414</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3335-30415</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = INT
@actionNegationInd	0..1	MAY		<a href="#">3335-30416</a>	
templateId	1..1	SHALL		<a href="#">3335-30417</a>	
item	1..1	SHALL		<a href="#">3335-30418</a>	
@root	1..1	SHALL		<a href="#">3335-30419</a>	2.16.840.1.113883.10.20.28.4.4 3
@extension	1..1	SHALL		<a href="#">3335-33692</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-30420</a>	
code	1..1	SHALL		<a href="#">3335-30421</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-30422</a>	
title	1..1	SHALL		<a href="#">3335-30423</a>	
statusCode	1..1	SHALL		<a href="#">3335-30424</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus)
@code	1..1	SHALL		<a href="#">3335-30510</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
methodCode	0..1	MAY		<a href="#">3335-30428</a>	
item	1..1	SHALL		<a href="#">3335-30429</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-30430</a>	
participation	0..1	MAY		<a href="#">3335-34413</a>	
@typeCode	1..1	SHALL		<a href="#">3335-34416</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3335-34414</a>	
low	1..1	SHALL		<a href="#">3335-34417</a>	
role	1..1	SHALL		<a href="#">3335-34415</a>	

@classCode	1..1	SHALL		<a href="#">3335-34418</a>	ROL
id	0..1	MAY		<a href="#">3335-34419</a>	
outboundRelationship	0..1	MAY		<a href="#">3335-30431</a>	
@typeCode	1..1	SHALL		<a href="#">3335-34115</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3335-30433</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.88:2017-05-01</a>

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CONF:3335-30414).
2. **SHALL** contain exactly one [1..1] **@moodCode="INT"** Intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-30415).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3335-30416).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-30417) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-30418).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.43"** (CONF:3335-30419).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-05-01"** (CONF:3335-33692).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3335-30420).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3335-30421).  
Note: QDM Attribute: Code
  - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3335-30422).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3335-30423).
8. **SHALL** contain exactly one [1..1] **statusCode** (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-30424).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code="active"** Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-30510).
9. **MAY** contain zero or one [0..1] **methodCode** (CONF:3335-30428).  
Note: QDM Attribute: Method
  - a. The methodCode, if present, **SHALL** contain exactly one [1..1] **item** (CONF:3335-30429).
    - i. This item **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3335-30430).
10. **MAY** contain zero or one [0..1] **participation** (CONF:3335-34413) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-34416).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3335-34414).

- i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3335-34417).  
Note: QDM Attribute: Author dateTime (The time the recommendation is authored (i.e., provided to the patient))
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3335-34415).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CONF:3335-34418).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3335-34419).
11. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3335-30431) such that it  
Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-34415).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3335-30433).

**Figure 38: Laboratory Test, Recommended Example**

```
<observationCriteria classCode="OBS" moodCode="INT">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.43" extension="2017-05-01"/>
  </templateId>
  <id root="7a54587b-f1d6-4ce1-bb4c-30ffc5139565"/>
  <code valueSet="{$QDMElementValueSetOID}"/>
  <title value="Laboratory Test, Recommended"/>
  <statusCode code="active"/>
</observationCriteria>
```

## 5.35 Medication, Active (V2)

[substanceAdministrationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.44:2017-08-01 (open)]

**Table 81: Medication, Active (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Supply</a>

This template represents the QDM data type: Medication, Active.

Medication represents clinical drugs or chemical substances intended for use in the medical diagnosis, cure, treatment, or prevention of disease. Medication active represents medication that is currently being taken by the patient.

Timing: The Relevant Period addresses: StartTime = when the medication is first known to be used (generally the time of entry on the medication list); StopTime = when the medication is discontinued (generally the time discontinuation is recorded on the medication list).

Dosage: Details of how medication is/is to be taken, i.e., the quantity (mg, cc, tablets) to be taken at a single administration.

Supply: The quantity (amount) of therapeutic agent that was provided to a patient (i.e., number of doses, number of tablets or pills, volume of medication). Used while the patient was on the given medication.

**Table 82: Medication, Active (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
substanceAdministrationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.44:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-31950</a>	SBADM
@moodCode	1..1	SHALL		<a href="#">3346-31951</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..0	SHALL NOT		<a href="#">3346-34809</a>	
templateId	1..1	SHALL		<a href="#">3346-31953</a>	
item	1..1	SHALL		<a href="#">3346-31954</a>	
@root	1..1	SHALL		<a href="#">3346-31955</a>	2.16.840.1.113883.10.20.28.4.4 4
@extension	1..1	SHALL		<a href="#">3346-33376</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-31956</a>	
title	1..1	SHALL		<a href="#">3346-31957</a>	
statusCode	1..1	SHALL		<a href="#">3346-31958</a>	
@code	1..1	SHALL		<a href="#">3346-31959</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-31960</a>	
low	0..1	MAY		<a href="#">3346-31961</a>	
high	0..1	MAY		<a href="#">3346-31962</a>	
effectiveTime	0..1	MAY	PIVL_TS	<a href="#">3346-34803</a>	
period	0..1	MAY		<a href="#">3346-34804</a>	
routeCode	0..1	MAY		<a href="#">3346-33115</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-33116</a>	
doseQuantity	0..1	MAY		<a href="#">3346-33117</a>	
participation	1..1	SHALL		<a href="#">3346-33121</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33122</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM

role	1..1	SHALL		<a href="#">3346-33123</a>	
playingMaterial	1..1	SHALL		<a href="#">3346-33124</a>	
@classCode	1..1	SHALL		<a href="#">3346-34116</a>	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = MMAT
@determinerCode	1..1	SHALL		<a href="#">3346-33125</a>	urn:oid:2.16.840.1.113883.5.30 (HL7EntityDeterminer) = KIND
code	1..1	SHALL		<a href="#">3346-33126</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-33127</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-34431</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34432</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = REFR
supplyCriteria	1..1	SHALL		<a href="#">3346-34805</a>	<a href="#">Supply (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.129:2017-08-01</a>

1. **SHALL** contain exactly one [1..1] **@classCode="SBADM"** Substance Administrated (CONF:3346-31950).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-31951).
3. **SHALL NOT** contain [0..0] **@actionNegationInd** (CONF:3346-34809).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-31953) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-31954).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.44"** (CONF:3346-31955).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-08-01"** (CONF:3346-33376).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-31956).
6. **SHALL** contain exactly one [1..1] **title** (CONF:3346-31957).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-31958).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code="active"** Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-31959).
8. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-31960) such that it
 

Note: QDM Attribute: Relevant Period

  - a. **MAY** contain zero or one [0..1] **low** (CONF:3346-31961).
 

Note: startTime - when a single medication administration event starts (e.g., the initiation of an intravenous infusion, or administering a pill or IM injection to a patient)
  - b. **MAY** contain zero or one [0..1] **high** (CONF:3346-31962).
 

Note: stopTime - when a single medication administration event ends (e.g., the end

- time of the intravenous infusion, or the administration of a pill or IM injection is completed - for pills and IM injections, the start and stop times are the same)
9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-34803) such that it  
Note: QDM Attribute: Frequency
    - a. **MAY** contain zero or one [0..1] **period** (CONF:3346-34804).
  10. **MAY** contain zero or one [0..1] **routeCode** (CONF:3346-33115).  
Note: QDM Attribute: Route
    - a. The routeCode, if present, **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-33116).
  11. **MAY** contain zero or one [0..1] **doseQuantity** (CONF:3346-33117).  
Note: QDM Attribute: Dosage
  12. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-33121) such that it
    - a. **SHALL** contain exactly one [1..1] **@typeCode="CSM"** Consumable (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-33122).
    - b. **SHALL** contain exactly one [1..1] **role** (CONF:3346-33123).
      - i. This role **SHALL** contain exactly one [1..1] **playingMaterial** (CONF:3346-33124).
        1. This playingMaterial **SHALL** contain exactly one [1..1] **@classCode="MMAT"** Manufactured Material (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:3346-34116).
        2. This playingMaterial **SHALL** contain exactly one [1..1] **@determinerCode="KIND"** Kind (CodeSystem: HL7EntityDeterminer urn:oid:2.16.840.1.113883.5.30) (CONF:3346-33125).
        3. This playingMaterial **SHALL** contain exactly one [1..1] **code** (CONF:3346-33126).
          - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-33127).
  13. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34431) such that it  
Note: QDM Attribute: Supply
    - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34432).
    - b. **SHALL** contain exactly one [1..1] **Supply** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01) (CONF:3346-34805).

**Figure 39: Medication, Active (V2) Example**

```
<substanceAdministrationCriteria classCode="SBADM" moodCode="EVN">
    <templateId>
        <item root="2.16.840.1.113883.10.20.28.4.44" extension="2017-08-01"/>
    </templateId>
    <id root="6c21f22e-3ae3-435d-a240-7718cc418b7d"/>
    <title value="Medication, Active"/>
    <statusCode code="active"/>
    <participation typeCode="CSM">
        <role classCode="MANU">
            <playingMaterial classCode="MMAT" determinerCode="KIND">
                <code valueSet="{$QDMElementValueSetOID}"/>
            </playingMaterial>
        </role>
    </participation>
</substanceAdministrationCriteria>
```

## 5.36 Medication, Administered (V2)

[substanceAdministrationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.45:2017-08-01 (open) ]

**Table 83: Medication, Administered (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a> <a href="#">Supply</a>

This template represents the QDM data type: Medication, Administered.

A medication refers to clinical drugs or chemical substances intended for use in the medical diagnosis, cure, treatment, or prevention of disease. This template represents a medication that was administered.

Timing: The Relevant Period addresses: StartTime = when a single medication administration event starts (e.g., the initiation of an intravenous infusion, or administering a pill or IM injection to a patient); StopTime = when a single medication administration event ends (e.g., the end time of the intravenous infusion, or the administration of a pill or IM injection is completed - for pills and IM injections, the start and stop times are the same) .

Dosage: Details of how medication is/is to be taken, i.e., the quantity (mg, cc, tablets) to be taken at a single administration.

Supply: The quantity (amount) of therapeutic agent that was provided to a patient (i.e., number of doses, number of tablets or pills, volume of medication).

**Table 84: Medication, Administered (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
substanceAdministrationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.45:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-32047</a>	SBADM
@moodCode	1..1	SHALL		<a href="#">3346-32048</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..1	MAY		<a href="#">3346-32049</a>	
templateId	1..1	SHALL		<a href="#">3346-32050</a>	
item	1..1	SHALL		<a href="#">3346-32051</a>	
@root	1..1	SHALL		<a href="#">3346-32052</a>	2.16.840.1.113883.10.20.28.4.45
@extension	1..1	SHALL		<a href="#">3346-33386</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-32053</a>	
code	1..1	SHALL		<a href="#">3346-32054</a>	
@code	1..1	SHALL		<a href="#">3346-32055</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 416118004
@codeSystem	1..1	SHALL		<a href="#">3346-32056</a>	2.16.840.1.113883.6.96
title	1..1	SHALL		<a href="#">3346-32057</a>	
statusCode	1..1	SHALL		<a href="#">3346-32058</a>	
@code	1..1	SHALL		<a href="#">3346-32059</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-32060</a>	
low	0..1	MAY		<a href="#">3346-32061</a>	
high	0..1	MAY		<a href="#">3346-32062</a>	
effectiveTime	0..1	MAY	PIVL_TS	<a href="#">3346-34806</a>	
period	0..1	MAY		<a href="#">3346-34807</a>	
routeCode	0..1	MAY		<a href="#">3346-32506</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-32507</a>	

doseQuantity	0..1	MAY		<a href="#">3346-33128</a>	
participation	1..1	SHALL		<a href="#">3346-32497</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32503</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM
role	1..1	SHALL		<a href="#">3346-32498</a>	
@classCode	1..1	SHALL		<a href="#">3346-32504</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU
playingManufacturedMaterial	1..1	SHALL		<a href="#">3346-32499</a>	
@classCode	1..1	SHALL		<a href="#">3346-32500</a>	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = MMAT
@determinerCode	1..1	SHALL		<a href="#">3346-32520</a>	urn:oid:2.16.840.1.113883.5.30 (HL7EntityDeterminer) = KIND
code	1..1	SHALL		<a href="#">3346-32501</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-32502</a>	
participation	1..1	SHALL		<a href="#">3346-34542</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34545</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3346-34543</a>	
low	1..1	SHALL		<a href="#">3346-34546</a>	
role	1..1	SHALL		<a href="#">3346-34544</a>	
@classCode	1..1	SHALL		<a href="#">3346-34547</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3346-34548</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-34434</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34435</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
supplyCriteria	1..1	SHALL		<a href="#">3346-34808</a>	<u>Supply (identifier:</u> <a href="#">urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01</a>
outboundRelationship	0..1	MAY		<a href="#">3346-32511</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32512</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3346-</a>	<u>Reason (identifier:</u>

				<a href="#">32513</a>	<a href="#">urn:hl7ii:2.16.840.1.113883.10.20.28.4.45</a>
--	--	--	--	-----------------------	---

1. **SHALL** contain exactly one [1..1] `@classCode="SBADM"` Substance Administration (CONF:3346-32047).
2. **SHALL** contain exactly one [1..1] `@moodCode="EVN"` Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-32048).
3. **MAY** contain zero or one [0..1] `@actionNegationInd` (CONF:3346-32049).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] `templateId` (CONF:3346-32050) such that it
  - a. **SHALL** contain exactly one [1..1] `item` (CONF:3346-32051).
    - i. This item **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.10.20.28.4.45"` (CONF:3346-32052).
    - ii. This item **SHALL** contain exactly one [1..1] `@extension="2017-08-01"` (CONF:3346-33386).
5. **SHALL** contain exactly one [1..1] `id` (CONF:3346-32053).
6. **SHALL** contain exactly one [1..1] `code` (CONF:3346-32054).
  - a. This code **SHALL** contain exactly one [1..1] `@code="416118004"` Administration (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3346-32055).
  - b. This code **SHALL** contain exactly one [1..1] `@codeSystem="2.16.840.1.113883.6.96"` (CONF:3346-32056).
7. **SHALL** contain exactly one [1..1] `title` (CONF:3346-32057).
8. **SHALL** contain exactly one [1..1] `statusCode` (CONF:3346-32058).
  - a. This statusCode **SHALL** contain exactly one [1..1] `@code="completed"` Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-32059).
9. **MAY** contain zero or one [0..1] `effectiveTime` (CONF:3346-32060) such that it  
Note: QDM Attribute: Relevant Period
  - a. **MAY** contain zero or one [0..1] `low` (CONF:3346-32061).  
Note: startTime - when a single medication administration event starts (e.g., the initiation of an intravenous infusion, or administering a pill or IM injection to a patient)
  - b. **MAY** contain zero or one [0..1] `high` (CONF:3346-32062).  
Note: stopTime - when a single medication administration event ends (e.g., the end time of the intravenous infusion, or the administration of a pill or IM injection is completed - for pills and IM injections, the start and stop times are the same)
10. **MAY** contain zero or one [0..1] `effectiveTime` (CONF:3346-34806) such that it  
Note: QDM Attribute: Frequency
  - a. **MAY** contain zero or one [0..1] `period` (CONF:3346-34807).
11. **MAY** contain zero or one [0..1] `routeCode` (CONF:3346-32506).  
Note: QDM Attribute: Route
  - a. The routeCode, if present, **SHOULD** contain zero or one [0..1] `@valueSet` (CONF:3346-32507).

12. **MAY** contain zero or one [0..1] **doseQuantity** (CONF:3346-33128).

Note: QDM Attribute: Dosage

13. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-32497) such that it

- a. **SHALL** contain exactly one [1..1] **@typeCode="CSM"** Consumable (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-32503).
- b. **SHALL** contain exactly one [1..1] **role** (CONF:3346-32498).
  - i. This role **SHALL** contain exactly one [1..1] **@classCode="MANU"** Manufactured Product (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-32504).
  - ii. This role **SHALL** contain exactly one [1..1] **playingManufacturedMaterial** (CONF:3346-32499).
    1. This playingManufacturedMaterial **SHALL** contain exactly one [1..1] **@classCode="MMAT"** Manufactured Material (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:3346-32500).
    2. This playingManufacturedMaterial **SHALL** contain exactly one [1..1] **@determinerCode="KIND"** Kind (CodeSystem: HL7EntityDeterminer urn:oid:2.16.840.1.113883.5.30) (CONF:3346-32520).
    3. This playingManufacturedMaterial **SHALL** contain exactly one [1..1] **code** (CONF:3346-32501).
      - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-32502).

14. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-34542) such that it

- a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34545).
- b. **SHALL** contain exactly one [1..1] **time** (CONF:3346-34543).
  - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3346-34546).  
Note: QDM Attribute: Author Time
  - ii. This role **SHOULD** contain exactly one [1..1] **role** (CONF:3346-34544).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-34547).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3346-34548).

15. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34434) such that it

Note: QDM Attribute: Supply

- a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34435).
- b. **SHALL** contain exactly one [1..1] **Supply** (**identifier:** urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01) (CONF:3346-34808).

16. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-32511) such that it

Note: QDM Attribute: Reason

- a. **SHALL** contain exactly one [1..1] @typeCode="RSON" Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32512).
- b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3346-32513).

Note: QDM Attribute: Reason

**Figure 40: Medication, Administered (V2) Example**

```
<substanceAdministrationCriteria classCode="SBADM" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.45" extension="2017-08-01"/>
  </templateId>
  <id root="de28ff02-d2cf-436e-898a-58eb49e15b47"/>
  <code code="416118004" codeSystem="2.16.840.1.113883.6.96">
    <displayName value="Administration"/>
  </code>
  <title value="Medication, Administered"/>
  <statusCode code="completed"/>
  <participation typeCode="CSM">
    <role classCode="MANU">
      <playingManufacturedMaterial classCode="MMAT" determinerCode="KIND">
        <code valueSet="{$QDMElementValueSetOID}"/>
      </playingManufacturedMaterial>
    </role>
  </participation>
</substanceAdministrationCriteria>
```

## 5.37 Medication, Discharge (V2)

[substanceAdministrationCriteria: identifier  
 urn:hl7ii:2.16.840.1.113883.10.20.28.4.48:2017-08-01 (open) ]

**Table 85: Medication, Discharge (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a> <a href="#">Supply</a>

This template represents the QDM data type: Medication, Discharge.

A medication refers to clinical drugs or chemical substances intended for use in the medical diagnosis, cure, treatment, or prevention of disease. This template represents medication should be taken by or given to the patient after being discharged from an inpatient encounter

Timing: The time the discharge medication list on the discharge instruction form is authored.

Dosage: Details of how medication is/is to be taken, i.e., the quantity (mg, cc, tablets) to be taken at a single administration.

Supply: The quantity (amount) of therapeutic agent that was provided to a patient (i.e., number of doses, number of tablets or pills, volume of medication). Dispensed to a patient to be taken at a later time.

**Table 86: Medication, Discharge (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
substanceAdministrationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.48:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-32521</a>	SBADM
@moodCode	1..1	SHALL		<a href="#">3346-32522</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = RQO
@actionNegationInd	0..1	MAY		<a href="#">3346-33438</a>	
templateId	1..1	SHALL		<a href="#">3346-32523</a>	
item	1..1	SHALL		<a href="#">3346-32524</a>	
@root	1..1	SHALL		<a href="#">3346-32525</a>	2.16.840.1.113883.10.20.28.4.4 8
@extension	1..1	SHALL		<a href="#">3346-33439</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-32526</a>	
code	1..1	SHALL		<a href="#">3346-32527</a>	
@code	1..1	SHALL		<a href="#">3346-32528</a>	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 10183-2
@codeSystem	1..1	SHALL		<a href="#">3346-32529</a>	2.16.840.1.113883.6.1
title	1..1	SHALL		<a href="#">3346-32530</a>	
statusCode	1..1	SHALL		<a href="#">3346-32531</a>	
@code	1..1	SHALL		<a href="#">3346-32532</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
effectiveTime	0..1	MAY	PIVL_TS	<a href="#">3346-34810</a>	
period	0..1	MAY		<a href="#">3346-34811</a>	
repeatNumber	0..1	MAY		<a href="#">3346-32536</a>	
routeCode	0..1	MAY		<a href="#">3346-32537</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-32538</a>	
doseQuantity	0..1	MAY		<a href="#">3346-34437</a>	
participation	1..1	SHALL		<a href="#">3346-32539</a>	

@typeCode	1..1	SHALL		<a href="#">3346-32540</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM
role	1..1	SHALL		<a href="#">3346-32541</a>	
@classCode	1..1	SHALL		<a href="#">3346-32542</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU
playingManufacturedMaterial	1..1	SHALL		<a href="#">3346-32543</a>	
@classCode	1..1	SHALL		<a href="#">3346-32544</a>	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = MMAT
@determinerCode	1..1	SHALL		<a href="#">3346-32545</a>	urn:oid:2.16.840.1.113883.5.30 (HL7EntityDeterminer) = KIND
code	1..1	SHALL		<a href="#">3346-32546</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-32547</a>	
participation	1..1	SHALL		<a href="#">3346-34438</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34442</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3346-34439</a>	
low	1..1	SHALL		<a href="#">3346-34443</a>	
role	1..1	SHALL		<a href="#">3346-34440</a>	
@classCode	1..1	SHALL		<a href="#">3346-34444</a>	ROL
id	0..1	MAY		<a href="#">3346-34445</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-34441</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34446</a>	REFR
supplyCriteria	1..1	SHALL		<a href="#">3346-34812</a>	<a href="#">Supply (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.129:2017-08-01</a>
outboundRelationship	0..1	MAY		<a href="#">3346-34130</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34131</a>	RSON
observationCriteria	1..1	SHALL		<a href="#">3346-34132</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.88:2017-05-01</a>

1. **SHALL** contain exactly one [1..1] @classCode="SBADM" Substance Administration (CONF:3346-32521).

2. **SHALL** contain exactly one [1..1] @moodCode="RQO" Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-32522).
3. **MAY** contain zero or one [0..1] @actionNegationInd (CONF:3346-33438).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] templateId (CONF:3346-32523) such that it
  - a. **SHALL** contain exactly one [1..1] item (CONF:3346-32524).
    - i. This item **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.28.4.48" (CONF:3346-32525).
    - ii. This item **SHALL** contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33439).
5. **SHALL** contain exactly one [1..1] id (CONF:3346-32526).
6. **SHALL** contain exactly one [1..1] code (CONF:3346-32527).
  - a. This code **SHALL** contain exactly one [1..1] @code="10183-2" Discharge Medication (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3346-32528).
  - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CONF:3346-32529).
7. **SHALL** contain exactly one [1..1] title (CONF:3346-32530).
8. **SHALL** contain exactly one [1..1] statusCode (CONF:3346-32531).
  - a. This statusCode **SHALL** contain exactly one [1..1] @code="active" Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-32532).
9. **MAY** contain zero or one [0..1] effectiveTime (CONF:3346-34810) such that it  
Note: QDM Attribute: Frequency
  - a. **MAY** contain zero or one [0..1] period (CONF:3346-34811).
10. **MAY** contain zero or one [0..1] repeatNumber (CONF:3346-32536).  
Note: QDM Attribute: Refills
11. **MAY** contain zero or one [0..1] routeCode (CONF:3346-32537).  
Note: QDM Attribute: Route
  - a. The routeCode, if present, **SHOULD** contain zero or one [0..1] @valueSet (CONF:3346-32538).
12. **MAY** contain zero or one [0..1] doseQuantity (CONF:3346-34437).  
Note: QDM Attribute: Dosage
13. **SHALL** contain exactly one [1..1] participation (CONF:3346-32539) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="CSM" Consumable (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-32540).
  - b. **SHALL** contain exactly one [1..1] role (CONF:3346-32541).
    - i. This role **SHALL** contain exactly one [1..1] @classCode="MANU" Manufactured Product (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-32542).
    - ii. This role **SHALL** contain exactly one [1..1] playingManufacturedMaterial (CONF:3346-32543).
      1. This playingManufacturedMaterial **SHALL** contain exactly one [1..1] @classCode="MMAT" Manufactured Material (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:3346-32544).

2. This playingManufacturedMaterial **SHALL** contain exactly one [1..1] **@determinerCode="KIND"** Kind (CodeSystem: HL7EntityDeterminer urn:oid:2.16.840.1.113883.5.30) (CONF:3346-32545).
  3. This playingManufacturedMaterial **SHALL** contain exactly one [1..1] **code** (CONF:3346-32546).
 

Note: QDM Attribute: Code

    - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-32547).
14. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-34438) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34442).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3346-34439).
    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3346-34443).
 

Note: QDM Attribute: Author dateTime (The time the discharge medication list on the discharge instruction form is authored)
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3346-34440).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CONF:3346-34444).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3346-34445).
15. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34441) such that it
- Note: QDM Attribute: Supply
- a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers To (CONF:3346-34446).
  - b. **SHALL** contain exactly one [1..1] **Supply** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01) (CONF:3346-34812).
16. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34130) such that it
- Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CONF:3346-34131).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3346-34132).

**Figure 41: Medication, Discharge (V2) Example**

```
<substanceAdministrationCriteria classCode="SBADM" moodCode="RQO">
    <templateId>
        <item root="2.16.840.1.113883.10.20.28.4.48" extension="2017-08-01"/>
    </templateId>
    <id root="7c7cb827-4ff6-4585-aba3-885a89c32083"/>
    <code code="10183-2" codeSystem="2.16.840.1.113883.6.1">
        <displayName value="Discharge Medication"/>
    </code>
    <title value="Medication, Discharge"/>
    <statusCode code="active" />
    <participation typeCode="CSM">
        <role classCode="MANU">
            <playingManufacturedMaterial classCode="MMAT" determinerCode="KIND">
                <code valueSet="{$QDMElementValueSetOID}"/>
            </playingManufacturedMaterial>
        </role>
    </participation>
</substanceAdministrationCriteria>
```

## 5.38 Medication, Dispensed (V2)

[supplyCriteria: identifier urn:hl7ii:2.16.840.1.113883.10.20.28.4.49:2017-08-01 (open)]

**Table 87: Medication, Dispensed (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Dosage</a> <a href="#">Reason</a>

This template represents the QDM data type: Medication, Dispensed.

Medication dispensed is to give medications to a patient or patient proxy based on a prescription. Typically, in the ambulatory setting, medications are primarily taken directly by patients and not directly observed. Hence, medications dispensed are the closest health provider documentation of medication compliance.

Timing: The time the medication dispensing event occurs; the author dateTime.

Timing: The Relevant Period addresses:

start Time = when the first administration of the medication is expected. If not specified, the start Time defaults to the Author dateTime (the time the medication dispensing event occurs).

stop Time = when the medication supply provided by the dispensing event is expected to be completed.

Dosage: Details of how medication is/is to be taken, i.e., the quantity (mg, cc, tablets) to be taken at a single administration.

Supply: The quantity (amount) of therapeutic agent that was provided to a patient (i.e., number of doses, number of tablets or pills, volume of medication). Dispensed to a patient to be taken at a later time.

**Table 88: Medication, Dispensed (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
supplyCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.49:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-32560</a>	SPLY
@moodCode	1..1	SHALL		<a href="#">3346-32561</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..1	MAY		<a href="#">3346-32562</a>	
templateId	1..1	SHALL		<a href="#">3346-32563</a>	
item	1..1	SHALL		<a href="#">3346-32564</a>	
@root	1..1	SHALL		<a href="#">3346-32565</a>	2.16.840.1.113883.10.20.28.4.4 9
@extension	1..1	SHALL		<a href="#">3346-33752</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-32566</a>	
title	1..1	SHALL		<a href="#">3346-32567</a>	
statusCode	1..1	SHALL		<a href="#">3346-32568</a>	
@code	1..1	SHALL		<a href="#">3346-32582</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-32569</a>	
low	1..1	SHALL		<a href="#">3346-32570</a>	
high	0..1	MAY		<a href="#">3346-34860</a>	
effectiveTime	0..1	MAY	PIVL_TS	<a href="#">3346-34856</a>	
period	0..1	MAY		<a href="#">3346-34857</a>	
repeatNumber	0..1	MAY		<a href="#">3346-32572</a>	
quantity	0..1	MAY		<a href="#">3346-34858</a>	
participation	1..1	SHALL		<a href="#">3346-32573</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32574</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM
role	1..1	SHALL		<a href="#">3346-32575</a>	

@classCode	1..1	SHALL		<a href="#">3346-32576</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = MANU
playingMaterial	0..1	MAY		<a href="#">3346-32577</a>	
@classCode	1..1	SHALL		<a href="#">3346-32578</a>	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = MMAT
@determinerCode	1..1	SHALL		<a href="#">3346-32579</a>	urn:oid:2.16.840.1.113883.5.30 (HL7EntityDeterminer) = KIND
code	1..1	SHALL		<a href="#">3346-32580</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-32581</a>	
participation	1..1	SHALL		<a href="#">3346-34861</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34864</a>	AUT
time	1..1	SHALL		<a href="#">3346-34862</a>	
low	1..1	SHALL		<a href="#">3346-34865</a>	
role	1..1	SHALL		<a href="#">3346-34863</a>	
@classCode	1..1	SHALL		<a href="#">3346-34866</a>	ROL
id	0..1	MAY		<a href="#">3346-34867</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-34448</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34449</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = REFR
observationCriteria	1..1	SHALL		<a href="#">3346-34450</a>	<a href="#">Dosage (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.125:2017-05-01</a>
outboundRelationship	0..1	MAY		<a href="#">3346-32589</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32590</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3346-32591</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.88:2017-05-01</a>

1. **SHALL** contain exactly one [1..1] @classCode="SPLY" Supply (CONF:3346-32560).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood  
urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-32561).

3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3346-32562).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-32563) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-32564).
    - i. This item **SHALL** contain exactly one [1..1] **@root**=*"2.16.840.1.113883.10.20.28.4.49"* (CONF:3346-32565).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension**=*"2017-08-01"* (CONF:3346-33752).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-32566).
6. **SHALL** contain exactly one [1..1] **title** (CONF:3346-32567).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-32568).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code**=*"completed"* Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-32582).
8. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-32569) such that it  
Note: QDM Attribute: Relevant Period
  - a. **SHALL** contain exactly one [1..1] **low** (CONF:3346-32570).  
Note: startTime = when the first administration of the medication is expected
  - b. **MAY** contain zero or one [0..1] **high** (CONF:3346-34860).  
Note: stopTime = when the medication supply provided by the dispensing event is expected to be completed
9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-34856) such that it  
Note: QDM Attribute: Frequency
  - a. **MAY** contain zero or one [0..1] **period** (CONF:3346-34857).
10. **MAY** contain zero or one [0..1] **repeatNumber** (CONF:3346-32572).  
Note: QDM Attribute: Refills
11. **MAY** contain zero or one [0..1] **quantity** (CONF:3346-34858).  
Note: QDM Attribute: Supply
12. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-32573) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode**=*"CSM"* Consumable (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-32574).
  - b. **SHALL** contain exactly one [1..1] **role** (CONF:3346-32575).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode**=*"MANU"* Manufactured Product (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-32576).
    - ii. This role **MAY** contain zero or one [0..1] **playingMaterial** (CONF:3346-32577).
      1. The playingMaterial, if present, **SHALL** contain exactly one [1..1] **@classCode**=*"MMAT"* Manufactured Material (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:3346-32578).
      2. The playingMaterial, if present, **SHALL** contain exactly one [1..1] **@determinerCode**=*"KIND"* Kind (CodeSystem: HL7EntityDeterminer urn:oid:2.16.840.1.113883.5.30) (CONF:3346-32579).

3. The playingMaterial, if present, **SHALL** contain exactly one [1..1] **code** (CONF:3346-32580).

Note: QDM Attribute: Code

- a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-32581).

13. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-34861) such that it

- a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** Author (CONF:3346-34864).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3346-34862).

- i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3346-34865).

Note: QDM Attribute: Author dateTime

- c. **SHALL** contain exactly one [1..1] **role** (CONF:3346-34863).

- i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CONF:3346-34866).

- ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3346-34867).

14. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34448) such that it

Note: QDM Attribute: Dosage

- a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34449).
  - b. **SHALL** contain exactly one [1..1] **Dosage** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.125:2017-05-01) (CONF:3346-34450).

15. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-32589) such that it

Note: QDM Attribute: Reason

- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32590).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3346-32591).

**Figure 42: Medication, Dispensed (V2) Example**

```
<supplyCriteria classCode="SPLY" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.49" extension="2017-08-01"/>
  </templateId>
  <id root="3c4dcf95-2b8b-4e29-bfef-40aaf2e3a80c"/>
  <title value="Medication, Dispensed"/>
  <statusCode code="completed"/>
  <participation typeCode="CSM">
    <role classCode="MANU">
      <playingMaterial classCode="MMAT" determinerCode="KIND">
        <code valueSet="{{$QDMElementValueSetOID}}"/>
      </playingMaterial>
    </role>
  </participation>
</supplyCriteria>
```

## 5.39 Medication, Order (V2)

[substanceAdministrationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.51:2017-08-01 (open) ]

**Table 89: Medication, Order (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a> <a href="#">Supply</a>

This template represents the QDM data type: Medication, Order.

This represents an order for a medication, intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease and that is not dependent on being metabolized to achieve any of its primary intended purposes.

Timing: The time the order is signed; author dateTime.

Timing: The Relevant Period addresses:

startTime = when the first administration of the medication is expected. The first administration may be expected at the time of the order or at a specified future date (i.e., the active time for the order); such information should be identified in the medication order. If the startTime is not specified in the order, the startTime defaults to the Author dateTime (the time the order is signed).

stopTime = when the medication supply provided by the medication order is expected to be completed, including all fulfillments covered by the number of refills.

Dosage: Details of how medication is/is to be taken, i.e., the quantity (mg, cc, tablets) to be taken at a single administration.

Supply: The quantity (amount) of therapeutic agent that was provided to a patient (i.e., number of doses, number of tablets or pills, volume of medication). Dispensed to a patient to be taken at a later time.

**Table 90: Medication, Order (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
substanceAdministrationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.51:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-30218</a>	SBADM
@moodCode	1..1	SHALL		<a href="#">3346-29049</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = RQO
@actionNegationInd	0..1	MAY		<a href="#">3346-31037</a>	
templateId	1..1	SHALL		<a href="#">3346-29050</a>	
item	1..1	SHALL		<a href="#">3346-29051</a>	
@root	1..1	SHALL		<a href="#">3346-29052</a>	2.16.840.1.113883.10.20.28.4.5 1
@extension	1..1	SHALL		<a href="#">3346-33443</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-30185</a>	
title	1..1	SHALL		<a href="#">3346-30186</a>	
statusCode	1..1	SHALL		<a href="#">3346-30227</a>	
@code	1..1	SHALL		<a href="#">3346-30228</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-30504</a>	
low	0..1	MAY		<a href="#">3346-31035</a>	
high	0..1	MAY		<a href="#">3346-34859</a>	
effectiveTime	0..1	MAY	PIVL_TS	<a href="#">3346-34816</a>	
period	0..1	MAY		<a href="#">3346-34817</a>	
repeatNumber	0..1	MAY		<a href="#">3346-31038</a>	
methodCode	0..1	MAY		<a href="#">3346-30199</a>	
item	0..1	SHALL		<a href="#">3346-30229</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-30230</a>	
routeCode	0..1	MAY		<a href="#">3346-30188</a>	

@valueSet	0..1	SHOULD		<a href="#">3346-30231</a>	
doseQuantity	0..1	MAY		<a href="#">3346-30224</a>	
participation	1..1	SHALL		<a href="#">3346-29053</a>	
@typeCode	1..1	SHALL		<a href="#">3346-29054</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM
role	1..1	SHALL		<a href="#">3346-29055</a>	
@classCode	1..1	SHALL		<a href="#">3346-29056</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = MANU
playingMaterial	1..1	SHALL		<a href="#">3346-29057</a>	
@classCode	1..1	SHALL		<a href="#">3346-29058</a>	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = MMAT
@determinerCode	1..1	SHALL		<a href="#">3346-29059</a>	urn:oid:2.16.840.1.113883.5.30 (HL7EntityDeterminer) = KIND
code	1..1	SHALL		<a href="#">3346-29060</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-30164</a>	
participation	0..1	MAY		<a href="#">3346-33441</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33444</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3346-33442</a>	
low	1..1	SHALL		<a href="#">3346-33500</a>	
role	1..1	SHALL		<a href="#">3346-33592</a>	
@classCode	1..1	SHALL		<a href="#">3346-33593</a>	ROL
id	0..1	MAY		<a href="#">3346-33594</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-30190</a>	
@typeCode	1..1	SHALL		<a href="#">3346-30191</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3346-30192</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.88:2017-05-01</a>
outboundRelationship	0..1	MAY		<a href="#">3346-34451</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34452</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) =

					REFR
supplyCriteria	1..1	SHALL		<a href="#">3346-34818</a>	<a href="#">Supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01)</a>

1. **SHALL** contain exactly one [1..1] **@classCode**="SBADM" Substance Administration (CONF:3346-30218).
2. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-29049).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3346-31037).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-29050) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-29051).
    - i. This item **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.28.4.51" (CONF:3346-29052).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension**="2017-08-01" (CONF:3346-33443).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-30185).
6. **SHALL** contain exactly one [1..1] **title** (CONF:3346-30186).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-30227).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="active" Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-30228).
8. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-30504) such that it  
Note: QDM Attribute: Relevant Period
  - a. **MAY** contain zero or one [0..1] **low** (CONF:3346-31035).  
Note: startTime = when the first administration of the medication is expected
  - b. **MAY** contain zero or one [0..1] **high** (CONF:3346-34859).  
Note: stopTime = when the medication supply provided by the medication order is expected to be completed, including all fulfillments covered by the number of refills
9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-34816) such that it  
Note: QDM Attribute: Frequency
  - a. **MAY** contain zero or one [0..1] **period** (CONF:3346-34817).
10. **MAY** contain zero or one [0..1] **repeatNumber** (CONF:3346-31038).  
Note: QDM Attribute: Refills
11. **MAY** contain zero or one [0..1] **methodCode** (CONF:3346-30199).  
Note: QDM Attribute: Method
  - a. The methodCode, if present, **SHALL** contain zero or one [0..1] **item** (CONF:3346-30229).
    - i. The item, if present, **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-30230).
12. **MAY** contain zero or one [0..1] **routeCode** (CONF:3346-30188).  
Note: QDM Attribute: Route
  - a. The routeCode, if present, **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-30231).

13. **MAY** contain zero or one [0..1] **doseQuantity** (CONF:3346-30224).

Note: QDM Attribute: Dosage

14. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-29053) such that it

- a. **SHALL** contain exactly one [1..1] **@typeCode="CSM"** Consumable (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-29054).
- b. **SHALL** contain exactly one [1..1] **role** (CONF:3346-29055).
  - i. This role **SHALL** contain exactly one [1..1] **@classCode="MANU"** Manufactured (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-29056).
  - ii. This role **SHALL** contain exactly one [1..1] **playingMaterial** (CONF:3346-29057).
    1. This playingMaterial **SHALL** contain exactly one [1..1] **@classCode="MMAT"** Manufactured Material (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:3346-29058).
    2. This playingMaterial **SHALL** contain exactly one [1..1] **@determinerCode="KIND"** Kind (CodeSystem: HL7EntityDeterminer urn:oid:2.16.840.1.113883.5.30) (CONF:3346-29059).
    3. This playingMaterial **SHALL** contain exactly one [1..1] **code** (CONF:3346-29060).

Note: QDM Attribute: Code

- a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-30164).

15. **MAY** contain zero or one [0..1] **participation** (CONF:3346-33441) such that it

- a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-33444).
- b. **SHALL** contain exactly one [1..1] **time** (CONF:3346-33442).
  - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3346-33500).
- c. Note: QDM Attribute: Author dateTime
- c. **SHALL** contain exactly one [1..1] **role** (CONF:3346-33592).
  - i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CONF:3346-33593).
  - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3346-33594).

16. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-30190) such that it

Note: QDM Attribute: Reason

- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-30191).
- b. **SHALL** contain exactly one [1..1] **Reason** (**identifier:** urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3346-30192).

17. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34451) such that it

Note: QDM Attribute: Supply

- a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34452).
- b. **SHALL** contain exactly one [1..1] **Supply** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01) (CONF:3346-34818).

**Figure 43: Medication, Order (V2) Example**

```
<substanceAdministrationCriteria classCode="SBADM" moodCode="RQO">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.51" extension="2017-08-01"/>
  </templateId>
  <id root="27beb8e3-7c86-48cf-b430-235b72786dea"/>
  <title value="Medication, Order"/>
  <statusCode code="active"/>
  <participation typeCode="CSM">
    <role classCode="MANU">
      <playingMaterial classCode="MMAT" determinerCode="KIND">
        <code valueSet="{$QDMElementValueSetOID}"/>
      </playingMaterial>
    </role>
  </participation>
</substanceAdministrationCriteria>
```

## 5.40 Patient Care Experience

[observationCriteria: identifier  
 urn:hl7ii:2.16.840.1.113883.10.20.28.4.52:2017-05-01 (open) ]

**Table 91: Patient Care Experience Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	

This template represents the QDM data type: Patient Care Experience.

Data elements that meet this criterion indicate the patient's care experience, usually measured with a validated survey tool. The most common tool is the Consumer Assessment of Healthcare Providers and Systems.

Timing: The time the care experience is recorded; author time

**Table 92: Patient Care Experience Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.52:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-32204</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3335-32205</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..0	SHALL NOT		<a href="#">3335-34707</a>	
templateId	1..1	SHALL		<a href="#">3335-32206</a>	
item	1..1	SHALL		<a href="#">3335-32207</a>	
@root	1..1	SHALL		<a href="#">3335-32208</a>	2.16.840.1.113883.10.20.28.4.5 2
@extension	1..1	SHALL		<a href="#">3335-33700</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-32209</a>	
code	1..1	SHALL		<a href="#">3335-32210</a>	
@code	1..1	SHALL		<a href="#">3335-32211</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 406193000
@codeSystem	1..1	SHALL		<a href="#">3335-32212</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT)
title	1..1	SHALL		<a href="#">3335-32213</a>	
statusCode	1..1	SHALL		<a href="#">3335-32216</a>	
@code	1..1	SHALL		<a href="#">3335-32217</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3335-34388</a>	
low	1..1	SHALL		<a href="#">3335-34389</a>	
value	1..1	SHALL	CD	<a href="#">3335-32214</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-32215</a>	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CONF:3335-32204).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood  
urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-32205).
3. **SHALL NOT** contain [0..0] @actionNegationInd (CONF:3335-34707).
4. **SHALL** contain exactly one [1..1] templateId (CONF:3335-32206) such that it

- a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-32207).
  - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.52"** (CONF:3335-32208).
  - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-05-01"** (CONF:3335-33700).
- 5. **SHALL** contain exactly one [1..1] **id** (CONF:3335-32209).
- 6. **SHALL** contain exactly one [1..1] **code** (CONF:3335-32210).
  - a. This code **SHALL** contain exactly one [1..1] **@code="406193000"** Patient Satisfaction (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3335-32211).
  - b. This code **SHALL** contain exactly one [1..1] **@codeSystem** (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3335-32212).
- 7. **SHALL** contain exactly one [1..1] **title** (CONF:3335-32213).
- 8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-32216).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-32217).
- 9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3335-34388) such that it
  - a. **SHALL** contain exactly one [1..1] **low** (CONF:3335-34389).
 

Note: QDM Attribute: Author dateTime (The time the care experience is recorded)
- 10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:3335-32214).
 

Note: QDM Attribute: Code

  - a. This value **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3335-32215).

**Figure 44: Patient Care Experience Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.52" extension="2017-05-01"/>
  </templateId>
  <id root="5d852a88-4e5f-4a13-b29f-6798ad42d192"/>
  <code code="406193000" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <displayName value="Patient Satisfaction"/>
  </code>
  <title value="Patient Care Experience"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" valueSet="{$QDMElementValueSetOID}"/>
</observationCriteria>
```

## **5.41 Patient Characteristic (V2)**

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.53:2017-08-01 (open) ]

**Table 93: Patient Characteristic (V2) Contexts**

<b>Contained By:</b>	<b>Contains:</b>
<a href="#">Data Criteria Section (V2)</a> (optional)	

This template represents the QDM data type: Patient Characteristic.

Timing: The time the characteristic is authored.

**Table 94: Patient Characteristic (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.53:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-31602</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3346-31603</a>	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@actionNegationInd	0..0	SHALL NOT		<a href="#">3346-31604</a>	
templateId	1..1	SHALL		<a href="#">3346-31605</a>	
item	1..1	SHALL		<a href="#">3346-31606</a>	
@root	1..1	SHALL		<a href="#">3346-31607</a>	2.16.840.1.113883.10.20.28.4.53
@extension	1..1	SHALL		<a href="#">3346-34456</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-31608</a>	
code	1..1	SHALL		<a href="#">3346-31609</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-34454</a>	
statusCode	1..1	SHALL		<a href="#">3346-31613</a>	
@code	1..1	SHALL		<a href="#">3346-31614</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-31615</a>	
low	1..1	SHALL		<a href="#">3346-31616</a>	
value	0..1	MAY		<a href="#">3346-34455</a>	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CONF:3346-31602).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-31603).
3. **SHALL NOT** contain [0..0] @actionNegationInd (CONF:3346-31604).
4. **SHALL** contain exactly one [1..1] templateId (CONF:3346-31605) such that it
  - a. **SHALL** contain exactly one [1..1] item (CONF:3346-31606).
    - i. This item **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.28.4.53" (CONF:3346-31607).
    - ii. This item **SHALL** contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-34456).

5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-31608).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3346-31609).  
Note: QDM Attribute: Code
  - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-34454).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-31613).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-31614).
8. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-31615) such that it
  - a. **SHALL** contain exactly one [1..1] **low** (CONF:3346-31616).  
Note: QDM Attribute: Author dateTime (The time the characteristic is authored)
9. **MAY** contain zero or one [0..1] **value** (CONF:3346-34455).

**Figure 45: Patient Characteristic (V2) Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.53" extension="2017-08-01"/>
  </templateId>
  <id root="35cf9fd6-0d3d-4f86-91bf-a87fbf5ba8ef"/>
  <code valueSet="{$QDMElementValueSetOID}"/>
  <statusCode code="completed"/>
</observationCriteria>
```

## 5.42 Patient Characteristic Birth Date

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.54:2017-05-01 (open)]

**Table 95: Patient Characteristic Birth Date Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	

This template represents the QDM data type: Patient Characteristic Birth Date.

Timing: The Patient Characteristic, Birthdate is a single point in time representing the date and time of birth. It does not have a start and stop time.

**Table 96: Patient Characteristic Birth Date Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.54:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-31550</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3335-31551</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = EVN
@actionNegationInd	0..0	SHALL NOT		<a href="#">3335-34706</a>	
templateId	1..1	SHALL		<a href="#">3335-31552</a>	
item	1..1	SHALL		<a href="#">3335-31553</a>	
@root	1..1	SHALL		<a href="#">3335-31554</a>	2.16.840.1.113883.10.20.28.4.54
@extension	1..1	SHALL		<a href="#">3335-33650</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-31555</a>	
code	1..1	SHALL		<a href="#">3335-31556</a>	
@code	1..1	SHALL		<a href="#">3335-31557</a>	21112-8
@codeSystem	1..1	SHALL		<a href="#">3335-31558</a>	2.16.840.1.113883.6.1
title	1..1	SHALL		<a href="#">3335-31559</a>	
statusCode	1..1	SHALL		<a href="#">3335-31583</a>	
@code	1..1	SHALL		<a href="#">3335-31584</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3335-31562</a>	
low	1..1	SHALL		<a href="#">3335-31563</a>	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CONF:3335-31550).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-31551).
3. **SHALL NOT** contain [0..0] **@actionNegationInd** (CONF:3335-34706).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-31552) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-31553).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.54"** (CONF:3335-31554).

- ii. This item **SHALL** contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33650).
- 5. **SHALL** contain exactly one [1..1] **id** (CONF:3335-31555).
- 6. **SHALL** contain exactly one [1..1] **code** (CONF:3335-31556).
  - a. This code **SHALL** contain exactly one [1..1] @code="21112-8" Birth Date (CONF:3335-31557).
  - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CONF:3335-31558).
- 7. **SHALL** contain exactly one [1..1] **title** (CONF:3335-31559).
- 8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-31583).
  - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-31584).
- 9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3335-31562) such that it
  - a. **SHALL** contain exactly one [1..1] **low** (CONF:3335-31563).

Note: QDM Attribute: Birth dateTime (A single point in time representing the date and time of birth)

**Figure 46: Patient Characteristic Birth Date Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.54" extension="20167-05-01"/>
  </templateId>
  <id root="b591e825-d308-4f9e-9798-098bbd880975"/>
  <code code="21112-8" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC">
    <displayName value="Birth Date"/>
  </code>
  <title value="Patient Characteristic Birth Date"/>
  <statusCode code="completed"/>
</observationCriteria>
```

## 5.43 Patient Characteristic Clinical Trial Participant

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.6:2017-05-01 (open)]

**Table 97: Patient Characteristic Clinical Trial Participant Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a>

This template represents the QDM data type: Patient Characteristic Clinical Trial Participant.

This template represents that a patient is a participant in a clinical trial.

Timing: The Relevant Period addresses: startTime – The time the clinical trial began; stopTime – The time the clinical trial ended.

**Table 98: Patient Characteristic Clinical Trial Participant Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.6:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-31565</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3335-31566</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..0	SHALL NOT		<a href="#">3335-34705</a>	
templateId	1..1	SHALL		<a href="#">3335-31567</a>	
item	1..1	SHALL		<a href="#">3335-31568</a>	
@root	1..1	SHALL		<a href="#">3335-31569</a>	2.16.840.1.113883.10.20.28.4.6
@extension	1..1	SHALL		<a href="#">3335-33706</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-31570</a>	
code	1..1	SHALL		<a href="#">3335-31571</a>	
@code	1..1	SHALL		<a href="#">3335-31572</a>	ASSERTION
@codeSystem	1..1	SHALL		<a href="#">3335-31573</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode)
title	1..1	SHALL		<a href="#">3335-31574</a>	
statusCode	1..1	SHALL		<a href="#">3335-31575</a>	
@code	1..1	SHALL		<a href="#">3335-31576</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3335-31577</a>	
low	0..1	MAY		<a href="#">3335-31578</a>	
high	0..1	MAY		<a href="#">3335-31579</a>	
value	1..1	SHALL	CD	<a href="#">3335-31580</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-31739</a>	
outboundRelationship	0..1	MAY		<a href="#">3335-31620</a>	
@typeCode	1..1	SHALL		<a href="#">3335-31621</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = RSON

observationCriteria	1..1	SHALL		<a href="#">3335-31622</a>	Reason (identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01</a> )
---------------------	------	-------	--	----------------------------	--

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CONF:3335-31565).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-31566).
3. **SHALL NOT** contain [0..0] **@actionNegationInd** (CONF:3335-34705).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-31567) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-31568).
    - i. This item **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.28.4.6" (CONF:3335-31569).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension**="2017-05-01" (CONF:3335-33706).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3335-31570).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3335-31571).
  - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:3335-31572).
  - b. This code **SHALL** contain exactly one [1..1] **@codeSystem** (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3335-31573).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3335-31574).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-31575).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-31576).
9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3335-31577) such that it
 

Note: QDM Attribute: Relevant Period

  - a. **MAY** contain zero or one [0..1] **low** (CONF:3335-31578).
 

Note: startTime (The time the clinical trial began)
  - b. **MAY** contain zero or one [0..1] **high** (CONF:3335-31579).
 

Note: stopTime (The time the clinical trial ended)
10. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3335-31580).
 

Note: QDM Attribute: Code

  - a. This value **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3335-31739).
11. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3335-31620) such that it
 

Note: QDM Attribute: Reason

  - a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-31621).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: [urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01](#)) (CONF:3335-31622).

**Figure 47: Patient Characteristic Clinical Trial Participant Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.6" extension="2017-05-01"/>
  </templateId>
  <id root="c881c7cd-5ecf-4060-93c7-fbc8d1ab4500"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4">
    <displayName value="Assertion"/>
  </code>
  <title value="Patient Characteristic Clinical Trial Participant"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" valueSet="${QDMElementValueSetOID}"/>
</observationCriteria>
```

## 5.44 Patient Characteristic Ethnicity

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.56:2017-05-01 (open) ]

**Table 99: Patient Characteristic Ethnicity Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	

This template represents the QDM data type: Patient Characteristic Ethnicity.

This template represents a patient's ethnicity.

**Table 100: Patient Characteristic Ethnicity Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.56:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-28168</a>	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		<a href="#">3335-28169</a>	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@actionNegationInd	0..0	SHALL NOT		<a href="#">3335-34704</a>	
templateId	1..1	SHALL		<a href="#">3335-28171</a>	
item	1..1	SHALL		<a href="#">3335-28172</a>	
@root	1..1	SHALL		<a href="#">3335-28173</a>	2.16.840.1.113883.10.20.28.4.56
@extension	1..1	SHALL		<a href="#">3335-34654</a>	2017-05-01
code	1..1	SHALL		<a href="#">3335-28174</a>	
@code	1..1	SHALL		<a href="#">3335-28175</a>	54133-4
@codeSystem	1..1	SHALL		<a href="#">3335-28176</a>	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		<a href="#">3335-28179</a>	
statusCode	1..1	SHALL		<a href="#">3335-31180</a>	
@code	1..1	SHALL		<a href="#">3335-31181</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	<a href="#">3335-28180</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-31182</a>	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3335-28168).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-28169).
3. **SHALL NOT** contain [0..0] @actionNegationInd (CONF:3335-34704).
4. **SHALL** contain exactly one [1..1] templateId (CONF:3335-28171) such that it
  - a. **SHALL** contain exactly one [1..1] item (CONF:3335-28172).
    - i. This item **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.28.4.56" (CONF:3335-28173).

- ii. This item **SHALL** contain exactly one [1..1] `@extension="2017-05-01"` (CONF:3335-34654).
- 5. **SHALL** contain exactly one [1..1] `code` (CONF:3335-28174).
  - a. This code **SHALL** contain exactly one [1..1] `@code="54133-4"` Ethnicity (CONF:3335-28175).
  - b. This code **SHALL** contain exactly one [1..1] `@codeSystem="2.16.840.1.113883.6.1"` (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3335-28176).
- 6. **SHALL** contain exactly one [1..1] `title` (CONF:3335-28179).
- 7. **SHALL** contain exactly one [1..1] `statusCode` (CONF:3335-31180).
  - a. This statusCode **SHALL** contain exactly one [1..1] `@code="completed"` Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-31181).
- 8. **SHALL** contain exactly one [1..1] `value` with `@xsi:type="CD"` (CONF:3335-28180).
 

Note: QDM Attribute: Code

  - a. This value **SHOULD** contain zero or one [0..1] `@valueSet` (CONF:3335-31182).

**Figure 48: Patient Characteristic Ethnicity Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.56" extension="2017-05-01"/>
  </templateId>
  <id root="a719b01b-55a7-43e9-93bb-40e765affd7b"/>
  <code code="54133-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC">
    <displayName value="Ethnicity"/>
  </code>
  <title value="Patient Characteristic Ethnicity"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" valueSet="${QDMElementValueSetOID}"/>
</observationCriteria>
```

## 5.45 Patient Characteristic Expired

[observationCriteria: identifier  
 urn:hl7ii:2.16.840.1.113883.10.20.28.4.57:2017-05-01 (open)]

**Table 101: Patient Characteristic Expired Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Cause</a>

This template represents the QDM data type: Patient Characteristic Expired.

Timing: The Patient Characteristic, Expired is a single point in time representing the date and time of death. It does not have a start and stop time.

**Table 102: Patient Characteristic Expired Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.57:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-31585</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3335-31586</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..0	SHALL NOT		<a href="#">3335-34709</a>	
templateId	1..1	SHALL		<a href="#">3335-31587</a>	
item	1..1	SHALL		<a href="#">3335-31588</a>	
@root	1..1	SHALL		<a href="#">3335-313141</a>	2.16.840.1.113883.10.20.28.4.5 7
@extension	1..1	SHALL		<a href="#">3335-33381</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-31590</a>	
code	1..1	SHALL		<a href="#">3335-31591</a>	
@code	1..1	SHALL		<a href="#">3335-31592</a>	ASSERTION
@codeSystem	1..1	SHALL		<a href="#">3335-31593</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
title	1..1	SHALL		<a href="#">3335-31594</a>	
statusCode	1..1	SHALL		<a href="#">3335-31595</a>	
@code	1..1	SHALL		<a href="#">3335-31596</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3335-31597</a>	
low	1..1	SHALL		<a href="#">3335-31623</a>	
value	1..1	SHALL	CD	<a href="#">3335-31600</a>	
@code	1..1	SHALL		<a href="#">3335-33429</a>	419099009
@codeSystem	1..1	SHALL		<a href="#">3335-33430</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
outboundRelationship	0..1	MAY		<a href="#">3335-33450</a>	
@typeCode	1..1	SHALL		<a href="#">3335-</a>	urn:oid:2.16.840.1.113883.5.10

				<a href="#">33451</a>	02 (HL7ActRelationshipType) = CAUS
@inversionInd	1..1	SHALL		<a href="#">3335-33676</a>	true
observationCriteria	1..1	SHALL		<a href="#">3335-33452</a>	<a href="#">Cause (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.105:2017-05-01)</a>

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CONF:3335-31585).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-31586).
3. **SHALL NOT** contain [0..0] **@actionNegationInd** (CONF:3335-34709).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-31587) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-31588).
    - i. This item **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.28.4.57" (CONF:3335-33141).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension**="2017-05-01" (CONF:3335-33381).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3335-31590).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3335-31591).
  - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:3335-31592).
  - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3335-31593).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3335-31594).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-31595).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-31596).
9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3335-31597) such that it
  - a. **SHALL** contain exactly one [1..1] **low** (CONF:3335-31623).
 

Note: QDM Attribute: Expiration dateDateTime (A single point in time representing the date and time of death)
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:3335-31600).
  - a. This value **SHALL** contain exactly one [1..1] **@code**="419099009" Dead (CONF:3335-33429).
  - b. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3335-33430).
11. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3335-33450) such that it
 

Note: QDM Attribute: Cause

  - a. **SHALL** contain exactly one [1..1] **@typeCode**="CAUS" Cause (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-33451).

- b. **SHALL** contain exactly one [1..1] @inversionInd="true" (CONF:3335-33676).
- c. **SHALL** contain exactly one [1..1] **Cause** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.105:2017-05-01) (CONF:3335-33452).

**Figure 49: Patient Characteristic Expired Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.57" extension="2017-05-01"/>
  </templateId>
  <id root="6b9cb746-991a-45b1-a0ea-e511e0a38a41"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4">
    <displayName value="Assertion"/>
  </code>
  <title value="Patient Characteristic Expired"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" code="419099009" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT">
    <displayName value="Dead"/>
  </value>
</observationCriteria>
```

## 5.46 Patient Characteristic Payer

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.58:2017-05-01 (open) ]

**Table 103: Patient Characteristic Payer Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	

This template represents the QDM data type: Patient Characteristic Payer.

This template represents a patient's payment source.

Timing: The Relevant Period addresses: startTime – The first day of insurance coverage with the referenced payer; stopTime – The last day of insurance coverage with the referenced payer.

**Table 104: Patient Characteristic Payer Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.58:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-31627</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3335-31628</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..0	SHALL NOT		<a href="#">3335-34710</a>	
templateId	1..1	SHALL		<a href="#">3335-31629</a>	
item	1..1	SHALL		<a href="#">3335-31630</a>	
@root	1..1	SHALL		<a href="#">3335-31631</a>	2.16.840.1.113883.10.20.28.4.5 8
@extension	1..1	SHALL		<a href="#">3335-34457</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-31632</a>	
code	1..1	SHALL		<a href="#">3335-31633</a>	
@code	1..1	SHALL		<a href="#">3335-31634</a>	48768-6
@codeSystem	1..1	SHALL		<a href="#">3335-31635</a>	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		<a href="#">3335-31636</a>	
statusCode	1..1	SHALL		<a href="#">3335-31637</a>	
@code	1..1	SHALL		<a href="#">3335-31643</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3335-31638</a>	
low	0..1	MAY		<a href="#">3335-31641</a>	
high	0..1	MAY		<a href="#">3335-31642</a>	
value	1..1	SHALL	CD	<a href="#">3335-31639</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-31640</a>	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CONF:3335-31627).

2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-31628).
3. **SHALL NOT** contain [0..0] @actionNegationInd (CONF:3335-34710).
4. **SHALL** contain exactly one [1..1] templateId (CONF:3335-31629) such that it
  - a. **SHALL** contain exactly one [1..1] item (CONF:3335-31630).
    - i. This item **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.28.4.58" (CONF:3335-31631).
    - ii. This item **SHALL** contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-34457).
5. **SHALL** contain exactly one [1..1] id (CONF:3335-31632).
6. **SHALL** contain exactly one [1..1] code (CONF:3335-31633).
  - a. This code **SHALL** contain exactly one [1..1] @code="48768-6" Payment Source (CONF:3335-31634).
  - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3335-31635).
7. **SHALL** contain exactly one [1..1] title (CONF:3335-31636).
8. **SHALL** contain exactly one [1..1] statusCode (CONF:3335-31637).
  - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-31643).
9. **MAY** contain zero or one [0..1] effectiveTime (CONF:3335-31638) such that it
 

Note: QDM Attribute: Relevant Period

  - a. **MAY** contain zero or one [0..1] low (CONF:3335-31641).
 

Note: startTime (The first day of insurance coverage with the referenced payer)
  - b. **MAY** contain zero or one [0..1] high (CONF:3335-31642).
 

Note: stopTime (The last day of insurance coverage with the referenced payer)
10. **SHALL** contain exactly one [1..1] value with @xsi:type="CD" (CONF:3335-31639).
 

Note: QDM Attribute: Code

  - a. This value **SHOULD** contain zero or one [0..1] @valueSet (CONF:3335-31640).

**Figure 50: Patient Characteristic Payer Example**

```

<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.58" extension="2017-05-01"/>
  </templateId>
  <id root="ca3b4435-8cb4-499a-8ccd-db955364764e"/>
  <code code="48768-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC">
    <displayName value="Payer"/>
  </code>
  <title value="Patient Characteristic Payer"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" valueSet="{$QDMElementValueSetOID}"/>
</observationCriteria>

```

## **5.47 Patient Characteristic Race**

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.59:2017-05-01 (open) ]

**Table 105: Patient Characteristic Race Contexts**

<b>Contained By:</b>	<b>Contains:</b>
<a href="#">Data Criteria Section (V2)</a> (optional)	

This template represents the QDM data type: Patient Characteristic Race.

This template represents a patient's race.

**Table 106: Patient Characteristic Race Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.59:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-31236</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3335-31237</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..0	SHALL NOT		<a href="#">3335-34711</a>	
templateId	1..1	SHALL		<a href="#">3335-31238</a>	
item	1..1	SHALL		<a href="#">3335-31239</a>	
@root	1..1	SHALL		<a href="#">3335-31240</a>	2.16.840.1.113883.10.20.28.4.5 9
@extension	1..1	SHALL		<a href="#">3335-34655</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-31241</a>	
code	1..1	SHALL		<a href="#">3335-31242</a>	
@code	1..1	SHALL		<a href="#">3335-31243</a>	32624-9
@codeSystem	1..1	SHALL		<a href="#">3335-31244</a>	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		<a href="#">3335-31245</a>	
statusCode	1..1	SHALL		<a href="#">3335-31246</a>	
@code	1..1	SHALL		<a href="#">3335-31247</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	<a href="#">3335-31248</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-31249</a>	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CONF:3335-31236).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood  
urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-31237).
3. **SHALL NOT** contain [0..0] @actionNegationInd (CONF:3335-34711).
4. **SHALL** contain exactly one [1..1] templateId (CONF:3335-31238) such that it
  - a. **SHALL** contain exactly one [1..1] item (CONF:3335-31239).

- i. This item **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.28.4.59" (CONF:3335-31240).
  - ii. This item **SHALL** contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-34655).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3335-31241).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3335-31242).
- a. This code **SHALL** contain exactly one [1..1] @code="32624-9" Race (CONF:3335-31243).
  - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3335-31244).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3335-31245).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-31246).
- a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-31247).
9. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3335-31248).
- Note: QDM Attribute: Code
- a. This value **SHOULD** contain zero or one [0..1] @valueSet (CONF:3335-31249).

**Figure 51: Patient Characteristic Race Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.59" extension="2017-05-01"/>
  </templateId>
  <id root="5cabdd9d-cd97-47a2-8f15-a4a17c941d8c"/>
  <code code="54133-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC">
    <displayName value="Ethnicity"/>
  </code>
  <title value="Patient Characteristic Race"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" valueSet="{$QDMElementValueSetOID}"/>
</observationCriteria>
```

## 5.48 Patient Characteristic Sex

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.55:2017-05-01 (open)]

**Table 107: Patient Characteristic Sex Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	

This template represents the QDM data type: Patient Characteristic Sex.

This template represents a patient's sex.

**Table 108: Patient Characteristic Sex Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.55:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-31282</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3335-31283</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..0	SHALL NOT		<a href="#">3335-34712</a>	
templateId	1..1	SHALL		<a href="#">3335-31284</a>	
item	1..1	SHALL		<a href="#">3335-31285</a>	
@root	1..1	SHALL		<a href="#">3335-31286</a>	2.16.840.1.113883.10.20.28.4.5
@extension	1..1	SHALL		<a href="#">3335-33382</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-31287</a>	
code	1..1	SHALL		<a href="#">3335-31288</a>	
@code	1..1	SHALL		<a href="#">3335-31289</a>	263495000
@codeSystem	1..1	SHALL		<a href="#">3335-31290</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
title	1..1	SHALL		<a href="#">3335-31291</a>	
statusCode	1..1	SHALL		<a href="#">3335-31292</a>	
@code	1..1	SHALL		<a href="#">3335-33142</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = completed
value	1..1	SHALL	CD	<a href="#">3335-31293</a>	
@valueSet	1..1	SHOULD		<a href="#">3335-31294</a>	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CONF:3335-31282).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-31283).
3. **SHALL NOT** contain [0..0] @actionNegationInd (CONF:3335-34712).
4. **SHALL** contain exactly one [1..1] templateId (CONF:3335-31284) such that it
  - a. **SHALL** contain exactly one [1..1] item (CONF:3335-31285).
    - i. This item **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.28.4.55" (CONF:3335-31286).

- ii. This item **SHALL** contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33382).
- 5. **SHALL** contain exactly one [1..1] **id** (CONF:3335-31287).
- 6. **SHALL** contain exactly one [1..1] **code** (CONF:3335-31288).
  - a. This code **SHALL** contain exactly one [1..1] @code="263495000" Gender (CONF:3335-31289).
  - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3335-31290).
- 7. **SHALL** contain exactly one [1..1] **title** (CONF:3335-31291).
- 8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-31292).
  - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3335-33142).
- 9. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3335-31293).  
Note: QDM Attribute: Code
  - a. This value **SHOULD** contain exactly one [1..1] @valueSet (CONF:3335-31294).

**Figure 52: Patient Characteristic Sex Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.55" extension="2017-05-01"/>
  </templateId>
  <id root="4d3b1027-eb4b-4081-9093-e056acfd12ba"/>
  <code code="263495000" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <displayName value="Gender"/>
  </code>
  <title value="Patient Characteristic Sex"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" valueSet="{$QDMElementValueSetOID}"/>
</observationCriteria>
```

## 5.49 Physical Exam, Order

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.61:2017-05-01 (open)]

**Table 109: Physical Exam, Order Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a>

This template represents the QDM data type: Physical Exam, Order.

Physical Exam represents the evaluation of the patient's body to determine its state of health. The techniques of inspection include palpation (feeling with the hands or fingers), percussion (tapping with the fingers), auscultation (listening), visual inspection, and smell. Measurements may include vital signs (blood pressure, pulse, respiration) as well as other clinical measures

(such as expiratory flow rate and size of lesion). Physical exam includes psychiatric examinations.

Timing: The time the order is signed; author datetime.

**Table 110: Physical Exam, Order Constraints Overview**

<b>XPath</b>	<b>Card.</b>	<b>Verb</b>	<b>Data Type</b>	<b>CONF #</b>	<b>Value</b>
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.61:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-31405</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3335-31406</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = RQO
@actionNegationInd	0..1	MAY		<a href="#">3335-31407</a>	
templateId	1..1	SHALL		<a href="#">3335-31408</a>	
item	1..1	SHALL		<a href="#">3335-31409</a>	
@root	1..1	SHALL		<a href="#">3335-31410</a>	2.16.840.1.113883.10.20.28.4.6 1
@extension	1..1	SHALL		<a href="#">3335-33437</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-31411</a>	
code	1..1	SHALL		<a href="#">3335-31412</a>	
@code	1..1	SHALL		<a href="#">3335-31434</a>	5880005
@codeSystem	1..1	SHALL		<a href="#">3335-31435</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
title	1..1	SHALL		<a href="#">3335-31413</a>	
statusCode	1..1	SHALL		<a href="#">3335-31414</a>	
@code	1..1	SHALL		<a href="#">3335-31415</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
value	1..1	SHALL	CD	<a href="#">3335-31437</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-31438</a>	
methodCode	0..1	MAY		<a href="#">3335-31419</a>	
item	1..1	SHALL		<a href="#">3335-31420</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-31421</a>	
targetSiteCode	0..1	MAY		<a href="#">3335-31422</a>	
item	0..1	SHOULD		<a href="#">3335-31423</a>	

@valueSet	0..1	SHOULD		<a href="#">3335-31424</a>	
participation	0..1	MAY		<a href="#">3335-33501</a>	
@typeCode	1..1	SHALL		<a href="#">3335-33503</a>	AUT
time	1..1	SHALL		<a href="#">3335-33502</a>	
low	1..1	SHALL		<a href="#">3335-33504</a>	
role	1..1	SHALL		<a href="#">3335-33595</a>	
@classCode	1..1	SHALL		<a href="#">3335-33596</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3335-33597</a>	
outboundRelationship	0..1	MAY		<a href="#">3335-31431</a>	
@typeCode	1..1	SHALL		<a href="#">3335-31432</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3335-31433</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01)</a>

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CONF:3335-31405).
2. **SHALL** contain exactly one [1..1] **@moodCode="RQO"** request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-31406).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3335-31407).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-31408) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-31409).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.61"** (CONF:3335-31410).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-05-01"** (CONF:3335-33437).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3335-31411).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3335-31412).
  - a. This code **SHALL** contain exactly one [1..1] **@code="5880005"** Physical Examination (CONF:3335-31434).
  - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.6.96"** (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3335-31435).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3335-31413).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-31414).

- a. This statusCode **SHALL** contain exactly one [1..1] @code="active" Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-31415).
- 9. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3335-31437).  
Note: QDM Attribute: Code
  - a. This value **SHOULD** contain zero or one [0..1] @valueSet (CONF:3335-31438).
- 10. **MAY** contain zero or one [0..1] **methodCode** (CONF:3335-31419).  
Note: QDM Attribute: Method
  - a. The methodCode, if present, **SHALL** contain exactly one [1..1] **item** (CONF:3335-31420).
    - i. This item **SHOULD** contain zero or one [0..1] @valueSet (CONF:3335-31421).
- 11. **MAY** contain zero or one [0..1] **targetSiteCode** (CONF:3335-31422).  
Note: QDM Attribute: Anatomical Location Site
  - a. The targetSiteCode, if present, **SHOULD** contain zero or one [0..1] **item** (CONF:3335-31423).
    - i. The item, if present, **SHOULD** contain zero or one [0..1] @valueSet (CONF:3335-31424).
- 12. **MAY** contain zero or one [0..1] **participation** (CONF:3335-33501) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="AUT" Author (CONF:3335-33503).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3335-33502).
    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3335-33504).  
Note: QDM Attribute: Author dateTime (The time the order is signed)
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3335-33595).
    - i. This role **SHALL** contain exactly one [1..1] @classCode="ROL" Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3335-33596).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3335-33597).
- 13. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3335-31431) such that it  
Note: QDM Attribute: Reason
  - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-31432).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3335-31433).

**Figure 53: Physical Exam, Order Example**

```
<observationCriteria classCode="OBS" moodCode="RQO">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.61" extension="2017-05-01"/>
  </templateId>
  <id root="ae06f4b8-668d-45a9-acd4-28cff4ef6d45"/>
  <code code="5880005" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <displayName value="Physical Examination"/>
  </code>
  <title value="Physical Exam Order"/>
  <statusCode code="active"/>
  <value xsi:type="CD" valueSet="{$QDMElementValueSetOID}"/>
</observationCriteria>
```

## 5.50 Physical Exam, Performed (V2)

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.62:2017-08-01 (open) ]

**Table 111: Physical Exam, Performed (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Component</a> <a href="#">Reason</a> <a href="#">Result (V2)</a>

This template represents the QDM data type: Physical Exam, Performed.

This represents that a physical exam has been completed.

Timing: The Relevant Period addresses:startTime – The time the physical examination activity begins; stopTime – The time the physical examination activity ends.

QDM Attribute: Result is represented using the Result (V2) template.

**Table 112: Physical Exam, Performed (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.62:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-31251</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3346-31252</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..1	MAY		<a href="#">3346-31253</a>	
templateId	1..1	SHALL		<a href="#">3346-31254</a>	
item	1..1	SHALL		<a href="#">3346-31255</a>	
@root	1..1	SHALL		<a href="#">3346-31256</a>	2.16.840.1.113883.10.20.28.4.6 2
@extension	1..1	SHALL		<a href="#">3346-33428</a>	2017-05-01
id	1..1	SHALL		<a href="#">3346-31257</a>	
code	1..1	SHALL		<a href="#">3346-31258</a>	
@code	1..1	SHALL		<a href="#">3346-31439</a>	5880005
@codeSystem	1..1	SHALL		<a href="#">3346-31440</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
title	1..1	SHALL		<a href="#">3346-31260</a>	
statusCode	1..1	SHALL		<a href="#">3346-31261</a>	
@code	1..1	SHALL		<a href="#">3346-31262</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-31263</a>	
low	0..1	MAY		<a href="#">3346-31264</a>	
high	0..1	MAY		<a href="#">3346-31265</a>	
value	1..1	SHALL	CD	<a href="#">3346-31441</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-31442</a>	
methodCode	0..1	MAY		<a href="#">3346-31267</a>	
item	1..1	SHALL		<a href="#">3346-31268</a>	

@valueSet	0..1	SHOULD		<a href="#">3346-31269</a>	
targetSiteCode	0..1	MAY		<a href="#">3346-31270</a>	
item	0..1	SHOULD		<a href="#">3346-31271</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-31272</a>	
participation	0..1	MAY		<a href="#">3346-34549</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34552</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3346-34550</a>	
low	1..1	SHALL		<a href="#">3346-34553</a>	
role	1..1	SHALL		<a href="#">3346-34551</a>	
@classCode	1..1	SHALL		<a href="#">3346-34554</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3346-34555</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-31279</a>	
@typeCode	1..1	SHALL		<a href="#">3346-31280</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3346-33448</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.88:2017-05-01</a>
outboundRelationship	0..1	MAY		<a href="#">3346-33614</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33615</a>	VALUE
observationCriteria	1..1	SHALL		<a href="#">3346-33616</a>	<a href="#">Result (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.101:2017-08-01</a>
outboundRelationship	0..*	MAY		<a href="#">3346-34621</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34622</a>	REFR
observationCriteria	1..1	SHALL		<a href="#">3346-34623</a>	<a href="#">Component (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.121:2017-05-01</a>

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CONF:3346-31251).

2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-31252).
3. **MAY** contain zero or one [0..1] @actionNegationInd (CONF:3346-31253).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] templateId (CONF:3346-31254) such that it
  - a. **SHALL** contain exactly one [1..1] item (CONF:3346-31255).
    - i. This item **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.28.4.62" (CONF:3346-31256).
    - ii. This item **SHALL** contain exactly one [1..1] @extension="2017-05-01" (CONF:3346-33428).
5. **SHALL** contain exactly one [1..1] id (CONF:3346-31257).
6. **SHALL** contain exactly one [1..1] code (CONF:3346-31258).
  - a. This code **SHALL** contain exactly one [1..1] @code="5880005" Physical Examination (CONF:3346-31439).
  - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3346-31440).
7. **SHALL** contain exactly one [1..1] title (CONF:3346-31260).
8. **SHALL** contain exactly one [1..1] statusCode (CONF:3346-31261).
  - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-31262).
9. **MAY** contain zero or one [0..1] effectiveTime (CONF:3346-31263) such that it  
Note: QDM Attribute: Relevant Period
  - a. **MAY** contain zero or one [0..1] low (CONF:3346-31264).  
Note: startTime (The time the physical examination activity begins)
  - b. **MAY** contain zero or one [0..1] high (CONF:3346-31265).  
Note: stopTime (The time the physical examination activity ends)
10. **SHALL** contain exactly one [1..1] value with @xsi:type="CD" (CONF:3346-31441).  
Note: QDM Attribute: Code
  - a. This value **SHOULD** contain zero or one [0..1] @valueSet (CONF:3346-31442).
11. **MAY** contain zero or one [0..1] methodCode (CONF:3346-31267).  
Note: QDM Attribute: Method
  - a. The methodCode, if present, **SHALL** contain exactly one [1..1] item (CONF:3346-31268).
    - i. This item **SHOULD** contain zero or one [0..1] @valueSet (CONF:3346-31269).
12. **MAY** contain zero or one [0..1] targetSiteCode (CONF:3346-31270).  
Note: QDM Attribute: Anatomical Location Site
  - a. The targetSiteCode, if present, **SHOULD** contain zero or one [0..1] item (CONF:3346-31271).
    - i. The item, if present, **SHOULD** contain zero or one [0..1] @valueSet (CONF:3346-31272).
13. **MAY** contain zero or one [0..1] participation (CONF:3346-34549) such that it

- a. **SHALL** contain exactly one [1..1] @**typeCode**="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34552).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3346-34550).
    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3346-34553).  
Note: QDM Attribute: Author dateTime
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3346-34551).
    - i. This role **SHALL** contain exactly one [1..1] @**classCode**="ROL" Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-34554).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3346-34555).
14. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-31279) such that it  
Note: QDM Attribute: Reason
- a. **SHALL** contain exactly one [1..1] @**typeCode**="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-31280).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3346-33448).
15. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-33614) such that it  
Note: QDM Attribute: Result
- a. **SHALL** contain exactly one [1..1] @**typeCode**="VALUE" Has value (CONF:3346-33615).
  - b. **SHALL** contain exactly one [1..1] **Result (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01) (CONF:3346-33616).
16. **MAY** contain zero or more [0..\*] **outboundRelationship** (CONF:3346-34621) such that it  
Note: QDM Attribute: Components
- a. **SHALL** contain exactly one [1..1] @**typeCode**="REFR" Refers To (CONF:3346-34622).
  - b. **SHALL** contain exactly one [1..1] **Component** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.121:2017-05-01) (CONF:3346-34623).

**Figure 54: Physical Exam, Performed (V2) Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.62" extension="2017-08-01"/>
  </templateId>
  <id root="74a0af1f-15ed-4536-854f-79a066953e44"/>
  <code code="5880005" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <displayName value="Physical Examination"/>
  </code>
  <title value="Physical Exam, Performed"/>
  <statusCode code="completed"/>
  <effectiveTime xsi:type="IVL_TS"/>
  <value xsi:type="CD" valueSet="{$QDMElementValueSetOID}"/>
</observationCriteria>
```

## 5.51 Physical Exam, Recommended

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.63:2017-05-01 (open) ]

**Table 113: Physical Exam, Recommended Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a>

This template represents the QDM data type: Physical Exam, Recommended.

This template captures a recommendation by a physician or appropriately licensed care provider for a physical exam to be performed on the patient.

Timing: The time the recommendation is authored (i.e., provided to the patient).

All QDM datatypes referring to recommendations address the time that the recommendation occurs, a single point in time. Vendors have expressed concerns that recommendations are not necessarily captured or managed in a standard manner as part of structured data capture in clinical workflow; many are documented as part of assessments in narrative text. Measure developers should address feasibility of clinical workflow to capture recommendations when evaluating measures.

**Table 114: Physical Exam, Recommended Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.63:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-31443</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3335-31444</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = INT
@actionNegationInd	0..1	MAY		<a href="#">3335-31445</a>	
templateId	1..1	SHALL		<a href="#">3335-31446</a>	
item	1..1	SHALL		<a href="#">3335-31447</a>	
@root	1..1	SHALL		<a href="#">3335-31448</a>	2.16.840.1.113883.10.20.28.4.6 1
@extension	1..1	SHALL		<a href="#">3335-33449</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-31449</a>	
code	1..1	SHALL		<a href="#">3335-31450</a>	
@code	1..1	SHALL		<a href="#">3335-31451</a>	5880005
@codeSystem	1..1	SHALL		<a href="#">3335-31452</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
title	1..1	SHALL		<a href="#">3335-31453</a>	
statusCode	1..1	SHALL		<a href="#">3335-31454</a>	
@code	1..1	SHALL		<a href="#">3335-31455</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
value	1..1	SHALL	CD	<a href="#">3335-31459</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-31460</a>	
methodCode	0..1	MAY		<a href="#">3335-31461</a>	
item	1..1	SHALL		<a href="#">3335-31462</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-31463</a>	
targetSiteCode	0..1	MAY		<a href="#">3335-31464</a>	
item	0..1	SHOULD		<a href="#">3335-31465</a>	

@valueSet	0..1	SHOULD		<a href="#">3335-31466</a>	
participation	0..1	MAY		<a href="#">3335-34458</a>	
@typeCode	1..1	SHALL		<a href="#">3335-34461</a>	AUT
time	1..1	SHALL		<a href="#">3335-34459</a>	
low	1..1	SHALL		<a href="#">3335-34462</a>	
role	1..1	SHALL		<a href="#">3335-34460</a>	
@classCode	1..1	SHALL		<a href="#">3335-34463</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3335-34464</a>	
outboundRelationship	0..1	MAY		<a href="#">3335-31473</a>	
@typeCode	1..1	SHALL		<a href="#">3335-31474</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3335-31475</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01)</a>

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CONF:3335-31443).
2. **SHALL** contain exactly one [1..1] **@moodCode="INT"** intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-31444).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3335-31445).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-31446) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-31447).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.61"** (CONF:3335-31448).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-05-01"** (CONF:3335-33449).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3335-31449).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3335-31450).
  - a. This code **SHALL** contain exactly one [1..1] **@code="5880005"** Physical Examination (CONF:3335-31451).
  - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.6.96"** (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3335-31452).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3335-31453).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-31454).

- a. This statusCode **SHALL** contain exactly one [1..1] @code="active" Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-31455).
- 9. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3335-31459).  
Note: QDM Attribute: Code
  - a. This value **SHOULD** contain zero or one [0..1] @valueSet (CONF:3335-31460).
- 10. **MAY** contain zero or one [0..1] **methodCode** (CONF:3335-31461).  
Note: QDM Attribute: Method
  - a. The methodCode, if present, **SHALL** contain exactly one [1..1] **item** (CONF:3335-31462).
    - i. This item **SHOULD** contain zero or one [0..1] @valueSet (CONF:3335-31463).
- 11. **MAY** contain zero or one [0..1] **targetSiteCode** (CONF:3335-31464).  
Note: QDM Attribute: Anatomical Location Site
  - a. The targetSiteCode, if present, **SHOULD** contain zero or one [0..1] **item** (CONF:3335-31465).
    - i. The item, if present, **SHOULD** contain zero or one [0..1] @valueSet (CONF:3335-31466).
- 12. **MAY** contain zero or one [0..1] **participation** (CONF:3335-34458) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="AUT" Author (CONF:3335-34461).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3335-34459).
    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3335-34462).  
Note: QDM Attribute: Author dateTime (The time the recommendation is authored)
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3335-34460).
    - i. This role **SHALL** contain exactly one [1..1] @classCode="ROL" Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3335-34463).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3335-34464).
- 13. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3335-31473) such that it  
Note: QDM Attribute: Reason
  - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-31474).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3335-31475).

**Figure 55: Physical Exam, Recommended Example**

```
<observationCriteria classCode="OBS" moodCode="INT">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.63" extension="2017-05-01"/>
  </templateId>
  <id root="2ba56315-4f6f-4141-be6c-0248d8dfdbfc"/>
  <code code="5880005" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <displayName value="Physical Examination"/>
  </code>
  <title value="Physical Exam Recommended"/>
  <statusCode code="active"/>
  <effectiveTime xsi:type="IVL_TS"/>
  <value xsi:type="CD" valueSet="{$QDMElementValueSetOID}"/>
</observationCriteria>
```

## 5.52 Principal Diagnosis

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.122:2017-05-01 (open) ]

**Table 115: Principal Diagnosis Contexts**

Contained By:	Contains:
<a href="#">Encounter, Performed (V2)</a> (optional)	

The coded diagnosis/problem established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care.

**Table 116: Principal Diagnosis Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.122:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-34367</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3335-34368</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
templateId	1..1	SHALL		<a href="#">3335-34348</a>	
item	1..1	SHALL		<a href="#">3335-34349</a>	
@root	1..1	SHALL		<a href="#">3335-34358</a>	2.16.840.1.113883.10.20.28.4.1 22
@extension	1..1	SHALL		<a href="#">3335-34651</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-34369</a>	
code	1..1	SHALL		<a href="#">3335-34350</a>	
@code	1..1	SHALL		<a href="#">3335-34360</a>	52534-5
@codeSystem	1..1	SHALL		<a href="#">3335-34361</a>	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		<a href="#">3335-34370</a>	
statusCode	1..1	SHALL		<a href="#">3335-34351</a>	
@code	1..1	SHALL		<a href="#">3335-34362</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	<a href="#">3335-34353</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-34365</a>	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CONF:3335-34367).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood  
urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-34368).
3. **SHALL** contain exactly one [1..1] templateId (CONF:3335-34348) such that it
  - a. **SHALL** contain exactly one [1..1] item (CONF:3335-34349).
    - i. This item **SHALL** contain exactly one [1..1]  
@root="2.16.840.1.113883.10.20.28.4.122" (CONF:3335-34358).
    - ii. This item **SHALL** contain exactly one [1..1] @extension="2017-05-01"  
(CONF:3335-34651).
4. **SHALL** contain exactly one [1..1] id (CONF:3335-34369).

5. **SHALL** contain exactly one [1..1] **code** (CONF:3335-34350).
  - a. This code **SHALL** contain exactly one [1..1] @code="52534-5" Principal Diagnosis (CONF:3335-34360).
  - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3335-34361).
6. **SHALL** contain exactly one [1..1] **title** (CONF:3335-34370).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-34351).
  - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-34362).
8. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3335-34353).
  - a. This value **SHOULD** contain zero or one [0..1] @valueSet (CONF:3335-34365).

**Figure 56: Principal Diagnosis Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.122" extension="2017-05-01"/>
  </templateId>
  <id root="322b8dc5-4102-4e0d-bf15-fa9379f8c9ac"/>
  <code code="52534-5" codeSystem="2.16.840.1.113883.6.1" codeSystemName="SNOMED CT">
    <displayName value="Principal Diagnosis"/>
  </code>
  <title value="Principal Diagnosis"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" valueSet="{$QDMElementValueSetOID}"/>
</observationCriteria>
```

## 5.53 Procedure, Order (V2)

[ProcedureCriteria: identifier  
 urn:hl7ii:2.16.840.1.113883.10.20.28.4.66:2017-08-01 (open)]

**Table 117: Procedure, Order (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a>

This template represents the QDM data type: Procedure, Order.

A procedure may be a surgery or other type of physical manipulation of a person's body in whole or in part for purposes of making observations and diagnoses or providing treatment.

This template represents an order for a procedure.

Timing: The time the order is signed; author datetime.

**Table 118: Procedure, Order (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
ProcedureCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.66:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-33158</a>	PROC
@moodCode	1..1	SHALL		<a href="#">3346-31120</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = RQO
@actionNegationInd	0..1	MAY		<a href="#">3346-31121</a>	
templateId	1..1	SHALL		<a href="#">3346-31122</a>	
item	1..1	SHALL		<a href="#">3346-31123</a>	
@root	1..1	SHALL		<a href="#">3346-31124</a>	2.16.840.1.113883.10.20.28.4.6 6
@extension	1..1	SHALL		<a href="#">3346-33422</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-31125</a>	
code	1..1	SHALL		<a href="#">3346-31126</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-31127</a>	
title	1..1	SHALL		<a href="#">3346-31128</a>	
statusCode	1..1	SHALL		<a href="#">3346-31129</a>	
@code	1..1	SHALL		<a href="#">3346-33147</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = active
priorityCode	0..1	MAY		<a href="#">3346-31133</a>	
item	0..1	SHOULD		<a href="#">3346-31134</a>	
methodCode	0..1	MAY		<a href="#">3346-31135</a>	
item	1..1	SHALL		<a href="#">3346-31136</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-31235</a>	
approachSiteCode	0..1	MAY		<a href="#">3346-33418</a>	
item	1..1	SHALL		<a href="#">3346-33419</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-33423</a>	

targetSiteCode	0..1	MAY		<a href="#">3346-33420</a>	
item	1..1	SHALL		<a href="#">3346-33421</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-33424</a>	
participation	0..1	MAY		<a href="#">3346-33506</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33508</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3346-33507</a>	
low	1..1	SHALL		<a href="#">3346-33509</a>	
role	1..1	SHALL		<a href="#">3346-33598</a>	
@classCode	1..1	SHALL		<a href="#">3346-33599</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3346-33600</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-31143</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33148</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3346-31144</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01</a>

1. **SHALL** contain exactly one [1..1] **@classCode**="PROC" Procedure (CONF:3346-33158).
2. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-31120).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3346-31121).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-31122) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-31123).
    - i. This item **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.28.4.66" (CONF:3346-31124).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension**="2017-08-01" (CONF:3346-33422).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-31125).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3346-31126).  
Note: QDM Attribute: Code
  - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-31127).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3346-31128).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-31129).

- a. This statusCode **SHALL** contain exactly one [1..1] @code="active" Active (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-33147).
- 9. **MAY** contain zero or one [0..1] **priorityCode** (CONF:3346-31133).  
Note: QDM Attribute: Ordinality
  - a. The priorityCode, if present, **SHOULD** contain zero or one [0..1] **item** (CONF:3346-31134).
- 10. **MAY** contain zero or one [0..1] **methodCode** (CONF:3346-31135).  
Note: QDM Attribute: Method
  - a. The methodCode, if present, **SHALL** contain exactly one [1..1] **item** (CONF:3346-31136).
    - i. This item **SHOULD** contain zero or one [0..1] @valueSet (CONF:3346-31235).
- 11. **MAY** contain zero or one [0..1] **approachSiteCode** (CONF:3346-33418).  
Note: QDM Attribute: Anatomical Approach Site
  - a. The approachSiteCode, if present, **SHALL** contain exactly one [1..1] **item** (CONF:3346-33419).
    - i. This item **SHOULD** contain zero or one [0..1] @valueSet (CONF:3346-33423).
- 12. **MAY** contain zero or one [0..1] **targetSiteCode** (CONF:3346-33420).  
Note: QDM Attribute: Anatomical Location Site
  - a. The targetSiteCode, if present, **SHALL** contain exactly one [1..1] **item** (CONF:3346-33421).
    - i. This item **SHOULD** contain zero or one [0..1] @valueSet (CONF:3346-33424).
- 13. **MAY** contain zero or one [0..1] **participation** (CONF:3346-33506) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-33508).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3346-33507).
    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3346-33509).  
Note: QDM Attribute: Author dateTime (The time the order is signed)
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3346-33598).
    - i. This role **SHALL** contain exactly one [1..1] @classCode="ROL" Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-33599).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3346-33600).
- 14. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-31143) such that it  
Note: QDM Attribute: Reason
  - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-33148).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3346-31144).  
Note: QDM Attribute: Reason

**Figure 57: Procedure, Order (V2) Example**

```
<procedureCriteria classCode="PROC" moodCode="RQO">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.66" extension="2017-08-01"/>
  </templateId>
  <id root="7d559e0a-4e01-4f52-b87b-a3342705e2f2"/>
  <code valueSet="{$QDMElementValueSetOID}"/>
  <title value="Procedure, Order"/>
  <statusCode code="active"/>
</procedureCriteria>
```

## 5.54 Procedure, Performed (V2)

[ProcedureCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.67:2017-08-01 (open) ]

**Table 119: Procedure, Performed (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Component</a> <a href="#">Incision Datetime</a> <a href="#">Reason</a> <a href="#">Result (V2)</a> <a href="#">Status (V2)</a>

This template represents the QDM data type: Procedure, Performed.

A procedure may be a surgery or other type of physical manipulation of a person's body in whole or in part for purposes of making observations and diagnoses or providing treatment.

This template represents a procedure that has been performed.

Timing: The Relevant Period addresses: StartTime = the time the procedure begins; StopTime = the time the procedure is completed.

**Table 120: Procedure, Performed (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
ProcedureCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.67:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-31349</a>	PROC
@moodCode	1..1	SHALL		<a href="#">3346-31336</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..1	MAY		<a href="#">3346-31337</a>	
templateId	1..1	SHALL		<a href="#">3346-31338</a>	
item	1..1	SHALL		<a href="#">3346-31339</a>	
@root	1..1	SHALL		<a href="#">3346-31340</a>	2.16.840.1.113883.10.20.28.4.6 7
@extension	1..1	SHALL		<a href="#">3346-33398</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-31341</a>	
code	1..1	SHALL		<a href="#">3346-31342</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-31343</a>	
title	1..1	SHALL		<a href="#">3346-31344</a>	
statusCode	1..1	SHALL		<a href="#">3346-31345</a>	
@code	1..1	SHALL		<a href="#">3346-33150</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-31346</a>	
low	0..1	MAY		<a href="#">3346-31347</a>	
high	0..1	MAY		<a href="#">3346-31348</a>	
priorityCode	0..1	MAY		<a href="#">3346-31349</a>	
item	1..1	SHALL		<a href="#">3346-31350</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-33151</a>	
methodCode	0..1	MAY		<a href="#">3346-31351</a>	
item	1..1	SHALL		<a href="#">3346-31352</a>	

@valueSet	0..1	SHOULD		<a href="#">3346-31353</a>	
approachSiteCode	0..1	MAY		<a href="#">3346-33399</a>	
item	1..1	SHALL		<a href="#">3346-33400</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-33403</a>	
targetSiteCode	0..1	MAY		<a href="#">3346-33401</a>	
item	1..1	SHALL		<a href="#">3346-33402</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-33404</a>	
participation	1..1	SHALL		<a href="#">3346-34556</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34559</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3346-34557</a>	
low	1..1	SHALL		<a href="#">3346-34560</a>	
role	1..1	SHALL		<a href="#">3346-34558</a>	
@classCode	1..1	SHALL		<a href="#">3346-34561</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3346-34562</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-31360</a>	
@typeCode	1..1	SHALL		<a href="#">3346-31366</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3346-31361</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.88:2017-05-01</a>
outboundRelationship	0..1	MAY		<a href="#">3346-31362</a>	
@typeCode	1..1	SHALL		<a href="#">3346-31367</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = REFR
procedureCriteria	1..1	SHALL		<a href="#">3346-33153</a>	<a href="#">Incision Datetime (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.89:2017-05-01</a>
outboundRelationship	0..1	MAY		<a href="#">3346-31364</a>	
@typeCode	1..1	SHALL		<a href="#">3346-31368</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) =

					VALUE
observationCriteria	1..1	SHALL		<a href="#">3346-31365</a>	<a href="#">Result (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01)</a>
outboundRelationship	0..1	MAY		<a href="#">3346-33408</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33409</a>	REFR
observationCriteria	1..1	SHALL		<a href="#">3346-33410</a>	<a href="#">Status (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-08-01)</a>
outboundRelationship	0..*	MAY		<a href="#">3346-34624</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34625</a>	REFR
observationCriteria	1..1	SHALL		<a href="#">3346-34626</a>	<a href="#">Component (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.121:2017-05-01)</a>

1. **SHALL** contain exactly one [1..1] **@classCode**="PROC" Procedure (CONF:3346-3149).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-31336).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3346-31337).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-31338) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-31339).
    - i. This item **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.28.4.67" (CONF:3346-31340).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension**="2017-08-01" (CONF:3346-33398).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-31341).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3346-31342).  
Note: QDM Attribute: Code
  - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-31343).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3346-31344).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-31345).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-33150).
9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-31346) such that it  
Note: QDM Attribute: Relevant Period
  - a. **MAY** contain zero or one [0..1] **low** (CONF:3346-31347).  
Note: startTime (The time the procedure begins)
  - b. **MAY** contain zero or one [0..1] **high** (CONF:3346-31348).  
Note: stopTime (The time the procedure is completed)

10. **MAY** contain zero or one [0..1] **priorityCode** (CONF:3346-31349).

Note: QDM Attribute: Ordinality

- a. The priorityCode, if present, **SHALL** contain exactly one [1..1] **item** (CONF:3346-31350).

- i. This item **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-33151).

11. **MAY** contain zero or one [0..1] **methodCode** (CONF:3346-31351).

Note: QDM Attribute: Method

- a. The methodCode, if present, **SHALL** contain exactly one [1..1] **item** (CONF:3346-31352).

- i. This item **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-31353).

12. **MAY** contain zero or one [0..1] **approachSiteCode** (CONF:3346-33399).

Note: QDM Attribute: Anatomical Approach Site

- a. The approachSiteCode, if present, **SHALL** contain exactly one [1..1] **item** (CONF:3346-33400).

- i. This item **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-33403).

13. **MAY** contain zero or one [0..1] **targetSiteCode** (CONF:3346-33401).

Note: QDM Attribute: Anatomical Location Site

- a. The targetSiteCode, if present, **SHALL** contain exactly one [1..1] **item** (CONF:3346-33402).

- i. This item **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-33404).

14. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-34556) such that it

- a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34559).

- b. **SHALL** contain exactly one [1..1] **time** (CONF:3346-34557).

- i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3346-34560).

Note: QDM Attribute: Author date

- c. **SHALL** contain exactly one [1..1] **role** (CONF:3346-34558).

- i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-34561).

- ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3346-34562).

15. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-31360) such that it

Note: QDM Attribute: Reason

- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-31366).

- b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3346-31361).

16. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-31362) such that it

Note: QDM Attribute: Incision date

- a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-31367).

- b. **SHALL** contain exactly one [1..1] [Incision Datetime](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.89:2017-05-01) (CONF:3346-33153).
17. **MAY** contain zero or one [0..1] [outboundRelationship](#) (CONF:3346-31364) such that it  
 Note: QDM Attribute: Result
- a. **SHALL** contain exactly one [1..1] [@typeCode="VALUE"](#) Has value (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-31368).
  - b. **SHALL** contain exactly one [1..1] [Result \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01) (CONF:3346-31365).
18. **MAY** contain zero or one [0..1] [outboundRelationship](#) (CONF:3346-33408) such that it  
 Note: QDM Attribute: Status
- a. **SHALL** contain exactly one [1..1] [@typeCode="REFR"](#) Refers to (CONF:3346-33409).
  - b. **SHALL** contain exactly one [1..1] [Status \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-08-01) (CONF:3346-33410).
19. **MAY** contain zero or more [0..\*] [outboundRelationship](#) (CONF:3346-34624) such that it  
 Note: QDM Attribute: Components
- a. **SHALL** contain exactly one [1..1] [@typeCode="REFR"](#) Refers To (CONF:3346-34625).
  - b. **SHALL** contain exactly one [1..1] [Component](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.121:2017-05-01) (CONF:3346-34626).

**Figure 58: Procedure, Performed (V2) Example**

```
<procedureCriteria classCode="PROC" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.67" extension="2017-08-01"/>
  </templateId>
  <id root="6cc25a38-8781-4d79-a580-6a83d1b33575"/>
  <code valueSet="{$QDMElementValueSetOID}"/>
  <title value="Procedure, Performed"/>
  <statusCode code="completed"/>
</procedureCriteria>
```

## 5.55 Procedure, Recommended

[ProcedureCriteria: identifier  
 urn:hl7ii:2.16.840.1.113883.10.20.28.4.68:2017-05-01 (open)]

**Table 121: Procedure, Recommended Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a>

This template represents the QDM data type: Procedure, Recommended.

A procedure may be a surgery or other type of physical manipulation of a person's body in whole or in part for purposes of making observations and diagnoses or providing treatment.

This template represents a recommendation for a procedure.

Timing: The time the recommendation is authored (i.e., provided to the patient).

All QDM datatypes referring to recommendations address the time that the recommendation occurs, a single point in time. Vendors have expressed concerns that recommendations are not necessarily captured or managed in a standard manner as part of structured data capture in clinical workflow; many are documented as part of assessments in narrative text. Measure developers should address feasibility of clinical workflow to capture recommendations when evaluating measures.

**Table 122: Procedure, Recommended Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
ProcedureCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.68:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-33154</a>	PROC
@moodCode	1..1	SHALL		<a href="#">3335-31209</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = INT
@actionNegationInd	0..1	MAY		<a href="#">3335-31210</a>	
templateId	1..1	SHALL		<a href="#">3335-31211</a>	
item	1..1	SHALL		<a href="#">3335-31212</a>	
@root	1..1	SHALL		<a href="#">3335-31213</a>	2.16.840.1.113883.10.20.28.4.6 8
@extension	1..1	SHALL		<a href="#">3335-33417</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-31214</a>	
code	1..1	SHALL		<a href="#">3335-31215</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-31216</a>	
title	1..1	SHALL		<a href="#">3335-31217</a>	
statusCode	1..1	SHALL		<a href="#">3335-31218</a>	
@code	1..1	SHALL		<a href="#">3335-33155</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = completed
priorityCode	0..1	MAY		<a href="#">3335-31222</a>	
item	1..1	SHALL		<a href="#">3335-31223</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-33156</a>	
methodCode	0..1	MAY		<a href="#">3335-31224</a>	
item	1..1	SHALL		<a href="#">3335-31225</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-31226</a>	
approachSiteCode	0..1	MAY		<a href="#">3335-33411</a>	
item	1..1	SHALL		<a href="#">3335-33412</a>	

@valueSet	0..1	SHOULD		<a href="#">3335-33415</a>	
targetSiteCode	0..1	MAY		<a href="#">3335-33413</a>	
item	1..1	SHALL		<a href="#">3335-33414</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-33416</a>	
participation	0..1	MAY		<a href="#">3335-34465</a>	
@typeCode	1..1	SHALL		<a href="#">3335-34468</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3335-34466</a>	
low	1..1	SHALL		<a href="#">3335-34469</a>	
role	1..1	SHALL		<a href="#">3335-34467</a>	
@classCode	1..1	SHALL		<a href="#">3335-34470</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3335-34471</a>	
outboundRelationship	0..1	MAY		<a href="#">3335-31233</a>	
@typeCode	1..1	SHALL		<a href="#">3335-33157</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3335-31234</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01)</a>

1. **SHALL** contain exactly one [1..1] **@classCode="PROC"** Procedure (CONF:3335-33154).
2. **SHALL** contain exactly one [1..1] **@moodCode="INT"** Intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-31209).
3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3335-31210).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-31211) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-31212).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.68"** (CONF:3335-31213).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-05-01"** (CONF:3335-33417).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3335-31214).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3335-31215).  
Note: QDM Attribute: Code
  - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3335-31216).

7. **SHALL** contain exactly one [1..1] **title** (CONF:3335-31217).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-31218).
  - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3335-33155).
9. **MAY** contain zero or one [0..1] **priorityCode** (CONF:3335-31222).
 

Note: QDM Attribute: Ordinality

  - a. The priorityCode, if present, **SHALL** contain exactly one [1..1] **item** (CONF:3335-31223).
    - i. This item **SHOULD** contain zero or one [0..1] @valueSet (CONF:3335-33156).
10. **MAY** contain zero or one [0..1] **methodCode** (CONF:3335-31224).
 

Note: QDM Attribute: Method

  - a. The methodCode, if present, **SHALL** contain exactly one [1..1] **item** (CONF:3335-31225).
    - i. This item **SHOULD** contain zero or one [0..1] @valueSet (CONF:3335-31226).
11. **MAY** contain zero or one [0..1] **approachSiteCode** (CONF:3335-33411).
 

Note: QDM Attribute: Anatomical Approach Site

  - a. The approachSiteCode, if present, **SHALL** contain exactly one [1..1] **item** (CONF:3335-33412).
    - i. This item **SHOULD** contain zero or one [0..1] @valueSet (CONF:3335-33415).
12. **MAY** contain zero or one [0..1] **targetSiteCode** (CONF:3335-33413).
 

Note: QDM Attribute: Anatomical Location Site

  - a. The targetSiteCode, if present, **SHALL** contain exactly one [1..1] **item** (CONF:3335-33414).
    - i. This item **SHOULD** contain zero or one [0..1] @valueSet (CONF:3335-33416).
13. **MAY** contain zero or one [0..1] **participation** (CONF:3335-34465) such that it
  - a. **SHALL** contain exactly one [1..1] @typeCode="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-34468).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3335-34466).
    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3335-34469).
 

Note: QDM Attribute: Author dateTime (The time the recommendation is authored (i.e., provided to the patient))
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3335-34467).
    - i. This role **SHALL** contain exactly one [1..1] @classCode="ROL" Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3335-34470).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3335-34471).
14. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3335-31233) such that it
 

Note: QDM Attribute: Reason

  - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-33157).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3335-31234).

**Figure 59: Procedure, Recommended Example**

```
<procedureCriteria classCode="PROC" moodCode="INT">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.68" extension="2017-05-01"/>
  </templateId>
  <id root="7d559e0a-4e01-4f52-b87b-a3342705e2f2"/>
  <code valueSet="{$QDMElementValueSetOID}"/>
  <title value="Procedure, Recommended"/>
  <statusCode code="completed"/>
</procedureCriteria>
```

## 5.56 Program Participation

```
[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.130:2017-08-01 (open) ]
```

This template represents the QDM data type: Participation.

Participation represents a patient's coverage by a program such as an insurance or medical plan or a payment agreement. Such programs can include patient-centered medical home, disease-specific programs, etc.

**Table 123: Program Participation Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.130:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-34829</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3346-34830</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..0	SHALL NOT		<a href="#">3346-34831</a>	
templateId	1..1	SHALL		<a href="#">3346-34819</a>	
item	1..1	SHALL		<a href="#">3346-34820</a>	
@root	1..1	SHALL		<a href="#">3346-34824</a>	2.16.840.1.113883.10.20.28.4.1 30
@extension	1..1	SHALL		<a href="#">3346-34825</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-34832</a>	
code	1..1	SHALL		<a href="#">3346-34821</a>	
@code	1..1	SHALL		<a href="#">3346-34834</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = ASSERTION
statusCode	1..1	SHALL		<a href="#">3346-34822</a>	
@code	1..1	SHALL		<a href="#">3346-34827</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-34823</a>	
low	0..1	MAY		<a href="#">3346-34828</a>	
high	0..1	MAY		<a href="#">3346-34835</a>	
value	0..1	MAY	CD	<a href="#">3346-34833</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-34836</a>	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CONF:3346-34829).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-34830).
3. **SHALL NOT** contain [0..0] @actionNegationInd (CONF:3346-34831).
4. **SHALL** contain exactly one [1..1] templateId (CONF:3346-34819) such that it
  - a. **SHALL** contain exactly one [1..1] item (CONF:3346-34820).

- i. This item **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.28.4.130" (CONF:3346-34824).
- ii. This item **SHALL** contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-34825).
- 5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-34832).
- 6. **SHALL** contain exactly one [1..1] **code** (CONF:3346-34821).
  - a. This code **SHALL** contain exactly one [1..1] @code="ASSERTION" Assertion (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3346-34834).
- 7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-34822).
  - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-34827).
- 8. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-34823) such that it Note: QDM Attribute: Participation Period
  - a. **MAY** contain zero or one [0..1] **low** (CONF:3346-34828). Note: enrollmentStartdate – The time the patient enrolled in the program
  - b. **MAY** contain zero or one [0..1] **high** (CONF:3346-34835). Note: enrollmentEnddate – The time the patient's enrollment in the program ends
- 9. **MAY** contain zero or one [0..1] **value** with @xsi:type="CD" (CONF:3346-34833). Note: QDM Attribute: Code
  - a. The value, if present, **SHOULD** contain zero or one [0..1] @valueSet (CONF:3346-34836).

**Figure 60: Program Participation Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.130" extension="2017-08-01"/>
  </templateId>
  <id root="35cf9fd6-0d3d-4f86-91bf-a87fbf5ba8ef"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" valueSet="{$QDMElementValueSetOID}"/>
</observationCriteria>
```

## 5.57 Provider Care Experience

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.70:2017-05-01 (open)]

**Table 124: Provider Care Experience Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	

This template represents the QDM data type: Provider Care Experience.

Data elements that meet this criterion indicate the provider's experience with availability of resources (e.g., scheduling, equipment, space, and such consumables as medications). Provider care experience gauges provider satisfaction with key structures, processes, and outcomes in the healthcare delivery system.

Timing: The time the care experience is recorded; author time.

**Table 125: Provider Care Experience Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.70:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-32218</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3335-32219</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..0	SHALL NOT		<a href="#">3335-34708</a>	
templateId	1..1	SHALL		<a href="#">3335-32220</a>	
item	1..1	SHALL		<a href="#">3335-32221</a>	
@root	1..1	SHALL		<a href="#">3335-32222</a>	2.16.840.1.113883.10.20.28.4.70
@extension	1..1	SHALL		<a href="#">3335-33701</a>	2017-05-01
id	1..1	SHALL		<a href="#">3335-32223</a>	
code	1..1	SHALL		<a href="#">3335-32224</a>	
@code	1..1	SHALL		<a href="#">3335-32225</a>	405193005
@codeSystem	1..1	SHALL		<a href="#">3335-32226</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
title	1..1	SHALL		<a href="#">3335-32227</a>	
statusCode	1..1	SHALL		<a href="#">3335-32228</a>	
@code	1..1	SHALL		<a href="#">3335-32229</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3335-34390</a>	
low	1..1	SHALL		<a href="#">3335-34391</a>	
value	1..1	SHALL	CD	<a href="#">3335-32230</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-32231</a>	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CONF:3335-32218).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood  
urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-32219).
3. **SHALL NOT** contain [0..0] @actionNegationInd (CONF:3335-34708).

4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3335-32220) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3335-32221).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.70"** (CONF:3335-32222).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-05-01"** (CONF:3335-33701).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3335-32223).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3335-32224).
  - a. This code **SHALL** contain exactly one [1..1] **@code="405193005"** Caregiver Satisfaction (CONF:3335-32225).
  - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.6.96"** (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3335-32226).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3335-32227).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3335-32228).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3335-32229).
9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3335-34390) such that it
  - a. **SHALL** contain exactly one [1..1] **low** (CONF:3335-34391).
 

Note: QDM Attribute: Author dateTime (The time the care experience is recorded)
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:3335-32230).
 

Note: QDM Attribute: Code

  - a. This value **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3335-32231).

**Figure 61: Provider Care Experience Example**

```

<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.70" extension="2017-05-01"/>
  </templateId>
  <id root="a0b2aa8d-16b8-47b3-831b-94fcbb31e36"/>
  <code code="405193005" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <displayName value="Caregiver Satisfaction"/>
  </code>
  <title value="Provider Care Experience"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" valueSet="${QDMElementValueSetOID}"/>
</observationCriteria>

```

## 5.58 Provider Characteristic (V2)

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.71:2017-08-01 (open) ]

**Table 126: Provider Characteristic (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	

This template represents the QDM data type: Provider Characteristic.

Provider characteristics refer to specific factors about a provider. Included are demographics, behavioral factors, social, or cultural factors, available resources, and preferences.

Timing: The time the characteristic is authored.

**Table 127: Provider Characteristic (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.71:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-31740</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3346-31741</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
templateId	1..1	SHALL		<a href="#">3346-31742</a>	
item	1..1	SHALL		<a href="#">3346-31743</a>	
@root	1..1	SHALL		<a href="#">3346-31744</a>	2.16.840.1.113883.10.20.28.4.7 1
@extension	1..1	SHALL		<a href="#">3346-34121</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-31745</a>	
statusCode	1..1	SHALL		<a href="#">3346-31748</a>	
@code	1..1	SHALL		<a href="#">3346-31749</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-31750</a>	
low	1..1	SHALL		<a href="#">3346-31751</a>	
participation	1..1	SHALL		<a href="#">3346-31746</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34842</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = DRIV
role	1..1	SHALL		<a href="#">3346-31753</a>	
@classCode	1..1	SHALL		<a href="#">3346-31754</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = ASSIGNED
playingEntity	1..1	SHALL		<a href="#">3346-34837</a>	
@classCode	1..1	SHALL		<a href="#">3346-34838</a>	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = PSN
@determinerCode	1..1	SHALL		<a href="#">3346-34839</a>	urn:oid:2.16.840.1.113883.5.30 (EntityDeterminer) = KIND
code	1..1	SHALL		<a href="#">3346-34840</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-34841</a>	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CONF:3346-31740).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-31741).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-31742) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-31743).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.71"** (CONF:3346-31744).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-08-01"** (CONF:3346-34121).
4. **SHALL** contain exactly one [1..1] **id** (CONF:3346-31745).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-31748).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-31749).
6. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-31750) such that it
  - a. **SHALL** contain exactly one [1..1] **low** (CONF:3346-31751).
 

Note: QDM Attribute: Author dateTime (The time the characteristic is authored)
7. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-31746) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode="DRIV"** Is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34842).
  - b. **SHALL** contain exactly one [1..1] **role** (CONF:3346-31753).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="ASSIGNED"** Assigned Entity (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-31754).
    - ii. This role **SHALL** contain exactly one [1..1] **playingEntity** (CONF:3346-34837).
      1. This playingEntity **SHALL** contain exactly one [1..1] **@classCode="PSN"** Person (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:3346-34838).
      2. This playingEntity **SHALL** contain exactly one [1..1] **@determinerCode="KIND"** (CodeSystem: EntityDeterminer urn:oid:2.16.840.1.113883.5.30) (CONF:3346-34839).
      3. This playingEntity **SHALL** contain exactly one [1..1] **code** (CONF:3346-34840).
 

Note: QDM Attribute: Code

        - a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-34841).

**Figure 62: Provider Characteristic (V2) Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.71" extension="2017-08-01"/>
  </templateId>
  <id root="1b9dd45d-6d1e-4abb-87eb-2e1f1549bd58"/>
  <statusCode code="completed" />
  <participation typeCode="DRIV">
    <role classCode="ASSIGNED">
      <playingEntity classCode="PSN" determinerCode="KIND">
        <code valueSet="{$QDMElementValueSetOID}"/>
      </playingDevice>
    </role>
  </participation>
</observationCriteria>
```

## 5.59 Reason

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01 (open) ]

**Table 128: Reason Contexts**

Contained By:	Contains:
<a href="#">Assessment, Recommended</a> (optional) <a href="#">Device, Applied</a> (optional) <a href="#">Device, Order</a> (optional) <a href="#">Device, Recommended</a> (optional) <a href="#">Encounter, Order</a> (optional) <a href="#">Encounter, Recommended</a> (optional) <a href="#">Intervention, Order</a> (optional) <a href="#">Intervention, Recommended</a> (optional) <a href="#">Laboratory Test, Order</a> (optional) <a href="#">Laboratory Test, Recommended</a> (optional) <a href="#">Patient Characteristic Clinical Trial Participant</a> (optional) <a href="#">Physical Exam, Order</a> (optional) <a href="#">Physical Exam, Recommended</a> (optional) <a href="#">Procedure, Recommended</a> (optional) <a href="#">Assessment, Performed (V2)</a> (optional) <a href="#">Communication: From Patient to Provider (V2)</a> (optional) <a href="#">Diagnostic Study, Order (V2)</a> (optional) <a href="#">Diagnostic Study, Performed (V2)</a> (optional) <a href="#">Encounter, Performed (V2)</a> (optional) <a href="#">Laboratory Test, Performed (V2)</a> (optional) <a href="#">Immunization, Administered (V2)</a> (optional) <a href="#">Immunization, Order (V2)</a> (optional) <a href="#">Medication, Administered (V2)</a> (optional) <a href="#">Medication, Discharge (V2)</a> (optional) <a href="#">Medication, Order (V2)</a> (optional) <a href="#">Procedure, Order (V2)</a> (optional) <a href="#">Procedure, Performed (V2)</a> (optional) <a href="#">Substance, Order (V2)</a> (optional) <a href="#">Substance, Recommended (V2)</a> (optional) <a href="#">Intervention, Performed (V2)</a> (optional) <a href="#">Physical Exam, Performed (V2)</a> (optional) <a href="#">Communication: From Provider to Patient (V2)</a> (optional) <a href="#">Communication: From Provider to Provider (V2)</a> (optional) <a href="#">Medication, Dispensed (V2)</a> (optional)	

This template represents the QDM attribute: Reason.

It represents the thought process or justification for an action or for not performing an action. In some measures, specific treatments are acceptable inclusion criteria only if a justified reason is present. Each of these measures uses a value set (often, but not exclusively, using SNOMED CT) to express acceptable justification reasons. Other measures specify reasons as justification for exclusions. Examples include patient, system, or medical-related reasons for declining to perform specific actions. Each of these measures also uses a value set to express acceptable justification reasons for declining to perform expected actions.

**Table 129: Reason Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01)					
@classCode	1..1	SHALL		<a href="#">3335-29895</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3335-29896</a>	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		<a href="#">3335-29897</a>	
item	1..1	SHALL		<a href="#">3335-29898</a>	
@root	1..1	SHALL		<a href="#">3335-29899</a>	2.16.840.1.113883.10.20.28.4.88
@extension	1..1	SHALL		<a href="#">3335-33686</a>	2017-05-01
code	1..1	SHALL		<a href="#">3335-29901</a>	
@code	1..1	SHALL		<a href="#">3335-29902</a>	410666004
@codeSystem	1..1	SHALL		<a href="#">3335-29903</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
title	1..1	SHALL		<a href="#">3335-33173</a>	
value	1..1	SHALL	CD	<a href="#">3335-29904</a>	
@valueSet	0..1	SHOULD		<a href="#">3335-34681</a>	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CONF:3335-29895).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3335-29896).
3. **SHALL** contain exactly one [1..1] templateId (CONF:3335-29897) such that it
  - a. **SHALL** contain exactly one [1..1] item (CONF:3335-29898).
    - i. This item **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.28.4.88" (CONF:3335-29899).

- ii. This item **SHALL** contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33686).
4. **SHALL** contain exactly one [1..1] **code** (CONF:3335-29901).
- a. This code **SHALL** contain exactly one [1..1] @code="410666004" Reason (CONF:3335-29902).
  - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3335-29903).
5. **SHALL** contain exactly one [1..1] **title** (CONF:3335-33173).
6. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3335-29904).
- a. This value **SHOULD** contain zero or one [0..1] @valueSet (CONF:3335-34681).

**Figure 63: Reason Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.88" extension="2017-05-01"/>
  </templateId>
  <id root="05c07740-1f8d-417e-a9f2-fc769b1d342d"/>
  <code code="410666004" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <displayName value="Reason"/>
  </code>
  <title value="Reason"/>
  <value xsi:type="CD" valueSet="{$QDMElementValueSetOID}"/>
</observationCriteria>
```

## 5.60 Related To

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01 (open)]

**Table 130: Related To Contexts**

Contained By:	Contains:
<a href="#">Assessment, Performed (V2)</a> (optional) <a href="#">Care Goal (V2)</a> (optional) <a href="#">Communication: From Patient to Provider (V2)</a> (optional) <a href="#">Communication: From Provider to Patient (V2)</a> (optional) <a href="#">Communication: From Provider to Provider (V2)</a> (optional)	

This template represents the QDM attribute: Related To.

Something to which the QDM element is related.

The id of this template references the existing id of the QDM element this is related to. The root attribute of the id is required.

**Table 131: Related To Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-34725</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3346-34726</a>	EVN
templateId	1..1	SHALL		<a href="#">3346-34717</a>	
item	1..1	SHALL		<a href="#">3346-34718</a>	
@root	1..1	SHALL		<a href="#">3346-34721</a>	2.16.840.1.113883.10.20.28.4.127
@extension	1..1	SHALL		<a href="#">3346-34722</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-34727</a>	
@root	1..1	SHALL		<a href="#">3346-34730</a>	
@extension	0..1	MAY		<a href="#">3346-34731</a>	
code	1..1	SHALL		<a href="#">3346-34719</a>	
@code	1..1	SHALL		<a href="#">3346-34723</a>	42752001
@codeSystem	1..1	SHALL		<a href="#">3346-34724</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
title	1..1	SHALL		<a href="#">3346-34729</a>	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CONF:3346-34725).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CONF:3346-34726).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-34717).
  - a. This templateId **SHALL** contain exactly one [1..1] **item** (CONF:3346-34718).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.127"** (CONF:3346-34721).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-08-01"** (CONF:3346-34722).
4. **SHALL** contain exactly one [1..1] **id** (CONF:3346-34727).
  - a. This id **SHALL** contain exactly one [1..1] **@root** (CONF:3346-34730).
  - b. This id **MAY** contain zero or one [0..1] **@extension** (CONF:3346-34731).
5. **SHALL** contain exactly one [1..1] **code** (CONF:3346-34719).

- a. This code **SHALL** contain exactly one [1..1] @code="42752001" Due to (CONF:3346-34723).
- b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3346-34724).
- 6. **SHALL** contain exactly one [1..1] **title** (CONF:3346-34729).

**Figure 64: Related To Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.127" extension="2017-08-01"/>
  </templateId>
  <id root="302625d2-e41a-4d51-ba11-af0dfc81a11b"/>
  <code code="42752001" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <displayName value="Due to"/>
  </code>
  <title value="Related To"/>
</observationCriteria>
```

## 5.61 Result (V2)

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01 (open)]

**Table 132: Result (V2) Contexts**

Contained By:	Contains:
<a href="#">Diagnostic Study, Performed (V2)</a> (optional)	
<a href="#">Laboratory Test, Performed (V2)</a> (optional)	
<a href="#">Procedure, Performed (V2)</a> (optional)	
<a href="#">Intervention, Performed (V2)</a> (optional)	
<a href="#">Physical Exam, Performed (V2)</a> (optional)	

This template represents the QDM attribute: Result.

This represents the final consequences or data collected from a sequence of actions or events, or observable entities including, but not limited to procedures, laboratory tests, physical examinations, or diagnostic tests.

This template is used to represent result in all actCriteria except observationCriteria, where result is represented directly using observationCriteria/value. However, even though "Diagnostic Study, Performed" and "Laboratory Test, Performed" are observationCriteria, because these two data types also contain Result dateTime attribute, this Result template is also used to represent result in lieu of observation/value.

**Table 133: Result (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-32186</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3346-32187</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
templateId	1..1	SHALL		<a href="#">3346-32188</a>	
item	1..1	SHALL		<a href="#">3346-32189</a>	
@root	1..1	SHALL		<a href="#">3346-32190</a>	2.16.840.1.113883.10.20.28.4.1 01
@extension	1..1	SHALL		<a href="#">3346-34653</a>	2017-08-01
code	1..1	SHALL		<a href="#">3346-32192</a>	
@code	1..1	SHALL		<a href="#">3346-32193</a>	394617004
@codeSystem	1..1	SHALL		<a href="#">3346-32194</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
title	1..1	SHALL		<a href="#">3346-32195</a>	
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-34761</a>	
low	1..1	SHALL		<a href="#">3346-34762</a>	
value	1..1	SHALL		<a href="#">3346-32196</a>	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CONF:3346-32186).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood  
urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-32187).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-32188).
  - a. This templateId **SHALL** contain exactly one [1..1] **item** (CONF:3346-32189).
    - i. This item **SHALL** contain exactly one [1..1]  
**@root="2.16.840.1.113883.10.20.28.4.101"** (CONF:3346-32190).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-08-01"** (CONF:3346-34653).
4. **SHALL** contain exactly one [1..1] **code** (CONF:3346-32192).
  - a. This code **SHALL** contain exactly one [1..1] **@code="394617004"** Result (CONF:3346-32193).

- b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3346-32194).
- 5. **SHALL** contain exactly one [1..1] **title** (CONF:3346-32195).
- 6. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-34761).  
Note: QDM Attribute: Result dateTime (The time the result report is generated and saved in the database)
  - a. The effectiveTime, if present, **SHALL** contain exactly one [1..1] **low** (CONF:3346-34762).
- 7. **SHALL** contain exactly one [1..1] **value** (CONF:3346-32196).  
Note: QDM Attribute: Result

**Figure 65: Result (V2) Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.101" extension="2017-08-01"/>
  </templateId>
  <id root="6626ee8e-e72b-4382-97a0-9a00ac27763a"/>
  <code code="394617004" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <displayName value="Result"/>
  </code>
  <title value="Result"/>
  <value xsi:type="CD" valueSet="${QDMElementValueSetOID}"/>
</observationCriteria>
```

## 5.62 Severity Observation (V2)

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-08-01 (open) ]

**Table 134: Severity Observation (V2) Contexts**

Contained By:	Contains:
<a href="#">Adverse Event (V2)</a> (optional) <a href="#">Allergy Intolerance (V2)</a> (optional) <a href="#">Symptom (V2)</a> (optional) <a href="#">Diagnosis (V2)</a> (optional)	

This template represents the QDM attribute: Severity.

Severity observation represents the gravity of the problem, such as allergy or reaction, in terms of its actual or potential impact on the patient.

**Table 135: Severity Observation (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-30129</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3346-30130</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
templateId	1..1	SHALL		<a href="#">3346-30131</a>	
item	1..1	SHALL		<a href="#">3346-30132</a>	
@root	1..1	SHALL		<a href="#">3346-30133</a>	2.16.840.1.113883.10.20.28.4.9 3
@extension	1..1	SHALL		<a href="#">3346-33691</a>	2017-08-01
code	1..1	SHALL		<a href="#">3346-30135</a>	
@code	1..1	SHALL		<a href="#">3346-30136</a>	SEV
@codeSystem	1..1	SHALL		<a href="#">3346-30137</a>	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
title	1..1	SHALL		<a href="#">3346-30140</a>	
value	1..1	SHALL	CD	<a href="#">3346-30138</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-34843</a>	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CONF:3346-30129).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood  
urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-30130).
3. **SHALL** contain exactly one [1..1] templateId (CONF:3346-30131) such that it
  - a. **SHALL** contain exactly one [1..1] item (CONF:3346-30132).
    - i. This item **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.28.4.93" (CONF:3346-30133).
    - ii. This item **SHALL** contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33691).
4. **SHALL** contain exactly one [1..1] code (CONF:3346-30135).
  - a. This code **SHALL** contain exactly one [1..1] @code="SEV" Severity Observation (CONF:3346-30136).
  - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode  
urn:oid:2.16.840.1.113883.5.4) (CONF:3346-30137).

5. **SHALL** contain exactly one [1..1] **title** (CONF:3346-30140).
6. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3346-30138).
  - a. This value **SHOULD** contain zero or one [0..1] @valueSet (CONF:3346-34843).

**Figure 66: Severity Observation (V2) Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.93" extension="2017-08-01"/>
  </templateId>
  <code code="SEV" codeSystem="2.16.840.1.113883.5.4" codeSystemName="HL7 ActCode">
    <displayName value="Severity Observation"/>
  </code>
  <title value="Severity"/>
  <value xsi:type="CD" valueSet="${QDMElementValueSetOID}"/>
</observationCriteria>
```

## 5.63 Status (V2)

[observationCriteria: identifier  
 urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-08-01 (open) ]

**Table 136: Status (V2) Contexts**

Contained By:	Contains:
<a href="#">Diagnostic Study, Performed (V2)</a> (optional) <a href="#">Laboratory Test, Performed (V2)</a> (optional) <a href="#">Procedure, Performed (V2)</a> (optional) <a href="#">Intervention, Performed (V2)</a> (optional)	

This template represents the QDM attribute: Status.

Status represents the particular stage of the subject within a defined process.

**Table 137: Status (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-30151</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3346-30152</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
templateId	1..1	SHALL		<a href="#">3346-30153</a>	
item	1..1	SHALL		<a href="#">3346-30155</a>	
@root	1..1	SHALL		<a href="#">3346-30156</a>	2.16.840.1.113883.10.20.28.4.9 4
@extension	1..1	SHALL		<a href="#">3346-33690</a>	2017-08-01
code	1..1	SHALL		<a href="#">3346-30158</a>	
@code	1..1	SHALL		<a href="#">3346-30159</a>	33999-4
@codeSystem	1..1	SHALL		<a href="#">3346-30160</a>	urn:oid:2.16.840.1.113883.6.1 (LOINC)
title	1..1	SHALL		<a href="#">3346-30161</a>	
value	1..1	SHALL	CD	<a href="#">3346-30162</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-34844</a>	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CONF:3346-30151).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood  
urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-30152).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-30153) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-30155).
    - i. This item **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.28.4.94"** (CONF:3346-30156).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension="2017-08-01"** (CONF:3346-33690).
4. **SHALL** contain exactly one [1..1] **code** (CONF:3346-30158).
  - a. This code **SHALL** contain exactly one [1..1] **@code="33999-4"** Status (CONF:3346-30159).
  - b. This code **SHALL** contain exactly one [1..1] **@codeSystem** (CodeSystem: LOINC  
urn:oid:2.16.840.1.113883.6.1) (CONF:3346-30160).
5. **SHALL** contain exactly one [1..1] **title** (CONF:3346-30161).
6. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3346-30162).

- a. This value **SHOULD** contain zero or one [0..1] @valueSet (CONF:3346-34844).

**Figure 67: Status (V2) Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.94" extension="2017-08-01"/>
  </templateId>
  <code code="33999-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC">
    <displayName value="Status"/>
  </code>
  <title value="Status"/>
  <value xsi:type="CD" valueSet="${QDMElementValueSetOID}"/>
</observationCriteria>
```

## 5.64 Substance, Administered (V2)

[substanceAdministrationCriteria: identifier  
 urn:hl7ii:2.16.840.1.113883.10.20.28.4.73:2017-08-01 (open) ]

**Table 138: Substance, Administered (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Supply</a>

This template represents the QDM data type: Substance, Administered.

A substance is a chemical element and its compounds in the natural state or obtained by any manufacturing process (other than pharmaceutical drugs), including any additive necessary to preserve its stability and any impurity deriving from the process used, but excluding any solvent that may be separated without affecting the stability of the substance or changing its composition. Examples of a substance may include but are not limited to: environmental agents (e.g., pollen, dust) and food (e.g., vitamins).

This template represents a substance that has been administered.

Timing: The Relevant Period addresses: StartTime = when a single substance administration event starts (e.g., the initiation of an intravenous infusion, or administering a the substance orally or topically to a patient); StopTime = when a single substance administration event ends (e.g., the end time of the intravenous infusion, or the administration of a substance orally or topically is completed - for oral or topical administration, the start and stop times are the same).

Dosage: Details of how medication is/is to be taken, i.e., the quantity (mg, cc, tablets) to be taken at a single administration.

Supply: The quantity (amount) of therapeutic agent that was provided to a patient (i.e., number of doses, number of tablets or pills, volume of medication).

**Table 139: Substance, Administered (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
substanceAdministrationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.73:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-32878</a>	SBADM
@moodCode	1..1	SHALL		<a href="#">3346-32879</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
@actionNegationInd	0..1	MAY		<a href="#">3346-32880</a>	
templateId	1..1	SHALL		<a href="#">3346-32881</a>	
item	1..1	SHALL		<a href="#">3346-32882</a>	
@root	1..1	SHALL		<a href="#">3346-32883</a>	2.16.840.1.113883.10.20.28.4.7 3
@extension	1..1	SHALL		<a href="#">3346-33393</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-32884</a>	
code	1..1	SHALL		<a href="#">3346-32885</a>	
@code	1..1	SHALL		<a href="#">3346-33177</a>	416118004
@codeSystem	1..1	SHALL		<a href="#">3346-33178</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
title	1..1	SHALL		<a href="#">3346-32887</a>	
statusCode	1..1	SHALL		<a href="#">3346-32888</a>	
@code	1..1	SHALL		<a href="#">3346-32889</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-32890</a>	
low	0..1	MAY		<a href="#">3346-32891</a>	
high	0..1	MAY		<a href="#">3346-32892</a>	
effectiveTime	0..1	MAY	PIVL_TS	<a href="#">3346-34845</a>	
period	0..1	MAY		<a href="#">3346-34846</a>	
routeCode	0..1	MAY		<a href="#">3346-32894</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-32895</a>	

doseQuantity	0..1	MAY		<a href="#">3346-32896</a>	
participation	1..1	SHALL		<a href="#">3346-32897</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32898</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM
role	1..1	SHALL		<a href="#">3346-32899</a>	
@classCode	1..1	SHALL		<a href="#">3346-32900</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = ADMM
playingMaterial	1..1	SHALL		<a href="#">3346-32901</a>	
@classCode	1..1	SHALL		<a href="#">3346-32902</a>	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = MAT
@determinerCode	1..1	SHALL		<a href="#">3346-32903</a>	urn:oid:2.16.840.1.113883.5.30 (HL7EntityDeterminer) = KIND
code	1..1	SHALL		<a href="#">3346-32904</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-32905</a>	
participation	1..1	SHALL		<a href="#">3346-34563</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34566</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3346-34564</a>	
low	1..1	SHALL		<a href="#">3346-34567</a>	
role	1..1	SHALL		<a href="#">3346-34565</a>	
@classCode	1..1	SHALL		<a href="#">3346-34568</a>	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3346-34569</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-34482</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34483</a>	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
supplyCriteria	1..1	SHALL		<a href="#">3346-34847</a>	<a href="#">Supply (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.129:2017-08-01)</a>

1. **SHALL** contain exactly one [1..1] **@classCode="SBADM"** Substance Administration (CONF:3346-32878).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-32879).

3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3346-32880).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-32881) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-32882).
    - i. This item **SHALL** contain exactly one [1..1] **@root**=`"2.16.840.1.113883.10.20.28.4.73"` (CONF:3346-32883).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension**=`"2017-08-01"` (CONF:3346-33393).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-32884).
6. **SHALL** contain exactly one [1..1] **code** (CONF:3346-32885).
  - a. This code **SHALL** contain exactly one [1..1] **@code**=`"416118004"` Administration (CONF:3346-33177).
  - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**=`"2.16.840.1.113883.6.96"` (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3346-33178).
7. **SHALL** contain exactly one [1..1] **title** (CONF:3346-32887).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-32888).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code**=`"completed"` Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-32889).
9. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-32890) such that it  
Note: QDM Attribute: Relevant Period
  - a. **MAY** contain zero or one [0..1] **low** (CONF:3346-32891).  
Note: startTime (When a single substance administration event starts (e.g., the initiation of an intravenous infusion, or administering a the substance orally or topically to a patient))
  - b. **MAY** contain zero or one [0..1] **high** (CONF:3346-32892).  
Note: stopTime (When a single substance administration event ends (e.g., the end time of the intravenous infusion, or the administration of a substance orally or topically is completed - for oral or topical administration, the start and stop times are the same))
10. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-34845) such that it  
Note: QDM Attribute: Frequency
  - a. **MAY** contain zero or one [0..1] **period** (CONF:3346-34846).
11. **MAY** contain zero or one [0..1] **routeCode** (CONF:3346-32894).  
Note: QDM Attribute: Route
  - a. The routeCode, if present, **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-32895).
12. **MAY** contain zero or one [0..1] **doseQuantity** (CONF:3346-32896).  
Note: QDM Attribute: Dosage
13. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-32897) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode**=`"CSM"` Consumable (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-32898).
  - b. **SHALL** contain exactly one [1..1] **role** (CONF:3346-32899).

- i. This role **SHALL** contain exactly one [1..1] **@classCode="ADMM"** Administerable Material (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-32900).
  - ii. This role **SHALL** contain exactly one [1..1] **playingMaterial** (CONF:3346-32901).
    - 1. This playingMaterial **SHALL** contain exactly one [1..1] **@classCode="MAT"** Material (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:3346-32902).
    - 2. This playingMaterial **SHALL** contain exactly one [1..1] **@determinerCode="KIND"** Kind (CodeSystem: HL7EntityDeterminer urn:oid:2.16.840.1.113883.5.30) (CONF:3346-32903).
    - 3. This playingMaterial **SHALL** contain exactly one [1..1] **code** (CONF:3346-32904).
- Note: QDM Attribute: Code
- a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-32905).
14. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-34563) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34566).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3346-34564).
    - i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3346-34567).

Note: QDM Attribute: Author date
  - c. **SHALL** contain exactly one [1..1] **role** (CONF:3346-34565).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-34568).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3346-34569).
15. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34482) such that it
- Note: QDM Attribute: Supply
- a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34483).
  - b. **SHALL** contain exactly one [1..1] **Supply** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01) (CONF:3346-34847).

**Figure 68: Substance, Administered (V2) Example**

```
<substanceAdministrationCriteria classCode="SBADM" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.73" extension="2017-08-01"/>
  </templateId>
  <id root="8918e418-fdc0-4c9c-b902-67502e324b9b"/>
  <code code="416118004" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <displayName value="Administration"/>
  </code>
  <title value="Substance, Administered"/>
  <statusCode code="completed" />
  <participation typeCode="CSM">
    <role classCode="ADMM">
      <playingMaterial classCode="MAT" determinerCode="KIND">
        <code valueSet="{$QDMElementValueSetOID}"/>
      </playingMaterial>
    </role>
  </participation>
</substanceAdministrationCriteria>
```

## 5.65 Substance, Order (V2)

[substanceAdministrationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.77:2017-08-01 (open) ]

**Table 140: Substance, Order (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a> <a href="#">Supply</a>

This template represents the QDM data type: Substance, Order.

This template represents a request by a clinician or appropriately licensed care provider to a pharmacy to provide a substance to a patient.

Timing: The time the order is signed; author datetime.

Dosage: Details of how medication is/is to be taken, i.e., the quantity (mg, cc, tablets) to be taken at a single administration.

Supply: The quantity (amount) of therapeutic agent that was provided to a patient (i.e., number of doses, number of tablets or pills, volume of medication).

**Table 141: Substance, Order (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
substanceAdministrationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.77:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-32623</a>	SBADM
@moodCode	1..1	SHALL		<a href="#">3346-32624</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = RQO
@actionNegationInd	0..1	MAY		<a href="#">3346-32625</a>	
templateId	1..1	SHALL		<a href="#">3346-32626</a>	
item	1..1	SHALL		<a href="#">3346-32627</a>	
@root	1..1	SHALL		<a href="#">3346-32628</a>	2.16.840.1.113883.10.20.28.4.7 7
@extension	1..1	SHALL		<a href="#">3346-33652</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-32629</a>	
title	1..1	SHALL		<a href="#">3346-32632</a>	
statusCode	1..1	SHALL		<a href="#">3346-32633</a>	
@code	1..1	SHALL		<a href="#">3346-32634</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
repeatNumber	0..1	MAY		<a href="#">3346-32638</a>	
methodCode	0..1	MAY		<a href="#">3346-33671</a>	
item	1..1	SHALL		<a href="#">3346-33672</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-33673</a>	
routeCode	0..1	MAY		<a href="#">3346-32639</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-32640</a>	
doseQuantity	0..1	MAY		<a href="#">3346-32641</a>	
participation	1..1	SHALL		<a href="#">3346-32642</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32643</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM
role	1..1	SHALL		<a href="#">3346-32644</a>	

@classCode	1..1	SHALL		<a href="#">3346-32645</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = ADMM
playingMaterial	1..1	SHALL		<a href="#">3346-32646</a>	
@classCode	1..1	SHALL		<a href="#">3346-32647</a>	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = MAT
@determinerCode	1..1	SHALL		<a href="#">3346-32648</a>	urn:oid:2.16.840.1.113883.5.30 (HL7EntityDeterminer) = KIND
code	1..1	SHALL		<a href="#">3346-32649</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-32650</a>	
participation	0..1	MAY		<a href="#">3346-33511</a>	
@typeCode	1..1	SHALL		<a href="#">3346-33513</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3346-33512</a>	
low	1..1	SHALL		<a href="#">3346-33514</a>	
role	1..1	SHALL		<a href="#">3346-33601</a>	
@classCode	1..1	SHALL		<a href="#">3346-33602</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3346-33603</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-32651</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32652</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3346-32653</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.88:2017-05-01</a>
outboundRelationship	0..1	MAY		<a href="#">3346-34485</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34486</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = REFR
supplyCriteria	1..1	SHALL		<a href="#">3346-34848</a>	<a href="#">Supply (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.129:2017-08-01</a>

1. **SHALL** contain exactly one [1..1] @classCode="SBADM" Substance Administration (CONF:3346-32623).
2. **SHALL** contain exactly one [1..1] @moodCode="RQO" Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-32624).

3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3346-32625).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-32626) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-32627).
    - i. This item **SHALL** contain exactly one [1..1] **@root**=*"2.16.840.1.113883.10.20.28.4.77"* (CONF:3346-32628).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension***"2017-08-01"* (CONF:3346-33652).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-32629).
6. **SHALL** contain exactly one [1..1] **title** (CONF:3346-32632).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-32633).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code***"active"* Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-32634).
8. **MAY** contain zero or one [0..1] **repeatNumber** (CONF:3346-32638).  
Note: QDM Attribute: Refills
9. **MAY** contain zero or one [0..1] **methodCode** (CONF:3346-33671).  
Note: QDM Attribute: Method
  - a. The methodCode, if present, **SHALL** contain exactly one [1..1] **item** (CONF:3346-33672).
    - i. This item **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-33673).
10. **MAY** contain zero or one [0..1] **routeCode** (CONF:3346-32639).  
Note: QDM Attribute: Route
  - a. The routeCode, if present, **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-32640).
11. **MAY** contain zero or one [0..1] **doseQuantity** (CONF:3346-32641).  
Note: QDM Attribute: Dosage
12. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-32642) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode***"CSM"* Consumable (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-32643).
  - b. **SHALL** contain exactly one [1..1] **role** (CONF:3346-32644).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode***"ADMM"* Administerable Material (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-32645).
    - ii. This role **SHALL** contain exactly one [1..1] **playingMaterial** (CONF:3346-32646).
      1. This playingMaterial **SHALL** contain exactly one [1..1] **@classCode***"MAT"* Material (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:3346-32647).
      2. This playingMaterial **SHALL** contain exactly one [1..1] **@determinerCode***"KIND"* Kind (CodeSystem: HL7EntityDeterminer urn:oid:2.16.840.1.113883.5.30) (CONF:3346-32648).

3. This playingMaterial **SHALL** contain exactly one [1..1] **code** (CONF:3346-32649).

Note: QDM Attribute: Code

- a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-32650).

13. **MAY** contain zero or one [0..1] **participation** (CONF:3346-33511) such that it

- a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-33513).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3346-33512).

- i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3346-33514).

Note: QDM Attribute: Author dateTime (The time the order is signed)

- c. **SHALL** contain exactly one [1..1] **role** (CONF:3346-33601).
  - i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-33602).
    - ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3346-33603).

14. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-32651) such that it

Note: QDM Attribute: Reason

- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32652).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3346-32653).

15. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34485) such that it

Note: QDM Attribute: Supply

- a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34486).
  - b. **SHALL** contain exactly one [1..1] **Supply** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01) (CONF:3346-34488).

**Figure 69: Substance, Order (V2) Example**

```
<substanceAdministrationCriteria classCode="SBADM" moodCode="RQO">
    <templateId>
        <item root="2.16.840.1.113883.10.20.28.4.77" extension="2017-08-01"/>
    </templateId>
    <id root="58f3015d-d2dc-45ac-bf6d-fa8d1588603f"/>
    <title value="Substance, Order"/>
    <statusCode code="active"/>
    <participation typeCode="CSM">
        <role classCode="ADMM">
            <playingMaterial classCode="MAT" determinerCode="KIND">
                <code valueSet="{$QDMElementValueSetOID}"/>
            </playingMaterial>
        </role>
    </participation>
</substanceAdministrationCriteria>
```

## 5.66 Substance, Recommended (V2)

[substanceAdministrationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.78:2017-08-01 (open) ]

**Table 142: Substance, Recommended (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Reason</a> <a href="#">Supply</a>

This template represents the QDM data type: Substance, Recommended.

A substance is a chemical element and its compounds in the natural state or obtained by any manufacturing process (other than pharmaceutical drugs), including any additive necessary to preserve its stability and any impurity deriving from the process used, but excluding any solvent that may be separated without affecting the stability of the substance or changing its composition. Examples of a substance may include but are not limited to: environmental agents (e.g., pollen, dust) and food (e.g., vitamins).

This template represents a recommendation for a substance.

Timing: The time the recommendation is authored (i.e., provided to the patient).

Dosage: Details of how medication is/is to be taken, i.e., the quantity (mg, cc, tablets) to be taken at a single administration.

Supply: The quantity (amount) of therapeutic agent that was provided to a patient (i.e., number of doses, number of tablets or pills, volume of medication).

**Table 143: Substance, Recommended (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
substanceAdministrationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.78:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-32063</a>	SBADM
@moodCode	1..1	SHALL		<a href="#">3346-32064</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = INT
@actionNegationInd	0..1	MAY		<a href="#">3346-32065</a>	
templateId	1..1	SHALL		<a href="#">3346-32066</a>	
item	1..1	SHALL		<a href="#">3346-32125</a>	
@root	1..1	SHALL		<a href="#">3346-32126</a>	2.16.840.1.113883.10.20.28.4.7 8
@extension	1..1	SHALL		<a href="#">3346-33693</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-32067</a>	
title	1..1	SHALL		<a href="#">3346-32069</a>	
statusCode	1..1	SHALL		<a href="#">3346-32070</a>	
@code	1..1	SHALL		<a href="#">3346-32071</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
repeatNumber	0..1	MAY		<a href="#">3346-32121</a>	
methodCode	0..1	MAY		<a href="#">3346-32122</a>	
item	1..1	SHALL		<a href="#">3346-33198</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-33199</a>	
routeCode	0..1	MAY		<a href="#">3346-32123</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-33200</a>	
doseQuantity	0..1	MAY		<a href="#">3346-32124</a>	
participation	1..1	SHALL		<a href="#">3346-32103</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32104</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM
role	1..1	SHALL		<a href="#">3346-32105</a>	

@classCode	1..1	SHALL		<a href="#">3346-32106</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = MANU
playingMaterial	1..1	SHALL		<a href="#">3346-32107</a>	
@classCode	1..1	SHALL		<a href="#">3346-32108</a>	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = MMAT
@determinerCode	1..1	SHALL		<a href="#">3346-32109</a>	urn:oid:2.16.840.1.113883.5.30 (HL7EntityDeterminer) = KIND
code	1..1	SHALL		<a href="#">3346-32110</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-32111</a>	
participation	0..1	MAY		<a href="#">3346-34473</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34476</a>	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = AUT
time	1..1	SHALL		<a href="#">3346-34474</a>	
low	1..1	SHALL		<a href="#">3346-34477</a>	
role	1..1	SHALL		<a href="#">3346-34475</a>	
@classCode	1..1	SHALL		<a href="#">3346-34478</a>	urn:oid:2.16.840.1.113883.5.11 0 (HL7RoleClass) = ROL
id	0..1	MAY		<a href="#">3346-34479</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-32112</a>	
@typeCode	1..1	SHALL		<a href="#">3346-32113</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = RSON
observationCriteria	1..1	SHALL		<a href="#">3346-32114</a>	<a href="#">Reason (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.88:2017-05-01)</a>
outboundRelationship	0..1	MAY		<a href="#">3346-34488</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34489</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = REFR
supplyCriteria	1..1	SHALL		<a href="#">3346-34849</a>	<a href="#">Supply (identifier: urn:hl7ii:2.16.840.1.113883.10. 20.28.4.129:2017-08-01)</a>

1. **SHALL** contain exactly one [1..1] @classCode="SBADM" Substance Administration (CONF:3346-32063).
2. **SHALL** contain exactly one [1..1] @moodCode="INT" Intent (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-32064).

3. **MAY** contain zero or one [0..1] **@actionNegationInd** (CONF:3346-32065).  
Note: QDM Attribute: Negation Rationale
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-32066) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-32125).
    - i. This item **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.28.4.78" (CONF:3346-32126).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension**="2017-08-01" (CONF:3346-33693).
5. **SHALL** contain exactly one [1..1] **id** (CONF:3346-32067).
6. **SHALL** contain exactly one [1..1] **title** (CONF:3346-32069).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-32070).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="active" Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-32071).
8. **MAY** contain zero or one [0..1] **repeatNumber** (CONF:3346-32121).  
Note: QDM Attribute: Refills
9. **MAY** contain zero or one [0..1] **methodCode** (CONF:3346-32122).  
Note: QDM Attribute: Method
  - a. The methodCode, if present, **SHALL** contain exactly one [1..1] **item** (CONF:3346-33198).
    - i. This item **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-33199).
10. **MAY** contain zero or one [0..1] **routeCode** (CONF:3346-32123).  
Note: QDM Attribute: Route
  - a. The routeCode, if present, **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-33200).
11. **MAY** contain zero or one [0..1] **doseQuantity** (CONF:3346-32124).  
Note: QDM Attribute: Dosage
12. **SHALL** contain exactly one [1..1] **participation** (CONF:3346-32103) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode**="CSM" Consumable (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-32104).
  - b. **SHALL** contain exactly one [1..1] **role** (CONF:3346-32105).
    - i. This role **SHALL** contain exactly one [1..1] **@classCode**="MANU" Manufactured (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-32106).
    - ii. This role **SHALL** contain exactly one [1..1] **playingMaterial** (CONF:3346-32107).
      1. This playingMaterial **SHALL** contain exactly one [1..1] **@classCode**="MMAT" Manufactured Material (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:3346-32108).
      2. This playingMaterial **SHALL** contain exactly one [1..1] **@determinerCode**="KIND" Kind (CodeSystem: HL7EntityDeterminer urn:oid:2.16.840.1.113883.5.30) (CONF:3346-32109).

3. This playingMaterial **SHALL** contain exactly one [1..1] **code** (CONF:3346-32110).

Note: QDM Attribute: Code

- a. This code **SHOULD** contain zero or one [0..1] **@valueSet** (CONF:3346-32111).

13. **MAY** contain zero or one [0..1] **participation** (CONF:3346-34473) such that it

- a. **SHALL** contain exactly one [1..1] **@typeCode="AUT"** Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34476).
  - b. **SHALL** contain exactly one [1..1] **time** (CONF:3346-34474).

- i. This time **SHALL** contain exactly one [1..1] **low** (CONF:3346-34477).

Note: QDM Attribute: Author dateTime (The time the recommendation is authored (i.e., provided to the patient))

- c. **SHALL** contain exactly one [1..1] **role** (CONF:3346-34475).
  - i. This role **SHALL** contain exactly one [1..1] **@classCode="ROL"** Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-34478).

- ii. This role **MAY** contain zero or one [0..1] **id** (CONF:3346-34479).

14. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-32112) such that it

Note: QDM Attribute: Reason

- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-32113).
  - b. **SHALL** contain exactly one [1..1] **Reason** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01) (CONF:3346-32114).

15. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34488) such that it

Note: QDM Attribute: Supply

- a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34489).
  - b. **SHALL** contain exactly one [1..1] **Supply** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01) (CONF:3346-34849).

**Figure 70: Substance, Recommended (V2) Example**

```
<substanceAdministrationCriteria classCode="SBADM" moodCode="INT">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.78" extension="2017-08-01"/>
  </templateId>
  <id root="e208b889-30eb-4c2b-be1f-372084e98bbc"/>
  <title value="Substance, Recommended"/>
  <statusCode code="active"/>
  <participation typeCode="CSM">
    <role classCode="ADMM">
      <playingMaterial classCode="MAT" determinerCode="KIND">
        <code valueSet="{$QDMElementValueSetOID}" />
      </playingMaterial>
    </role>
  </participation>
</substanceAdministrationCriteria>
```

## 5.67 Supply

[supplyCriteria: identifier urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01 (open)]

**Table 144: Supply Contexts**

Contained By:	Contains:
<a href="#">Immunization, Administered (V2)</a> (optional) <a href="#">Immunization, Order (V2)</a> (optional) <a href="#">Medication, Active (V2)</a> (optional) <a href="#">Medication, Administered (V2)</a> (optional) <a href="#">Medication, Discharge (V2)</a> (optional) <a href="#">Medication, Order (V2)</a> (optional) <a href="#">Substance, Administered (V2)</a> (optional) <a href="#">Substance, Order (V2)</a> (optional) <a href="#">Substance, Recommended (V2)</a> (optional)	

This template represents the QDM Attribute: Supply.

The quantity (amount) of therapeutic agent that was provided to a patient (i.e., number of doses, number of tablets or pills, volume of medication).

**Table 145: Supply Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
supplyCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-34795</a>	SPLY
@moodCode	1..1	SHALL		<a href="#">3346-34796</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
templateId	1..1	SHALL		<a href="#">3346-34771</a>	
item	1..1	SHALL		<a href="#">3346-34772</a>	
@root	1..1	SHALL		<a href="#">3346-34783</a>	2.16.840.1.113883.10.20.28.4.1 29
@extension	1..1	SHALL		<a href="#">3346-34784</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-34797</a>	
title	1..1	SHALL		<a href="#">3346-34798</a>	
quantity	1..1	SHALL		<a href="#">3346-34800</a>	

1. **SHALL** contain exactly one [1..1] **@classCode**="SPLY" Supply (CONF:3346-34795).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-34796).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-34771).
  - a. This templateId **SHALL** contain exactly one [1..1] **item** (CONF:3346-34772).
    - i. This item **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.28.4.129" (CONF:3346-34783).
    - ii. This item **SHALL** contain exactly one [1..1] **@extension**="2017-08-01" (CONF:3346-34784).
4. **SHALL** contain exactly one [1..1] **id** (CONF:3346-34797).
5. **SHALL** contain exactly one [1..1] **title** (CONF:3346-34798).
6. **SHALL** contain exactly one [1..1] **quantity** (CONF:3346-34800).

Note: QDM Attribute: Supply

**Figure 71: Supply Example**

```
<supplyCriteria classCode="SPLY" moodCode="RQO">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.129" extension="2017-08-01"/>
  </templateId>
  <id root="5ab17ed3-166c-4265-9c61-d254e30c8e83"/>
  <title value="Supply"/>
  <quantity xsi:type="IVL_PQ">
    <low value="50" unit="mL"/>
  </quantity>
</supplyCriteria>
```

## 5.68 Symptom (V2)

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.116:2017-08-01 (open) ]

**Table 146: Symptom (V2) Contexts**

Contained By:	Contains:
<a href="#">Data Criteria Section (V2)</a> (optional)	<a href="#">Severity Observation (V2)</a>

This template represents the QDM data type: Symptom.

A symptom is a patient's reported perception of departure from normal functioning that is present at the time indicated.

Timing: The Prevalence Period references the time from the onset date to the abatement date.

The onset datetime corresponds to the implicit start datetime of the datatype and the abatement datetime corresponds to the implicit stop datetime of the datatype. If the abatement datetime is null, then the symptom is considered to still be active. When this datatype is used with timing relationships, the criterion is looking for whether the symptom was active for the time frame indicated by the timing relationships.

**Table 147: Symptom (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.116:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-34108</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3346-34109</a>	urn:oid:2.16.840.1.113883.5.10 01 (HL7ActMood) = EVN
templateId	1..1	SHALL		<a href="#">3346-34079</a>	
item	1..1	SHALL		<a href="#">3346-34080</a>	
@root	1..1	SHALL		<a href="#">3346-34093</a>	2.16.840.1.113883.10.20.28.4.1 16
@extension	1..1	SHALL		<a href="#">3346-34480</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-34112</a>	
code	1..1	SHALL		<a href="#">3346-34081</a>	
@code	1..1	SHALL		<a href="#">3346-34095</a>	418799008
@codeSystem	1..1	SHALL		<a href="#">3346-34096</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
title	1..1	SHALL		<a href="#">3346-34111</a>	
statusCode	1..1	SHALL		<a href="#">3346-34082</a>	
@code	1..1	SHALL		<a href="#">3346-34097</a>	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	MAY	IVL_TS	<a href="#">3346-34083</a>	
low	0..1	MAY		<a href="#">3346-34098</a>	
high	0..1	MAY		<a href="#">3346-34099</a>	
value	1..1	SHALL	CD	<a href="#">3346-34088</a>	
@valueSet	0..1	SHOULD		<a href="#">3346-34105</a>	
outboundRelationship	0..1	MAY		<a href="#">3346-34078</a>	
@typeCode	1..1	SHALL		<a href="#">3346-34092</a>	urn:oid:2.16.840.1.113883.5.10 02 (HL7ActRelationshipType) = REFR
observationCriteria	1..1	SHALL		<a href="#">3346-</a>	<a href="#">Severity Observation (V2)</a>

				<a href="#">34091</a>	(identifier: <a href="#">urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-08-01</a>
--	--	--	--	-----------------------	--

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CONF:3346-34108).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3346-34109).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3346-34079) such that it
  - a. **SHALL** contain exactly one [1..1] **item** (CONF:3346-34080).
    - i. This item **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.28.4.116" (CONF:3346-34093).
    - ii. This item **SHALL** contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-34480).
4. **SHALL** contain exactly one [1..1] **id** (CONF:3346-34112).
5. **SHALL** contain exactly one [1..1] **code** (CONF:3346-34081).
  - a. This code **SHALL** contain exactly one [1..1] @code="418799008" Symptom (CONF:3346-34095).
  - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3346-34096).
6. **SHALL** contain exactly one [1..1] **title** (CONF:3346-34111).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3346-34082).
  - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3346-34097).
8. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:3346-34083) such that it
 

Note: QDM Attribute: Prevalence Period (References the time from the onset date to the abatement date)

  - a. **MAY** contain zero or one [0..1] **low** (CONF:3346-34098).
 

Note: Onset dateTime
  - b. **MAY** contain zero or one [0..1] **high** (CONF:3346-34099).
 

Note: Abatement dateTime (If the abatement datetime is null, then the symptom is considered to still be active)
9. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3346-34088).
 

Note: QDM Attribute: Code

  - a. This value **SHOULD** contain zero or one [0..1] @valueSet (CONF:3346-34105).
10. **MAY** contain zero or one [0..1] **outboundRelationship** (CONF:3346-34078) such that it
 

Note: QDM Attribute: Severity

  - a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34092).
  - b. **SHALL** contain exactly one [1..1] Severity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-08-01) (CONF:3346-34091).

**Figure 72: Symptom (V2) Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.116" extension="2017-08-01"/>
  </templateId>
  <id root="9e4e810d-3c3e-461e-86f8-6fe7a0b1ca2b"/>
  <code code="418799008" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <displayName value="Symptom"/>
  </code>
  <title value="Symptom"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" valueSet="${QDMElementValueSetOID}"/>
</observationCriteria>
```

## 5.69 Target Outcome

[observationCriteria: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.28.4.128:2017-08-01 (open) ]

**Table 148: Target Outcome Contexts**

Contained By:	Contains:
<a href="#">Care Goal (V2)</a> (optional)	

This template represents the QDM attribute: Target Outcome.

The expected outcome that will indicate the care goal is achieved, or met.

**Table 149: Target Outcome Constraints Overview**

XPath	Card.	Verb	Data Type	CONF #	Value
observationCriteria (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.128:2017-08-01)					
@classCode	1..1	SHALL		<a href="#">3346-29112</a>	OBS
@moodCode	1..1	SHALL		<a href="#">3346-29113</a>	GOL
templateId	1..1	SHALL		<a href="#">3346-29104</a>	
item	1..1	SHALL		<a href="#">3346-29105</a>	
@root	1..1	SHALL		<a href="#">3346-29108</a>	2.16.840.1.113883.10.20.28.4.128
@extension	1..1	SHALL		<a href="#">3346-29109</a>	2017-08-01
id	1..1	SHALL		<a href="#">3346-29114</a>	
code	1..1	SHALL		<a href="#">3346-29106</a>	
@code	1..1	SHALL		<a href="#">3346-29110</a>	385676005
@codeSystem	1..1	SHALL		<a href="#">3346-29111</a>	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
title	1..1	SHALL		<a href="#">3346-29116</a>	
value	1..1	SHALL		<a href="#">3346-29107</a>	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CONF:3346-29112).
2. **SHALL** contain exactly one [1..1] @moodCode="GOL" Goal (CONF:3346-29113).
3. **SHALL** contain exactly one [1..1] templateId (CONF:3346-29104) such that it
  - a. **SHALL** contain exactly one [1..1] item (CONF:3346-29105) such that it
    - i. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.28.4.128" (CONF:3346-29108).
    - ii. **SHALL** contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-29109).
4. **SHALL** contain exactly one [1..1] id (CONF:3346-29114).
5. **SHALL** contain exactly one [1..1] code (CONF:3346-29106).
  - a. This code **SHALL** contain exactly one [1..1] @code="385676005" Outcome of action (CONF:3346-29110).
  - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3346-29111).

6. **SHALL** contain exactly one [1..1] **title** (CONF:3346-29116).
7. **SHALL** contain exactly one [1..1] **value** (CONF:3346-29107).

**Figure 73: Target Outcome Example**

```
<observationCriteria classCode="OBS" moodCode="EVN">
  <templateId>
    <item root="2.16.840.1.113883.10.20.28.4.128" extension="2017-08-01"/>
  </templateId>
  <code code="385676005" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <displayName value="Outcome of action"/>
  </code>
  <title value="Target Outcome"/>
  <value xsi:type="CD" valueSet="${QDMElementValueSetOID}"/>
</observationCriteria>
```

## 6 TEMPLATE IDS IN THIS GUIDE

**Table 150: Template List**

Template Title	Template Type	templateId
<a href="#">QDM Templates for CQL-Based HQMF Header (V2)</a>	Document	urn:hl7ii:2.16.840.1.113883.10.20.28.1.2:2017-08-01
<a href="#">Data Criteria Section (V2)</a>	Section	urn:hl7ii:2.16.840.1.113883.10.20.28.2.6:2017-08-01
<a href="#">Measure Description Section</a>	Section	urn:oid:2.16.840.1.113883.10.20.28.2.3
<a href="#">Measure Observations Section</a>	Section	urn:oid:2.16.840.1.113883.10.20.28.2.4
<a href="#">Population Criteria Section</a>	Section	urn:hl7ii:2.16.840.1.113883.10.20.28.2.7:2017-05-01
<a href="#">Admission Source</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.123:2017-05-01
<a href="#">Adverse Event (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.120:2017-08-01
<a href="#">Allergy Intolerance (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.119:2017-08-01
<a href="#">Assessment, Performed (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.117:2017-08-01
<a href="#">Assessment, Recommended</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.118:2017-05-01
<a href="#">Care Goal (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.7:2017-08-01
<a href="#">Cause</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.105:2017-05-01
<a href="#">Communication: From Patient to Provider (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.8:2017-08-01
<a href="#">Communication: From Provider to Patient (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.9:2017-08-01
<a href="#">Communication: From Provider to Provider (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.10:2017-08-01
<a href="#">Component</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.121:2017-05-01
<a href="#">Device, Applied</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.13:2017-05-01
<a href="#">Device, Order</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.15:2017-05-01
<a href="#">Device, Recommended</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.16:2017-05-01
<a href="#">Diagnosis (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.110:2017-08-01
<a href="#">Diagnostic Study, Order (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.

<b>Template Title</b>	<b>Template Type</b>	<b>templateId</b>
		28.4.22:2017-08-01
<a href="#">Diagnostic Study, Performed (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.23:2017-08-01
<a href="#">Diagnostic Study, Recommended (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.24:2017-08-01
<a href="#">Dosage</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.125:2017-05-01
Encounter, Active (RETIRED)	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.26:2017-08-01
<a href="#">Encounter, Order</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.27:2017-05-01
<a href="#">Encounter, Performed (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.5:2017-08-01
<a href="#">Encounter, Recommended</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.28:2017-05-01
<a href="#">Facility Location</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.92:2017-05-01
<a href="#">Family History</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.111:2017-05-01
Frequency (RETIRED)	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.99:2017-08-01
<a href="#">Immunization, Administered (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.112:2017-08-01
<a href="#">Immunization, Order (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.113:2017-08-01
<a href="#">Incision Datetime</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.89:2017-05-01
<a href="#">Intervention, Order</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.35:2017-05-01
<a href="#">Intervention, Performed (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.36:2017-08-01
<a href="#">Intervention, Recommended</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.37:2017-05-01
<a href="#">Laboratory Test Component</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.126:2017-05-01
<a href="#">Laboratory Test Reference Range</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.124:2017-05-01
<a href="#">Laboratory Test, Order</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.41:2017-05-01
<a href="#">Laboratory Test, Performed (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.42:2017-08-01
<a href="#">Laboratory Test, Recommended</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.43:2017-05-01
<a href="#">Medication, Active (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.44:2017-08-01
<a href="#">Medication, Administered (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.

<b>Template Title</b>	<b>Template Type</b>	<b>templateId</b>
		28.4.45:2017-08-01
<a href="#">Medication, Discharge (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.48:2017-08-01
<a href="#">Medication, Dispensed (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.49:2017-08-01
<a href="#">Medication, Order (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.51:2017-08-01
<a href="#">Patient Care Experience</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.52:2017-05-01
<a href="#">Patient Characteristic (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.53:2017-08-01
<a href="#">Patient Characteristic Birth Date</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.54:2017-05-01
<a href="#">Patient Characteristic Clinical Trial Participant</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.6:2017-05-01
<a href="#">Patient Characteristic Ethnicity</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.56:2017-05-01
<a href="#">Patient Characteristic Expired</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.57:2017-05-01
<a href="#">Patient Characteristic Payer</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.58:2017-05-01
<a href="#">Patient Characteristic Race</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.59:2017-05-01
<a href="#">Patient Characteristic Sex</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.55:2017-05-01
<a href="#">Physical Exam, Order</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.61:2017-05-01
<a href="#">Physical Exam, Performed (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.62:2017-08-01
<a href="#">Physical Exam, Recommended</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.63:2017-05-01
<a href="#">Principal Diagnosis</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.122:2017-05-01
<a href="#">Procedure, Order (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.66:2017-08-01
<a href="#">Procedure, Performed (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.67:2017-08-01
<a href="#">Procedure, Recommended</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.68:2017-05-01
<a href="#">Program Participation</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.130:2017-08-01
<a href="#">Provider Care Experience</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.70:2017-05-01
<a href="#">Provider Characteristic (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.71:2017-08-01
Radiation Dosage (RETIRED)	Entry	urn:hl7ii:2.16.840.1.113883.10.20.

<b>Template Title</b>	<b>Template Type</b>	<b>templateId</b>
		28.4.106:2017-08-01
Radiation Duration (RETIRED)	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.107:2017-08-01
<a href="#"><u>Reason</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.88:2017-05-01
<a href="#"><u>Related To</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.127:2017-08-01
<a href="#"><u>Result (V2)</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.101:2017-08-01
<a href="#"><u>Severity Observation (V2)</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.93:2017-08-01
<a href="#"><u>Status (V2)</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.94:2017-08-01
<a href="#"><u>Substance, Administered (V2)</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.73:2017-08-01
<a href="#"><u>Substance, Order (V2)</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.77:2017-08-01
<a href="#"><u>Substance, Recommended (V2)</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.78:2017-08-01
<a href="#"><u>Supply</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.129:2017-08-01
<a href="#"><u>Symptom (V2)</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.116:2017-08-01
<a href="#"><u>Target Outcome</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.128:2017-08-01

**Table 151: Template Containments**

Template Title	Template Type	templateId
<a href="#">QDM Templates for CQL-Based HQMF Header (V2)</a>	Document	urn:hl7ii:2.16.840.1.113883.10.20.28.1.2:2017-08-01
<a href="#">Data Criteria Section (V2)</a>	Section	urn:hl7ii:2.16.840.1.113883.10.20.28.2.6:2017-08-01
<a href="#">Adverse Event (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.120:2017-08-01
<a href="#">Facility Location</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.92:2017-05-01
<a href="#">Severity Observation (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-08-01
<a href="#">Allergy Intolerance (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.119:2017-08-01
<a href="#">Severity Observation (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-08-01
<a href="#">Assessment, Performed (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.117:2017-08-01
<a href="#">Component</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.121:2017-05-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Related To</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01
<a href="#">Assessment, Recommended</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.118:2017-05-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Care Goal (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.7:2017-08-01
<a href="#">Related To</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01
<a href="#">Target Outcome</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.128:2017-08-01
<a href="#">Communication: From Patient to Provider (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.8:2017-08-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Related To</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01
<a href="#">Communication: From Provider to Patient (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.9:2017-08-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Related To</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01

<b>Template Title</b>	<b>Template Type</b>	<b>templateId</b>
<a href="#">Communication: From Provider to Provider (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.10:2017-08-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Related To</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01
<a href="#">Device, Applied</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.13:2017-05-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Device, Order</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.15:2017-05-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Device, Recommended</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.16:2017-05-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Diagnosis (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.110:2017-08-01
<a href="#">Severity Observation (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-08-01
<a href="#">Diagnostic Study, Order (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.22:2017-08-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Diagnostic Study, Performed (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.23:2017-08-01
<a href="#">Component</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.121:2017-05-01
<a href="#">Facility Location</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.92:2017-05-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Result (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01
<a href="#">Status (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-08-01
<a href="#">Diagnostic Study, Recommended (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.24:2017-08-01
<a href="#">Encounter, Order</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.27:2017-05-01
<a href="#">Facility Location</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.92:2017-05-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01

<b>Template Title</b>	<b>Template Type</b>	<b>templateId</b>
<a href="#">Encounter, Performed (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.5:2017-08-01
<a href="#">Admission Source</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.123:2017-05-01
<a href="#">Diagnosis (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.110:2017-08-01
<a href="#">Severity Observation (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-08-01
<a href="#">Facility Location</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.92:2017-05-01
<a href="#">Principal Diagnosis</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.122:2017-05-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Encounter, Recommended</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.28:2017-05-01
<a href="#">Facility Location</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.92:2017-05-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Family History</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.111:2017-05-01
<a href="#">Immunization, Administered (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.112:2017-08-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Supply</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01
<a href="#">Immunization, Order (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.113:2017-08-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Supply</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01
<a href="#">Intervention, Order</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.35:2017-05-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Intervention, Performed (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.36:2017-08-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Result (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01
<a href="#">Status (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-08-01

<b>Template Title</b>	<b>Template Type</b>	<b>templateId</b>
<a href="#">Intervention, Recommended</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.37:2017-05-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Laboratory Test, Order</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.41:2017-05-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Laboratory Test, Performed (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.42:2017-08-01
<a href="#">Laboratory Test Component</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.126:2017-05-01
<a href="#">Laboratory Test Reference Range</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.124:2017-05-01
<a href="#">Laboratory Test Reference Range</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.124:2017-05-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Result (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01
<a href="#">Status (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-08-01
<a href="#">Laboratory Test, Recommended</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.43:2017-05-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Medication, Active (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.44:2017-08-01
<a href="#">Supply</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01
<a href="#">Medication, Administered (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.45:2017-08-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Supply</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01
<a href="#">Medication, Discharge (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.48:2017-08-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Supply</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01
<a href="#">Medication, Dispensed (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.49:2017-08-01
<a href="#">Dosage</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.125:2017-05-01

<b>Template Title</b>	<b>Template Type</b>	<b>templateId</b>
<a href="#"><u>Reason</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#"><u>Medication, Order (V2)</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.51:2017-08-01
<a href="#"><u>Reason</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#"><u>Supply</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01
<a href="#"><u>Patient Care Experience</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.52:2017-05-01
<a href="#"><u>Patient Characteristic (V2)</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.53:2017-08-01
<a href="#"><u>Patient Characteristic Birth Date</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.54:2017-05-01
<a href="#"><u>Patient Characteristic Clinical Trial Participant</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.6:2017-05-01
<a href="#"><u>Reason</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#"><u>Patient Characteristic Ethnicity</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.56:2017-05-01
<a href="#"><u>Patient Characteristic Expired</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.57:2017-05-01
<a href="#"><u>Cause</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.105:2017-05-01
<a href="#"><u>Patient Characteristic Payer</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.58:2017-05-01
<a href="#"><u>Patient Characteristic Race</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.59:2017-05-01
<a href="#"><u>Patient Characteristic Sex</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.55:2017-05-01
<a href="#"><u>Physical Exam, Order</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.61:2017-05-01
<a href="#"><u>Reason</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#"><u>Physical Exam, Performed (V2)</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.62:2017-08-01
<a href="#"><u>Component</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.121:2017-05-01
<a href="#"><u>Reason</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#"><u>Result (V2)</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01
<a href="#"><u>Physical Exam, Recommended</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.63:2017-05-01
<a href="#"><u>Reason</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01

<b>Template Title</b>	<b>Template Type</b>	<b>templateId</b>
<a href="#">Procedure, Order (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.66:2017-08-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Procedure, Performed (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.67:2017-08-01
<a href="#">Component</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.121:2017-05-01
<a href="#">Incision Datetime</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.89:2017-05-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Result (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01
<a href="#">Status (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-08-01
<a href="#">Procedure, Recommended</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.68:2017-05-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Provider Care Experience</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.70:2017-05-01
<a href="#">Provider Characteristic (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.71:2017-08-01
<a href="#">Substance, Administered (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.73:2017-08-01
<a href="#">Supply</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01
<a href="#">Substance, Order (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.77:2017-08-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Supply</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01
<a href="#">Substance, Recommended (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.78:2017-08-01
<a href="#">Reason</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.88:2017-05-01
<a href="#">Supply</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01
<a href="#">Symptom (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.116:2017-08-01
<a href="#">Severity Observation (V2)</a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-08-01
<a href="#">Measure Description Section</a>	Section	urn:oid:2.16.840.1.113883.10.20.28.2.3

<b>Template Title</b>	<b>Template Type</b>	<b>templateId</b>
<a href="#"><u>Measure Observations Section</u></a>	Section	urn:oid:2.16.840.1.113883.10.20.28.2.4
<a href="#"><u>Population Criteria Section</u></a>	Section	urn:hl7ii:2.16.840.1.113883.10.20.28.2.7:2017-05-01
<a href="#"><u>Encounter, Active (RETIRED)</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.26:2017-08-01
<a href="#"><u>Frequency (RETIRED)</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.99:2017-08-01
<a href="#"><u>Program Participation</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.130:2017-08-01
<a href="#"><u>Radiation Dosage (RETIRED)</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.106:2017-08-01
<a href="#"><u>Radiation Duration (RETIRED)</u></a>	Entry	urn:hl7ii:2.16.840.1.113883.10.20.28.4.107:2017-08-01

## 7 VALUE SETS IN THIS GUIDE

**Table 152: ObservationMeasureScoring**

Value Set: ObservationMeasureScoring urn:oid:2.16.840.1.113883.1.11.20367 Observation values used to indicate the type of scoring (e.g., proportion, ratio) used by a health quality measure.			
<b>Code</b>	<b>Code System</b>	<b>Code System OID</b>	<b>Print Name</b>
COHORT	HL7ObservationValue	urn:oid:2.16.840.1.11388 3.5.1063	cohort measure scoring
CONTVAR	HL7ObservationValue	urn:oid:2.16.840.1.11388 3.5.1063	continuous variable measure scoring
PROPOR	HL7ObservationValue	urn:oid:2.16.840.1.11388 3.5.1063	proportion measure scoring
RATIO	HL7ObservationValue	urn:oid:2.16.840.1.11388 3.5.1063	ratio measure scoring

**Table 153: ObservationMeasureType**

Value Set: ObservationMeasureType urn:oid:2.16.840.1.113883.1.11.20368 Observation values used to indicate whether a health quality measure is used to example a process or outcome over time.			
<b>Code</b>	<b>Code System</b>	<b>Code System OID</b>	<b>Print Name</b>
OUTCOME	HL7ObservationValue	urn:oid:2.16.840.1.11388 3.5.1063	outcome measure type
PROCESS	HL7ObservationValue	urn:oid:2.16.840.1.11388 3.5.1063	process measure type
COMPOSITE	HL7ObservationValue	urn:oid:2.16.840.1.11388 3.5.1063	composite measure type
RESOURCE	HL7ObservationValue	urn:oid:2.16.840.1.11388 3.5.1063	resource use measure type
EFFICIENCY	HL7ObservationValue	urn:oid:2.16.840.1.11388 3.5.1063	efficiency measure type
EXPERIENCE	HL7ObservationValue	urn:oid:2.16.840.1.11388 3.5.1063	experience measure type
STRUCTURE	HL7ObservationValue	urn:oid:2.16.840.1.11388 3.5.1063	structure measure type

**Table 154: RoleClassServiceDeliveryLocation**

Value Set: RoleClassServiceDeliveryLocation urn:oid:2.16.840.1.113883.1.11.16927 Location(s) in which care being measured is rendered.			
<b>Code</b>	<b>Code System</b>	<b>Code System OID</b>	<b>Print Name</b>
SDLOC	HL7RoleClass	urn:oid:2.16.840.1.11388 3.5.110	service delivery location
DSDLOC	HL7RoleClass	urn:oid:2.16.840.1.11388 3.5.110	dedicated service delivery location/health care facility
ISDLOC	HL7RoleClass	urn:oid:2.16.840.1.11388 3.5.110	incidental service delivery location

## 8 CODE SYSTEMS IN THIS GUIDE

**Table 155: Code Systems**

Name	OID
EntityDeterminer	urn:oid:2.16.840.1.113883.5.30
HL7ActClass	urn:oid:2.16.840.1.113883.5.6
HL7ActCode	urn:oid:2.16.840.1.113883.5.4
HL7ActMood	urn:oid:2.16.840.1.113883.5.1001
HL7ActReason	urn:oid:2.16.840.1.113883.5.8
HL7ActRelationshipType	urn:oid:2.16.840.1.113883.5.1002
HL7ActStatus	urn:oid:2.16.840.1.113883.5.14
HL7EntityClass	urn:oid:2.16.840.1.113883.5.41
HL7EntityDeterminer	urn:oid:2.16.840.1.113883.5.30
HL7ObservationValue	urn:oid:2.16.840.1.113883.5.1063
HL7ParticipationType	urn:oid:2.16.840.1.113883.5.90
HL7RoleClass	urn:oid:2.16.840.1.113883.5.110
HL7RoleCode	urn:oid:2.16.840.1.113883.5.111
HL7RoleLinkType	urn:oid:2.16.840.1.113883.5.107
LOINC	urn:oid:2.16.840.1.113883.6.1
SNOMED CT	urn:oid:2.16.840.1.113883.6.96

## 9 RETIRED TEMPLATES

**Table 156: Retired Templates**

Name	OID	Description
Encounter, Active (RETIRED)	urn:hl7ii:2.16.840.1.113883.10 .20.28.4.26:2017-08-01	<p>This template represents the QDM data type: Encounter, Active.</p> <p>An encounter is an identifiable grouping of healthcare-related activities characterized by the entity relationship between the subject of care and a healthcare provider; such grouping is determined by the healthcare provider. A patient encounter represents interaction between a healthcare provider and a patient with a face-to-face patient visit to a clinician's office, or any electronically remote interaction with a clinician for any form of diagnostic treatment or therapeutic event.</p> <p>This template represents an encounter that is active.</p> <p>Timing: The Relevant Period addresses: startTime – The time the encounter began (admission time); stopTime – The time the encounter ended (discharge time).</p>
Frequency (RETIRED)	urn:hl7ii:2.16.840.1.113883.10 .20.28.4.99:2017-08-01	<p>This template represents the QDM attribute: Frequency.</p> <p>Frequency represents number of times a medication is given within a specified time.</p>
Radiation Dosage (RETIRED)	urn:hl7ii:2.16.840.1.113883.10 .20.28.4.106:2017-08-01	<p>This template represents the QDM attribute: Radiation Dosage.</p> <p>This indicates the total dosage of radiation associated with the action referenced by the datatype.</p>

Name	OID	Description
Radiation Duration (RETIRED)	urn:hl7ii:2.16.840.1.113883.10 .20.28.4.107:2017-08-01	<p>This template represents the QDM attribute: Radiation Duration.</p> <p>This indicates the time (duration) of radiation exposure associated with the action referenced by the datatype..</p>

## 10 CHANGES FROM PREVIOUS VERSION

### 10.1 QDM Templates for CQL-Based HQMF Header (V2)

[QDM Templates for CQL-Based HQMF Header \(V2\)](#)

[\(urn:hl7ii:2.16.840.1.113883.10.20.28.1.2:2017-08-01\)](#)

Change	Old	New
Status	Published	Published
Name	QDM Templates for CQL-Based HQMF Header	QDM Templates for CQL-Based HQMF Header (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.1.2:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.1.2:2017-08-01
Description	This is the document header template for a CQL-based HQMF document that contains QDM-based entry templates.	This is the document header template for a CQL-based HQMF document that contains QDM-based entry templates (QDM Version 5.3).
CONF #: 3346-18772 Modified	This templateId SHALL contain at least one [1..*] item (CONF:3335-18772) such that it	SHALL contain exactly one [1..1] item (CONF:3346-18772) such that it
CONF #: 3346-18833 Modified	SHALL contain exactly one [1..1] Data Criteria Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.2.6:2017-05-01) (CONF:3335-18833).	SHALL contain exactly one [1..1] Data Criteria Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.2.6:2017-08-01) (CONF:3346-18833).
CONF #: 3346-33755 Modified	SHALL contain zero or one [0..1] @extension="2017-05-01" (CONF:3335-33755).	SHALL contain zero or one [0..1] @extension="2017-08-01" (CONF:3346-33755).
CONF #: 3346-19058 Modified	SHALL contain exactly one [1..1] Population Criteria Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.2.7:2017-05-01) (CONF:3335-19058).	SHALL contain exactly one [1..1] Population Criteria Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.2.7:2017-08-01) (CONF:3346-19058).

## 10.2 Adverse Event (V2)

[Adverse Event \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.28.4.120:2017-08-01\)](#)

Change	Old	New
Status	Published	Published
Name	Adverse Event	Adverse Event (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.120:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.120:2017-08-01
Description	<p>This template represents the QDM data type: Adverse Event</p> <p>Adverse Event is used to define any untoward medical occurrence associated with the clinical care delivery, whether or not considered drug related.</p> <p>Timing: The Prevalence Period references the time from the onset date to the abatement date.</p>	<p>This template represents the QDM data type: Adverse Event</p> <p>Adverse Event is used to define any untoward medical occurrence associated with the clinical care delivery, whether or not considered drug related.</p> <p>Timing: The Prevalence Period references the time from the onset date to the abatement date.</p>
CONF #: 3346-34692 Added		MAY contain zero or one [0..1] participation (CONF:3346-34692) such that it
CONF #: 3346-34693 Added		SHALL contain exactly one [1..1] role (CONF:3346-34693).
CONF #: 3346-34694 Added		SHALL contain exactly one [1..1] @typeCode="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34694).
CONF #: 3346-34695 Added		SHALL contain exactly one [1..1] time (CONF:3346-34695). Note: QDM Attribute: Author dateTime
CONF #: 3346-34696 Added		This role SHALL contain exactly one [1..1] @classCode="ROL" Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-34696).
CONF #: 3346-34697 Added		This role MAY contain zero or one [0..1] id (CONF:3346-34697).
CONF #: 3346-34758 Added		SHALL NOT contain [0..0] @actionNegationInd (CONF:3346-34758).
CONF #: 3346-34184 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-34184).	SHALL contain exactly one [1..1] item (CONF:3346-34184).
CONF #: 3346-34500 Modified	MAY contain zero or one [0..1] participation (CONF:3335-34500) such that it Note: QDM Attribute: Facility	MAY contain zero or more [0..*] participation (CONF:3346-34500) such that it Note: QDM Attribute: Facility

<b>Change</b>	<b>Old</b>	<b>New</b>
	Location	Location
CONF #: 3346-34499 Modified	SHALL contain exactly one [1..1] Severity Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-05-01) (CONF:3335-34499).	SHALL contain exactly one [1..1] Severity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-08-01) (CONF:3346-34499).
CONF #: 3346-34531 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-34531).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-34531).
CONF #: 3346-34199 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] low (CONF:3335-34199). Note: StartTime – the time the adverse event began	MAY contain zero or one [0..1] low (CONF:3346-34199). Note: StartTime – the time the adverse event began
CONF #: 3346-34200 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] high (CONF:3335-34200). Note: StopTime – the time the adverse event completed	MAY contain zero or one [0..1] high (CONF:3346-34200). Note: StopTime – the time the adverse event completed

## 10.3 Allergy Intolerance (V2)

Allergy Intolerance (V2) (urn:hl7ii:2.16.840.1.113883.10.20.28.4.119:2017-08-01)

Change	Old	New
Status	Published	Published
Name	Allergy/Intolerance	Allergy Intolerance (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.119:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.119:2017-08-01
CONF #: 3346-34704 Added		MAY contain zero or one [0..1] outboundRelationship (CONF:3346-34704) such that it Note: QDM Attribute: Type (The characterization of the reaction (e.g., hypersensitivity, rash, gastroenteric symptoms, etc.)
CONF #: 3346-34705 Added		SHALL contain exactly one [1..1] observationCriteria (CONF:3346-34705).
CONF #: 3346-34706 Added		This observationCriteria SHALL contain exactly one [1..1] code (CONF:3346-34706).
CONF #: 3346-34707 Added		This observationCriteria SHALL contain exactly one [1..1] @classCode="OBS" (CONF:3346-34707).
CONF #: 3346-34708 Added		This observationCriteria SHALL contain exactly one [1..1] @moodCode="EVN" (CONF:3346-34708).
CONF #: 3346-34709 Added		SHALL contain exactly one [1..1] @typeCode="REFR" Refers To (CONF:3346-34709).
CONF #: 3346-34710 Added		MAY contain zero or one [0..1] participation (CONF:3346-34710) such that it
CONF #: 3346-34711 Added		SHALL contain exactly one [1..1] time (CONF:3346-34711).
CONF #: 3346-34712 Added		SHALL contain exactly one [1..1] role (CONF:3346-34712).
CONF #: 3346-34713 Added		SHALL contain exactly one [1..1] @typeCode="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34713).
CONF #: 3346-34714 Added		This time SHALL contain exactly one [1..1] low (CONF:3346-34714). Note: QDM Attribute: Author dateTime
CONF #: 3346-34715 Added		This role SHALL contain exactly

<b>Change</b>	<b>Old</b>	<b>New</b>
		one [1..1] @classCode="ROL" Role (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3346-34715).
CONF #: 3346-34716 Added		This role MAY contain zero or one [0..1] id (CONF:3346-34716).
CONF #: 3346-34759 Added		SHALL NOT contain [0..0] @actionNegationInd (CONF:3346-34759).
CONF #: 3335-34692 Removed	MAY contain zero or one [0..1] outboundRelationship (CONF:3335-34692) such that it Note: QDM Attribute: Type (The characterization of the reaction (e.g., hypersensitivity, rash, gastroenteric symptoms, etc.)	
CONF #: 3335-34693 Removed	SHALL contain exactly one [1..1] observationCriteria (CONF:3335-34693).	
CONF #: 3335-34694 Removed	This observationCriteria SHALL contain exactly one [1..1] code (CONF:3335-34694).	
CONF #: 3335-34695 Removed	SHALL contain exactly one [1..1] @typeCode="REFR" Refers To (CONF:3335-34695).	
CONF #: 3335-34696 Removed	This observationCriteria SHALL contain exactly one [1..1] @classCode="OBS" (CONF:3335-34696).	
CONF #: 3335-34697 Removed	This observationCriteria SHALL contain exactly one [1..1] @moodCode="EVN" (CONF:3335-34697).	
CONF #: 3346-34216 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-34216).	SHALL contain exactly one [1..1] item (CONF:3346-34216).
CONF #: 3346-34225 Modified	SHALL contain exactly one [1..1] Severity Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-05-01) (CONF:3335-34225).	SHALL contain exactly one [1..1] Severity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-08-01) (CONF:3346-34225).
CONF #: 3346-34532 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-34532).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-34532).
CONF #: 3346-34232 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] low (CONF:3335-34232). Note: Onset Date	MAY contain zero or one [0..1] low (CONF:3346-34232). Note: Onset Date
CONF #: 3346-34233 Modified	The effectiveTime, if present, MAY	MAY contain zero or one [0..1] high

<b>Change</b>	<b>Old</b>	<b>New</b>
	contain zero or one [0..1] high (CONF:3335-34233). Note: Abatement Date	(CONF:3346-34233). Note: Abatement Date

## 10.4 Assessment, Performed (V2)

[Assessment, Performed \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.28.4.117:2017-08-01\)](#)

Change	Old	New
Status	Published	Published
Name	Assessment, Performed	Assessment, Performed (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.117:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.117:2017-08-01
Description	<p>This template represents the QDM data type: Assessment, Performed.</p> <p>Assessment is a resource used to define specific observations that clinicians use to guide treatment of the patient. An assessment can be a single question, or observable entity with an expected response, an organized collection of questions intended to solicit information from patients, providers or other individuals, or a single observable entity that is part of such a collection of questions. The Assessment Performed template represents the completion of an assessment.</p> <p>Timing: The time the assessment is completed; author time.</p>	<p>This template represents the QDM data type: Assessment, Performed. Assessment is a resource used to define specific observations that clinicians use to guide treatment of the patient. An assessment can be a single question, or observable entity with an expected response, an organized collection of questions intended to solicit information from patients, providers or other individuals, or a single observable entity that is part of such a collection of questions. The Assessment Performed template represents the completion of an assessment.</p> <p>Timing: The time the assessment is completed; author time.</p>
CONF #: 3346-34732 Added		<p>MAY contain zero or more [0..*] outboundRelationship (CONF:3346-34732) such that it Note: QDM Attribute: Related To</p>
CONF #: 3346-34733 Added		<p>SHALL contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34733).</p>
CONF #: 3346-34734 Added		<p>SHALL contain exactly one [1..1] Related To (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01) (CONF:3346-34734).</p>
CONF #: 3346-34735 Added		<p>MAY contain zero or one [0..1] participation (CONF:3346-34735) such that it</p>
CONF #: 3346-34736 Added		<p>SHALL contain exactly one [1..1] time (CONF:3346-34736). Note: QDM Attribute: Author dateTime (The time the assessment is completed)</p>

<b>Change</b>	<b>Old</b>	<b>New</b>
CONF #: 3346-34737 Added		SHALL contain exactly one [1..1] role (CONF:3346-34737).
CONF #: 3346-34738 Added		SHALL contain exactly one [1..1] @typeCode="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34738).
CONF #: 3346-34739 Added		This time SHALL contain exactly one [1..1] low (CONF:3346-34739).
CONF #: 3346-34740 Added		This role MAY contain zero or one [0..1] id (CONF:3346-34740).
CONF #: 3346-34741 Added		This role SHALL contain exactly one [1..1] @classCode="ROL" Role (CONF:3346-34741).
CONF #: 3335-34386 Removed	MAY contain zero or one [0..1] effectiveTime (CONF:3335-34386).	
CONF #: 3335-34387 Removed	The effectiveTime, if present, SHALL contain exactly one [1..1] low (CONF:3335-34387). Note: QDM Attribute: Author Time (The time the assessment is completed)	
CONF #: 3346-34127 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-34127).	SHALL contain exactly one [1..1] item (CONF:3346-34127).
CONF #: 3346-34254 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-34254).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-34254).
CONF #: 3346-34609 Modified	SHALL contain exactly one [1..1] @typeCode="REFR" Refers To (CONF:3335-34609).	SHALL contain exactly one [1..1] @typeCode="REFR" Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34609).

## 10.5 Care Goal (V2)

Care Goal (V2) (<urn:hl7ii:2.16.840.1.113883.10.20.28.4.7:2017-08-01>)

Change	Old	New
Status	Published	Published
Name	Care Goal	Care Goal (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.7:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.7:2017-08-01
Description	<p>This template represents the QDM data type: Care Goal.</p> <p>Care Goal represents a defined target or measure to be achieved in the process of patient care, that is, an expected outcome. A typical goal is expressed as a change in status expected at a defined future time. That change can be an observation represented by other QDM categories (diagnostic tests, laboratory tests, symptoms, etc.) scheduled for some time in the future and with a particular value. A goal can be found in the plan of care (care plan), the structure used by all stakeholders, including the patient, to define the management actions for the various conditions, problems, or issues identified for the target of the plan. This structure, through which the goals and care-planning actions and processes can be organized, planned, communicated, and checked for completion, is represented in the QDM categories as a Record Artifact. A time/date stamp is required. Specifically, a care plan is composed of the following elements:</p> <ul style="list-style-type: none"> <li>• Problem, which is managed by other QDM standard categories (condition/diagnosis/ problem) and their related data elements.</li> <li>• Procedure, which is managed by other standard categories and their related data elements. Note that procedures are a continuum of interventions ranging from actions patients can do for themselves to those that can be performed by others (caregivers or clinical professionals), including detailed complex surgical procedures</li> </ul>	<p>This template represents the QDM data type: Care Goal.</p> <p>Care Goal represents a defined target or measure to be achieved in the process of patient care, that is, an expected outcome. A typical goal is expressed as a change in status expected at a defined future time. That change can be an observation represented by other QDM categories (diagnostic tests, laboratory tests, symptoms, etc.) scheduled for some time in the future and with a particular value. A goal can be found in the plan of care (care plan), the structure used by all stakeholders, including the patient, to define the management actions for the various conditions, problems, or issues identified for the target of the plan. This structure, through which the goals and care-planning actions and processes can be organized, planned, communicated, and checked for completion, is represented in the QDM categories as a Record Artifact. A time/date stamp is required. Specifically, a care plan is composed of the following elements:</p> <ul style="list-style-type: none"> <li>• Problem, which is managed by other QDM standard categories (condition/diagnosis/ problem) and their related data elements.</li> <li>• Procedure, which is managed by other standard categories and their related data elements. Note that procedures are a continuum of interventions ranging from actions patients can do for themselves to those that can be performed by others (caregivers or clinical professionals), including detailed complex surgical procedures requiring highly trained physicians,</li> </ul>

<b>Change</b>	<b>Old</b>	<b>New</b>
	<p>requiring highly trained physicians, nurses, and state-of-the-art facilities.</p> <ul style="list-style-type: none"> <li>• Goal, which is what is expected to happen.</li> <li>• Outcome, which is what happened. An outcome can be shown by other QDM standard categories and their related data elements.</li> </ul>	<p>nurses, and state-of-the-art facilities.</p> <ul style="list-style-type: none"> <li>• Goal, which is what is expected to happen.</li> <li>• Outcome, which is what happened. An outcome can be shown by other QDM standard categories and their related data elements.</li> </ul>
CONF #: 3346-34742 Added		<p>MAY contain zero or one [0..1] outboundRelationship (CONF:3346-34742) such that it Note: QDM Attribute: Target Outcome</p>
CONF #: 3346-34743 Added		<p>SHALL contain exactly one [1..1] @typeCode="REFR" refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34743).</p>
CONF #: 3346-34744 Added		<p>SHALL contain exactly one [1..1] Related To (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01) (CONF:3346-34744).</p>
CONF #: 3346-34745 Added		<p>SHALL contain exactly one [1..1] @typeCode="REFR" refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34745).</p>
CONF #: 3346-34746 Added		<p>SHALL contain exactly one [1..1] Target Outcome (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.128:2017-08-01) (CONF:3346-34746).</p>
CONF #: 3346-34760 Added		<p>SHALL NOT contain [0..0] @actionNegationInd (CONF:3346-34760).</p>
CONF #: 3335-33033 Removed	<p>SHALL contain exactly one [1..1] observationCriteria (CONF:3335-33033).</p>	
CONF #: 3335-33036 Removed	<p>This observationCriteria SHALL contain exactly one [1..1] code (CONF:3335-33036).</p>	
CONF #: 3335-33039 Removed	<p>This observationCriteria SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:3335-33039).</p>	
CONF #: 3335-33041 Removed	<p>MAY contain zero or one [0..1]</p>	

<b>Change</b>	<b>Old</b>	<b>New</b>
	outboundRelationship (CONF:3335-33041) such that it Note: QDM Attribute: Target Outcome	
CONF #: 3335-33042 Removed	SHALL contain exactly one [1..1] observationCriteria (CONF:3335-33042).	
CONF #: 3335-33043 Removed	This observationCriteria SHALL contain exactly one [1..1] code (CONF:3335-33043).	
CONF #: 3335-33037 Removed	This code SHALL contain exactly one [1..1] @code="REL" Related (CodeSystem: HL7RoleLinkType urn:oid:2.16.840.1.113883.5.107) (CONF:3335-33037).	
CONF #: 3335-33038 Removed	This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.107" (CONF:3335-33038).	
CONF #: 3335-33040 Removed	This value SHOULD contain zero or one [0..1] @valueSet (CONF:3335-33040).	
CONF #: 3335-33034 Removed	This observationCriteria SHALL contain exactly one [1..1] @classCode="OBS" Observation (CONF:3335-33034).	
CONF #: 3335-33035 Removed	This observationCriteria SHALL contain exactly one [1..1] id (CONF:3335-33035).	
CONF #: 3335-33048 Removed	This code SHALL contain exactly one [1..1] @code="385676005" Outcome of action (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3335-33048).	
CONF #: 3335-33049 Removed	This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CONF:3335-33049).	
CONF #: 3335-33045 Removed	This observationCriteria SHALL contain exactly one [1..1] @classCode="OBS" (CONF:3335-33045).	
CONF #: 3335-33046 Removed	This observationCriteria SHALL contain exactly one [1..1] @moodCode="GOL" (CONF:3335-33046).	
CONF #: 3335-33047 Removed	This observationCriteria SHALL contain exactly one [1..1] id (CONF:3335-33047).	

<b>Change</b>	<b>Old</b>	<b>New</b>
CONF #: 3335-33050 Removed	This observationCriteria SHALL contain exactly one [1..1] value (CONF:3335-33050).	
CONF #: 3335-33044 Removed	SHALL contain exactly one [1..1] @typeCode="GOAL" (CONF:3335-33044).	
CONF #: 3346-28447 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-28447).	SHALL contain exactly one [1..1] item (CONF:3346-28447).
CONF #: 3346-33032 Modified	MAY contain zero or one [0..1] outboundRelationship (CONF:3335-33032) such that it Note: QDM Attribute: Related To	MAY contain zero or more [0..*] outboundRelationship (CONF:3346-33032) such that it Note: QDM Attribute: Related To
CONF #: 3346-33051 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33051).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33051).
CONF #: 3346-32489 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] low (CONF:3335-32489). Note: Start Time (when the goal is recorded, and therefore should be considered effective)	MAY contain zero or one [0..1] low (CONF:3346-32489). Note: Start dateTIme (when the goal is recorded, and therefore should be considered effective)
CONF #: 3346-32490 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] high (CONF:3335-32490). Note: Stop Time (when the target outcome is expected to be met)	MAY contain zero or one [0..1] high (CONF:3346-32490). Note: Stop dateTIme (when the target outcome is expected to be met)

## 10.6 Communication: From Patient to Provider (V2)

Communication: From Patient to Provider (V2)  
(urn:hl7ii:2.16.840.1.113883.10.20.28.4.8:2017-08-01)

Change	Old	New
Status	Published	Published
Name	Communication: From Patient to Provider	Communication: From Patient to Provider (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.8:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.8:2017-08-01
CONF #: 3346-34748 Added		MAY contain zero or more [0..*] outboundRelationship (CONF:3346-34748) such that it Note: QDM Attribute: Related To
CONF #: 3346-34750 Added		SHALL contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34750).
CONF #: 3346-34751 Added		SHALL contain exactly one [1..1] Related To (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01) (CONF:3346-34751).
CONF #: 3346-33638 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33638).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33638).
CONF #: 3346-31937 Modified	The effectiveTime, if present, SHALL contain exactly one [1..1] low (CONF:3335-31937). Note: QDM Attribute: Author Datetime (The time the communication occurs, or is sent)	SHALL contain exactly one [1..1] low (CONF:3346-31937). Note: QDM Attribute: Author dateTime (The time the communication occurs, or is sent)

## 10.7 Communication: From Provider to Patient (V2)

Communication: From Provider to Patient (V2)  
(urn:hl7ii:2.16.840.1.113883.10.20.28.4.9:2017-08-01)

Change	Old	New
Status	Published	Published
Name	Communication: From Provider to Patient	Communication: From Provider to Patient (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.9:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.9:2017-08-01
CONF #: 3346-34850 Added		MAY contain zero or more [0..*] outboundRelationship (CONF:3346-34850) such that it
CONF #: 3346-34851 Added		SHALL contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34851).
CONF #: 3346-34852 Added		SHALL contain exactly one [1..1] Related To (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01) (CONF:3346-34852). Note: QDM Attribute: Related To
CONF #: 3346-33639 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33639).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33639).
CONF #: 3346-32086 Modified	The effectiveTime, if present, SHALL contain exactly one [1..1] low (CONF:3335-32086). Note: QDM Attribute: Author Datetime (The time the communication occurs, or is sent)	SHALL contain exactly one [1..1] low (CONF:3346-32086). Note: QDM Attribute: Author dateTime (The time the communication occurs, or is sent)

## 10.8 Communication: From Provider to Provider (V2)

Communication: From Provider to Provider (V2)

(urn:hl7ii:2.16.840.1.113883.10.20.28.4.10:2017-08-01)

Change	Old	New
Status	Published	Published
Name	Communication: From Provider to Provider	Communication: From Provider to Provider (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.10:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.10:2017-08-01
CONF #: 3346-34853 Added		MAY contain zero or more [0..*] outboundRelationship (CONF:3346-34853) such that it Note: QDM Attribute: Related To
CONF #: 3346-34854 Added		SHALL contain exactly one [1..1] @typeCode="REFR" Refers to (CONF:3346-34854).
CONF #: 3346-34855 Added		SHALL contain exactly one [1..1] Related To (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.127:2017-08-01) (CONF:3346-34855).
CONF #: 3346-32131 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-32131).	SHALL contain exactly one [1..1] item (CONF:3346-32131).
CONF #: 3346-33640 Modified	This item SHALL contain exactly one [1..1] @extension="2016-12-01" (CONF:3335-33640).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33640).
CONF #: 3346-32138 Modified	The effectiveTime, if present, SHALL contain exactly one [1..1] low (CONF:3335-32138). Note: QDM Attribute: Author Time (The time the communication occurs, or is sent)	SHALL contain exactly one [1..1] low (CONF:3346-32138). Note: QDM Attribute: Author dateTime (The time the communication occurs, or is sent)

## 10.9 Diagnosis (V2)

[Diagnosis \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.28.4.110:2017-08-01\)](#)

Change	Old	New
Status	Published	Published
Name	Diagnosis	Diagnosis (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.110:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.110:2017-08-01
CONF #: 3346-33790 Modified	SHALL contain exactly one [1..1] Severity Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-05-01) (CONF:3335-33790).	SHALL contain exactly one [1..1] Severity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-08-01) (CONF:3346-33790).
CONF #: 3346-34321 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-34321).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-34321).

## 10.10 Diagnostic Study, Order (V2)

[Diagnostic Study, Order \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.28.4.22:2017-08-01\)](#)

Change	Old	New
Status	Published	Published
Name	Diagnostic Study, Order	Diagnostic Study, Order (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.22:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.22:2017-08-01
CONF #: 3335-30118 Removed	MAY contain zero or one [0..1] outboundRelationship (CONF:3335-30118) such that it Note: QDM Attribute: Radiation Dosage	
CONF #: 3335-33620 Removed	MAY contain zero or one [0..1] outboundRelationship (CONF:3335-33620) such that it Note: QDM Attribute: Radiation Duration	
CONF #: 3335-30119 Removed	SHALL contain exactly one [1..1] Radiation Dosage (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.106:2017-05-01) (CONF:3335-30119).	
CONF #: 3335-30909 Removed	SHALL contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-30909).	
CONF #: 3335-33621 Removed	SHALL contain exactly one [1..1] @typeCode="REFR" Refers To (CONF:3335-33621).	
CONF #: 3335-33622 Removed	SHALL contain exactly one [1..1] Radiation Dosage (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.106:2017-05-01) (CONF:3335-33622).	
CONF #: 3346-30109 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-30109).	SHALL contain exactly one [1..1] item (CONF:3346-30109).
CONF #: 3346-33643 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33643).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33643).

## 10.11 Diagnostic Study, Performed (V2)

Diagnostic Study, Performed (V2) (urn:hl7ii:2.16.840.1.113883.10.20.28.4.23:2017-08-01)

Change	Old	New
Status	Published	Published
Name	Diagnostic Study, Performed	Diagnostic Study, Performed (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.23:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.23:2017-08-01
Description	<p>This template represents the QDM data type: Diagnostic Study, Performed.</p> <p>Diagnostic Study represents any kind of medical test performed as a specific test or series of steps to aid in diagnosing or detecting disease (e.g., to establish a diagnosis, measure the progress or recovery from disease, confirm that a person is free from disease). The QDM defines diagnostic studies as those that are not performed in organizations that perform testing on samples of human blood, tissue, or other substance from the body. Diagnostic studies may make use of digital images and textual reports. Such studies include but are not limited to imaging studies, cardiology studies (electrocardiogram, treadmill stress testing), pulmonary-function testing, vascular laboratory testing, and others.</p> <p>The QDM defines diagnostic studies as those that are not performed in organizations that perform testing on samples of human blood, tissue, or other substance from the body. Diagnostic studies may make use of digital images and textual reports. Such studies include but are not limited to imaging studies, cardiology studies (electrocardiogram, treadmill stress testing), pulmonary-function testing, vascular laboratory testing, and others.</p> <p>Timing: The Relevant Period addresses: startTime – when the diagnostic study is initiated; stopTime – when the diagnostic</p>	<p>This template represents the QDM data type: Diagnostic Study, Performed.</p> <p>Diagnostic Study represents any kind of medical test performed as a specific test or series of steps to aid in diagnosing or detecting disease (e.g., to establish a diagnosis, measure the progress or recovery from disease, confirm that a person is free from disease). The QDM defines diagnostic studies as those that are not performed in organizations that perform testing on samples of human blood, tissue, or other substance from the body. Diagnostic studies may make use of digital images and textual reports. Such studies include but are not limited to imaging studies, cardiology studies (electrocardiogram, treadmill stress testing), pulmonary-function testing, vascular laboratory testing, and others.</p> <p>The QDM defines diagnostic studies as those that are not performed in organizations that perform testing on samples of human blood, tissue, or other substance from the body. Diagnostic studies may make use of digital images and textual reports. Such studies include but are not limited to imaging studies, cardiology studies (electrocardiogram, treadmill stress testing), pulmonary-function testing, vascular laboratory testing, and others.</p> <p>Timing: The Relevant Period addresses: startTime – when the diagnostic study is initiated; stopTime – when the diagnostic</p>

<b>Change</b>	<b>Old</b>	<b>New</b>
	<p>diagnostic study is initiated; stopTime – when the diagnostic study is completed.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Initiation of a treadmill stress test to the time the treadmill stress test has completed</li> <li>• Initiation of the ultrasound study until completion of the ultrasound study</li> </ul>	<p>study is completed.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Initiation of a treadmill stress test to the time the treadmill stress test has completed</li> <li>• Initiation of the ultrasound study until completion of the ultrasound study</li> </ul> <p>QDM Attributes: Result and Result dateTime are represented using the Result (V2) template</p>
CONF #: 3346-34763 Added		<p>MAY contain zero or one [0..1] outboundRelationship (CONF:3346-34763) such that it Note: QDM Attribute: Result, QDM Attribute: Result dateTime</p>
CONF #: 3346-34764 Added		<p>SHALL NOT contain [0..0] value (CONF:3346-34764). Note: Use the Result (V2) template to represent Result</p>
CONF #: 3346-34765 Added		<p>SHALL contain exactly one [1..1] @typeCode="VALUE" has value (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34765).</p>
CONF #: 3346-34766 Added		<p>SHALL contain exactly one [1..1] Result (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01) (CONF:3346-34766).</p>
CONF #: 3335-30793 Removed	<p>MAY contain zero or one [0..1] outboundRelationship (CONF:3335-30793) such that it Note: QDM Attribute: Radiation Dosage</p>	
CONF #: 3335-33604 Removed	<p>MAY contain zero or one [0..1] outboundRelationship (CONF:3335-33604) such that it Note: QDM Attribute: Radiation Duration</p>	
CONF #: 3335-30794 Removed	<p>SHALL contain exactly one [1..1] Radiation Dosage (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.106:2017-05-01) (CONF:3335-30794).</p>	
CONF #: 3335-30918 Removed	<p>SHALL contain exactly one [1..1] @typeCode="REFR" Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-30918).</p>	

<b>Change</b>	<b>Old</b>	<b>New</b>
CONF #: 3335-33606 Removed	SHALL contain exactly one [1..1] @typeCode="REFR" Refers To (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-33606).	
CONF #: 3335-33607 Removed	SHALL contain exactly one [1..1] Radiation Duration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.107:2017-05-01) (CONF:3335-33607).	
CONF #: 3335-33612 Removed	MAY contain zero or one [0..1] value (CONF:3335-33612). Note: QDM Attribute: Result	
CONF #: 3346-30779 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-30779).	SHALL contain exactly one [1..1] item (CONF:3346-30779).
CONF #: 3346-33605 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33605).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33605).
CONF #: 3346-30788 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] low (CONF:3335-30788). Note: Start Time (When the diagnostic study is initiated)	MAY contain zero or one [0..1] low (CONF:3346-30788). Note: startTime (When the diagnostic study is initiated)
CONF #: 3346-30789 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] high (CONF:3335-30789). Note: Stop Time (When the diagnostic study is completed)	MAY contain zero or one [0..1] high (CONF:3346-30789). Note: stopTime (When the diagnostic study is completed)
CONF #: 3346-33366 Modified	SHALL contain exactly one [1..1] Status (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-05-01) (CONF:3335-33366).	SHALL contain exactly one [1..1] Status (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-08-01) (CONF:3346-33366).

## 10.12 Diagnostic Study, Recommended (V2)

[Diagnostic Study, Recommended \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.28.4.24:2017-08-01\)](#)

Change	Old	New
Status	Published	Published
Name	Diagnostic Study, Recommended	Diagnostic Study, Recommended (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.24:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.24:2017-08-01
CONF #: 3335-30989 Removed	SHALL contain exactly one [1..1] Reason (identifier: urn:hl7ii:2.16.840.1.113883.10.20. 28.4.88:2017-05-01) (CONF:3335-30989).	
CONF #: 3335-30589 Removed	MAY contain zero or one [0..1] outboundRelationship (CONF:3335-30589) such that it Note: QDM Attribute: Radiation Dosage	
CONF #: 3335-30987 Removed	MAY contain zero or one [0..1] outboundRelationship (CONF:3335-30987) such that it	
CONF #: 3335-33626 Removed	MAY contain zero or one [0..1] outboundRelationship (CONF:3335-33626) such that it Note: QDM Attribute: Radiation Duration	
CONF #: 3335-30590 Removed	SHALL contain exactly one [1..1] Radiation Dosage (identifier: urn:hl7ii:2.16.840.1.113883.10.20. 28.4.106:2017-05-01) (CONF:3335-30590).	
CONF #: 3335-30914 Removed	SHALL contain exactly one [1..1] @typeCode="REFR" Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-30914).	
CONF #: 3335-30988 Removed	SHALL contain exactly one [1..1] @typeCode="RSON" Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-30988).	
CONF #: 3335-33627 Removed	SHALL contain exactly one [1..1] @typeCode="REFR" Refers To (CONF:3335-33627).	
CONF #: 3335-33628 Removed	SHALL contain exactly one [1..1] Radiation Duration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.	

<b>Change</b>	<b>Old</b>	<b>New</b>
	28.4.107:2017-05-01) (CONF:3335-33628).	
CONF #: 3346-30576 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-30576).	SHALL contain exactly one [1..1] item (CONF:3346-30576).
CONF #: 3346-34330 Modified	The participation, if present, SHALL contain exactly one [1..1] time (CONF:3335-34330).	SHALL contain exactly one [1..1] time (CONF:3346-34330).
CONF #: 3346-34333 Modified	The participation, if present, SHALL contain exactly one [1..1] role (CONF:3335-34333).	SHALL contain exactly one [1..1] role (CONF:3346-34333).
CONF #: 3346-33751 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33751).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33751).
CONF #: 3346-34331 Modified	The participation, if present, SHALL contain exactly one [1..1] @typeCode="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-34331).	SHALL contain exactly one [1..1] @typeCode="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34331).

## 10.13 Encounter, Active (RETIRED)

Encounter, Active (RETIRED) (urn:hl7ii:2.16.840.1.113883.10.20.28.4.26:2017-08-01)

<b>Change</b>	<b>Old</b>	<b>New</b>
Status	Published	Retired
Name	Encounter, Active	Encounter, Active (RETIRED)
Oid	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.26:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20. 28.4.26:2017-08-01

## 10.14 Encounter, Performed (V2)

[Encounter, Performed \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.28.4.5:2017-08-01\)](#)

Change	Old	New
Status	Published	Published
Name	Encounter, Performed	Encounter, Performed (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.5:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.5:2017-08-01
CONF #: 3346-31021 Modified	MAY contain zero or one [0..1] participation (CONF:3335-31021) such that it Note: QDM Attribute: Facility Location	MAY contain zero or more [0..*] participation (CONF:3346-31021) such that it Note: QDM Attribute: Facility Location
CONF #: 3346-31009 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-31009).	SHALL contain exactly one [1..1] item (CONF:3346-31009).
CONF #: 3346-34041 Modified	MAY contain zero or one [0..1] outboundRelationship (CONF:3335-34041) such that it Note: QDM Attribute: Diagnosis	MAY contain zero or more [0..*] outboundRelationship (CONF:3346-34041) such that it Note: QDM Attribute: Diagnosis
CONF #: 3346-31018 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] low (CONF:3335-31018). Note: Admission Datetime (The time the encounter began)	MAY contain zero or one [0..1] low (CONF:3346-31018). Note: startTime – The time the encounter began (admission time)
CONF #: 3346-31019 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] high (CONF:3335-31019). Note: Discharge Datetime (The time the encounter ended)	MAY contain zero or one [0..1] high (CONF:3346-31019). Note: stopTime – The time the encounter ended (discharge time)
CONF #: 3346-34375 Modified	SHALL contain exactly one [1..1] Diagnosis (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.110:2017-05-01) (CONF:3335-34375).	SHALL contain exactly one [1..1] Diagnosis (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.110:2017-08-01) (CONF:3346-34375).

## 10.15 Frequency (RETIRED)

[Frequency \(RETIRED\) \(urn:hl7ii:2.16.840.1.113883.10.20.28.4.99:2017-08-01\)](#)

Change	Old	New
Status	Published	Retired
Name	Frequency	Frequency (RETIRED)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.99:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.99:2017-08-01

## 10.16 Immunization, Administered (V2)

[Immunization, Administered \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.28.4.112:2017-08-01\)](#)

Change	Old	New
Status	Published	Published
Name	Immunization, Administered	Immunization, Administered (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.112:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.112:2017-08-01
CONF #: 3346-34801 Added		SHALL contain exactly one [1..1] Supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01) (CONF:3346-34801).
CONF #: 3335-34493 Removed	SHALL contain exactly one [1..1] Dosage (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.125:2017-05-01) (CONF:3335-34493).	
CONF #: 3346-33831 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-33831).	SHALL contain exactly one [1..1] item (CONF:3346-33831).
CONF #: 3346-34384 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-34384).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-34384).
CONF #: 3346-33838 Modified	This code SHALL contain exactly one [1..1] @code="416118004" Administration (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3335-33838).	This code SHALL contain exactly one [1..1] @code="416118004" Administration (CONF:3346-33838).
CONF #: 3346-33848 Modified	The effectiveTime, if present, SHALL contain exactly one [1..1] low (CONF:3335-33848). Note: QDM Attribute: Author dateTime (The time the immunization is administered, i.e., a single point in time))	SHALL contain exactly one [1..1] low (CONF:3346-33848). Note: QDM Attribute: Author dateTime (The time the immunization is administered, i.e., a single point in time))

## 10.17 Immunization, Order (V2)

[Immunization, Order \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.28.4.113:2017-08-01\)](#)

Change	Old	New
Status	Published	Published
Name	Immunization, Order	Immunization, Order (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.113:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.113:2017-08-01
CONF #: 3346-34802 Added		SHALL contain exactly one [1..1] Supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01) (CONF:3346-34802).
CONF #: 3335-34496 Removed	SHALL contain exactly one [1..1] Dosage (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.125:2017-05-01) (CONF:3335-34496).	
CONF #: 3346-34004 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-34004).	SHALL contain exactly one [1..1] item (CONF:3346-34004).
CONF #: 3346-34385 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-34385).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-34385).
CONF #: 3346-34018 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] low (CONF:3335-34018). Note: QDM Attribute: Active datetime	MAY contain zero or one [0..1] low (CONF:3346-34018). Note: QDM Attribute: Active datetime

## 10.18 Intervention, Performed (V2)

[Intervention, Performed \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.28.4.36:2017-08-01\)](#)

Change	Old	New
Status	Published	Published
Name	Intervention, Performed	Intervention, Performed (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.36:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.36:2017-08-01
CONF #: 3346-33384 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33384).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33384).
CONF #: 3346-33433 Modified	SHALL contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-33433).	SHALL contain exactly one [1..1] @typeCode="VALUE" Has value (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-33433).
CONF #: 3346-33434 Modified	SHALL contain exactly one [1..1] Result (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-05-01) (CONF:3335-33434).	SHALL contain exactly one [1..1] Result (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01) (CONF:3346-33434).
CONF #: 3346-33436 Modified	SHALL contain exactly one [1..1] Status (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-05-01) (CONF:3335-33436).	SHALL contain exactly one [1..1] Status (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-08-01) (CONF:3346-33436).

## 10.19 Laboratory Test, Performed (V2)

Laboratory Test, Performed (V2) (urn:hl7ii:2.16.840.1.113883.10.20.28.4.42:2017-08-01)

Change	Old	New
Status	Published	Published
Name	Laboratory Test, Performed	Laboratory Test, Performed (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.42:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.42:2017-08-01
Description	<p>This template represents the QDM data type: Laboratory Test, Performed.</p> <p>Laboratory Test represents a medical procedure that involves testing a sample of blood, urine, or other substance from the body. Tests can help determine a diagnosis, plan treatment, check to see if treatment is working, or monitor the disease over time. Laboratory tests may be performed on specimens not derived from patients (electrolytes or contents of water or consumed fluids, cultures of environment, pets, other animals).</p> <p>Timing: The Relevant Period addresses: startTime – When the laboratory test is initiated (i.e., the time the specimen collection begins); stopTime – when the laboratory test is completed (i.e., the time the specimen collection ends).</p>	<p>This template represents the QDM data type: Laboratory Test, Performed.</p> <p>Laboratory Test represents a medical procedure that involves testing a sample of blood, urine, or other substance from the body. Tests can help determine a diagnosis, plan treatment, check to see if treatment is working, or monitor the disease over time. Laboratory tests may be performed on specimens not derived from patients (electrolytes or contents of water or consumed fluids, cultures of environment, pets, other animals).</p> <p>Timing: The Relevant Period addresses: startTime – When the laboratory test is initiated (i.e., the time the specimen collection begins); stopTime – when the laboratory test is completed (i.e., the time the specimen collection ends).</p> <p>QDM Attributes: Result and Result dateTime are represented using the Result (V2) template.</p>
CONF #: 3346-34767 Added		MAY contain zero or one [0..1] outboundRelationship (CONF:3346-34767) such that it Note: QDM Attribute: Result, QDM Attribute: Result dateTime
CONF #: 3346-34768 Added		SHALL contain exactly one [1..1] @typeCode="VALUE" has value (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34768).
CONF #: 3346-34769 Added		SHALL contain exactly one [1..1] Result (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01) (CONF:3346-34769).

<b>Change</b>	<b>Old</b>	<b>New</b>
CONF #: 3346-30367 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-30367).	SHALL contain exactly one [1..1] item (CONF:3346-30367).
CONF #: 3346-34536 Modified	This participation SHALL contain exactly one [1..1] time (CONF:3335-34536).	SHALL contain exactly one [1..1] time (CONF:3346-34536).
CONF #: 3346-34537 Modified	This participation SHALL contain exactly one [1..1] role (CONF:3335-34537).	SHALL contain exactly one [1..1] role (CONF:3346-34537).
CONF #: 3346-33373 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33373).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33373).
CONF #: 3346-30375 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] low (CONF:3335-30375). Note: Start Datetime (When the laboratory test is initiated (i.e., the time the specimen collection begins))	MAY contain zero or one [0..1] low (CONF:3346-30375). Note: startTime (When the laboratory test is initiated (i.e., the time the specimen collection begins))
CONF #: 3346-30376 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] high (CONF:3335-30376). Note: Stop Datetime (When the laboratory test is completed (i.e., the time the specimen collection ends))	MAY contain zero or one [0..1] high (CONF:3346-30376). Note: stopTime (When the laboratory test is completed (i.e., the time the specimen collection ends))
CONF #: 3346-33375 Modified	SHALL contain exactly one [1..1] Status (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-05-01) (CONF:3335-33375).	SHALL contain exactly one [1..1] Status (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-08-01) (CONF:3346-33375).
CONF #: 3346-33611 Modified	MAY contain zero or one [0..1] value (CONF:3335-33611). Note: QDM Attribute: Result	SHALL NOT contain [0..0] value (CONF:3346-33611). Note: Use Result (V2) template for the QDM Attribute: Result
CONF #: 3346-34538 Modified	This participation SHALL contain exactly one [1..1] @typeCode="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-34538).	SHALL contain exactly one [1..1] @typeCode="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34538).

## 10.20Medication, Active (V2)

[Medication, Active \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.28.4.44:2017-08-01\)](#)

Change	Old	New
Status	Published	Published
Name	Medication, Active	Medication, Active (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.44:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.44:2017-08-01
CONF #: 3346-34803 Added		MAY contain zero or one [0..1] effectiveTime (CONF:3346-34803) such that it Note: QDM Attribute: Frequency
CONF #: 3346-34804 Added		MAY contain zero or one [0..1] period (CONF:3346-34804).
CONF #: 3346-34805 Added		SHALL contain exactly one [1..1] Supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01) (CONF:3346-34805).
CONF #: 3346-34809 Added		SHALL NOT contain [0..0] @actionNegationInd (CONF:3346-34809).
CONF #: 3335-34433 Removed	SHALL contain exactly one [1..1] Dosage (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.125:2017-05-01) (CONF:3335-34433).	
CONF #: 3335-33118 Removed	MAY contain zero or one [0..1] outboundRelationship (CONF:3335-33118) such that it Note: QDM Attribute: Frequency	
CONF #: 3335-33119 Removed	SHALL contain exactly one [1..1] @typeCode="REFR" Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-33119).	
CONF #: 3335-33120 Removed	SHALL contain exactly one [1..1] Frequency (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.99:2017-05-01) (CONF:3335-33120).	
CONF #: 3346-31954 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-31954).	SHALL contain exactly one [1..1] item (CONF:3346-31954).
CONF #: 3346-33376 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33376).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33376).
CONF #: 3346-31961 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] low	MAY contain zero or one [0..1] low (CONF:3346-31961).

<b>Change</b>	<b>Old</b>	<b>New</b>
	(CONF:3335-31961). Note: Start Datetime (When the medication is first known to be used (generally the time of entry on the medication list))	Note: startTime - when a single medication administration event starts (e.g., the initiation of an intravenous infusion, or administering a pill or IM injection to a patient)
CONF #: 3346-31962 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] high (CONF:3335-31962). Note: Stop Datetime (When the medication is discontinued (generally the time discontinuation is recorded on the medication list))	MAY contain zero or one [0..1] high (CONF:3346-31962). Note: stopTime - when a single medication administration event ends (e.g., the end time of the intravenous infusion, or the administration of a pill or IM injection is completed - for pills and IM injections, the start and stop times are the same)

## 10.21 Medication, Administered (V2)

[Medication, Administered \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.28.4.45:2017-08-01\)](#)

Change	Old	New
Status	Published	Published
Name	Medication, Administered	Medication, Administered (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.45:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.45:2017-08-01
CONF #: 3346-34806 Added		MAY contain zero or one [0..1] effectiveTime (CONF:3346-34806) such that it Note: QDM Attribute: Frequency
CONF #: 3346-34807 Added		MAY contain zero or one [0..1] period (CONF:3346-34807).
CONF #: 3346-34808 Added		SHALL contain exactly one [1..1] Supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01) (CONF:3346-34808).
CONF #: 3335-34436 Removed	SHALL contain exactly one [1..1] Dosage (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.125:2017-05-01) (CONF:3335-34436).	
CONF #: 3335-32508 Removed	MAY contain zero or one [0..1] outboundRelationship (CONF:3335-32508) such that it Note: QDM Attribute: Frequency	
CONF #: 3335-32510 Removed	SHALL contain exactly one [1..1] Frequency (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.99:2017-05-01) (CONF:3335-32510).	
CONF #: 3335-32509 Removed	SHALL contain exactly one [1..1] @typeCode="REFR" Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-32509).	
CONF #: 3346-32051 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-32051).	SHALL contain exactly one [1..1] item (CONF:3346-32051).
CONF #: 3346-32498 Modified	This participation SHALL contain exactly one [1..1] role (CONF:3335-32498).	SHALL contain exactly one [1..1] role (CONF:3346-32498).
CONF #: 3346-34543 Modified	This participation SHALL contain exactly one [1..1] time (CONF:3335-34543).	SHALL contain exactly one [1..1] time (CONF:3346-34543).
CONF #: 3346-34544 Modified	This participation SHALL contain	SHALL contain exactly one [1..1]

<b>Change</b>	<b>Old</b>	<b>New</b>
	exactly one [1..1] role (CONF:3335-34544).	role (CONF:3346-34544).
CONF #: 3346-33386 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33386).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33386).
CONF #: 3346-32056 Modified	This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CONF:3335-32056).	This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CONF:3346-32056).
CONF #: 3346-32061 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] low (CONF:3335-32061). Note: Start Datetime (When a single medication administration event starts (e.g., the initiation of an intravenous infusion, or administering a pill or IM injection to a patient))	MAY contain zero or one [0..1] low (CONF:3346-32061). Note: startTime - when a single medication administration event starts (e.g., the initiation of an intravenous infusion, or administering a pill or IM injection to a patient)
CONF #: 3346-32062 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] high (CONF:3335-32062). Note: Stop Datetime (When a single medication administration event ends (e.g., the end time of the intravenous infusion, or the administration of a pill or IM injection is completed - for pills and IM injections, the start and stop times are the same))	MAY contain zero or one [0..1] high (CONF:3346-32062). Note: stopTime - when a single medication administration event ends (e.g., the end time of the intravenous infusion, or the administration of a pill or IM injection is completed - for pills and IM injections, the start and stop times are the same)
CONF #: 3346-32503 Modified	This participation SHALL contain exactly one [1..1] @typeCode="CSM" Consumable (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-32503).	SHALL contain exactly one [1..1] @typeCode="CSM" Consumable (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-32503).
CONF #: 3346-34545 Modified	This participation SHALL contain exactly one [1..1] @typeCode="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-34545).	SHALL contain exactly one [1..1] @typeCode="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34545).

## 10.22 Medication, Discharge (V2)

Medication, Discharge (V2) (urn:hl7ii:2.16.840.1.113883.10.20.28.4.48:2017-08-01)

Change	Old	New
Status	Published	Published
Name	Medication, Discharge	Medication, Discharge (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.48:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.48:2017-08-01
CONF #: 3346-34810 Added		MAY contain zero or one [0..1] effectiveTime (CONF:3346-34810) such that it Note: QDM Attribute: Frequency
CONF #: 3346-34811 Added		MAY contain zero or one [0..1] period (CONF:3346-34811).
CONF #: 3346-34812 Added		SHALL contain exactly one [1..1] Supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01) (CONF:3346-34812).
CONF #: 3335-34447 Removed	SHALL contain exactly one [1..1] Dosage (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.125:2017-05-01) (CONF:3335-34447).	
CONF #: 3335-32548 Removed	MAY contain zero or one [0..1] outboundRelationship (CONF:3335-32548) such that it Note: QDM Attribute: Frequency	
CONF #: 3335-32550 Removed	SHALL contain exactly one [1..1] Frequency (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.99:2017-05-01) (CONF:3335-32550).	
CONF #: 3335-32549 Removed	SHALL contain exactly one [1..1] @typeCode="REFR" Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-32549).	
CONF #: 3346-32524 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-32524).	SHALL contain exactly one [1..1] item (CONF:3346-32524).
CONF #: 3346-33439 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33439).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33439).

## 10.23Medication, Dispensed (V2)

[Medication, Dispensed \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.28.4.49:2017-08-01\)](#)

Change	Old	New
Status	Published	Published
Name	Medication, Dispensed	Medication, Dispensed (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.49:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.49:2017-08-01
Description	<p>This template represents the QDM data type: Medication, Dispensed.</p> <p>Medication dispensed is to give medications to a patient or patient proxy based on a prescription. Typically, in the ambulatory setting, medications are primarily taken directly by patients and not directly observed. Hence, medications dispensed are the closest health provider documentation of medication compliance.</p> <p>Timing: The time the medication dispensing event occurs; the author dateTime.</p> <p>Dosage: Details of how medication is/is to be taken, i.e., the quantity (mg, cc, tablets) to be taken at a single administration.</p> <p>Supply: The quantity (amount) of therapeutic agent that was provided to a patient (i.e., number of doses, number of tablets or pills, volume of medication). Dispensed to a patient to be taken at a later time.</p>	<p>This template represents the QDM data type: Medication, Dispensed. Medication dispensed is to give medications to a patient or patient proxy based on a prescription. Typically, in the ambulatory setting, medications are primarily taken directly by patients and not directly observed. Hence, medications dispensed are the closest health provider documentation of medication compliance.</p> <p>Timing: The time the medication dispensing event occurs; the author dateTime.</p> <p>Timing: The Relevant Period addresses:</p> <p>startTime = when the first administration of the medication is expected. If not specified, the startTime defaults to the Author dateTime (the time the medication dispensing event occurs).</p> <p>stopTime = when the medication supply provided by the dispensing event is expected to be completed.</p> <p>Dosage: Details of how medication is/is to be taken, i.e., the quantity (mg, cc, tablets) to be taken at a single administration.</p> <p>Supply: The quantity (amount) of therapeutic agent that was provided to a patient (i.e., number of doses, number of tablets or pills, volume of medication). Dispensed to a patient to be taken at a later time.</p>
CONF #: 3346-34856 Added		MAY contain zero or one [0..1] effectiveTime (CONF:3346-34856) such that it Note: QDM Attribute: Frequency
CONF #: 3346-34857 Added		MAY contain zero or one [0..1] period (CONF:3346-34857).

<b>Change</b>	<b>Old</b>	<b>New</b>
CONF #: 3346-34858 Added		MAY contain zero or one [0..1] quantity (CONF:3346-34858). Note: QDM Attribute: Supply
CONF #: 3346-34860 Added		MAY contain zero or one [0..1] high (CONF:3346-34860). Note: stopTime = when the medication supply provided by the dispensing event is expected to be completed
CONF #: 3346-34861 Added		SHALL contain exactly one [1..1] participation (CONF:3346-34861) such that it
CONF #: 3346-34862 Added		SHALL contain exactly one [1..1] time (CONF:3346-34862).
CONF #: 3346-34863 Added		SHALL contain exactly one [1..1] role (CONF:3346-34863).
CONF #: 3346-34864 Added		SHALL contain exactly one [1..1] @typeCode="AUT" Author (CONF:3346-34864).
CONF #: 3346-34865 Added		This time SHALL contain exactly one [1..1] low (CONF:3346-34865). Note: QDM Attribute: Author dateTime
CONF #: 3346-34866 Added		This role SHALL contain exactly one [1..1] @classCode="ROL" Role (CONF:3346-34866).
CONF #: 3346-34867 Added		This role MAY contain zero or one [0..1] id (CONF:3346-34867).
CONF #: 3335-32586 Removed	MAY contain zero or one [0..1] outboundRelationship (CONF:3335-32586) such that it	
CONF #: 3335-32587 Removed	SHALL contain exactly one [1..1] @typeCode="REFR" Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-32587).	
CONF #: 3335-32588 Removed	SHALL contain exactly one [1..1] Frequency (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.99:2017-05-01) (CONF:3335-32588). Note: QDM Attribute: Frequency	
CONF #: 3346-32564 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-32564).	SHALL contain exactly one [1..1] item (CONF:3346-32564).
CONF #: 3346-32568 Modified	SHALL contain exactly one [1..1] statusCode (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14)	SHALL contain exactly one [1..1] statusCode (CONF:3346-32568).

<b>Change</b>	<b>Old</b>	<b>New</b>
	(CONF:3335-32568).	
CONF #: 3346-33752 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33752).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33752).
CONF #: 3346-32570 Modified	The effectiveTime, if present, SHALL contain exactly one [1..1] low (CONF:3335-32570). Note: QDM Attribute: Author Time (The time the medication dispensing event occurs)	SHALL contain exactly one [1..1] low (CONF:3346-32570). Note: startTime = when the first administration of the medication is expected

## 10.24Medication, Order (V2)

[Medication, Order \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.28.4.51:2017-08-01\)](#)

<b>Change</b>	<b>Old</b>	<b>New</b>
Status	Published	Published
Name	Medication, Order	Medication, Order (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.51:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.51:2017-08-01
Description	<p>This template represents the QDM data type: Medication, Order. This represents an order for a medication, intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease and that is not dependent on being metabolized to achieve any of its primary intended purposes.</p> <p>Timing: The time the order is signed; author dateTime.</p> <p>Dosage: Details of how medication is/is to be taken, i.e., the quantity (mg, cc, tablets) to be taken at a single administration.</p> <p>Supply: The quantity (amount) of therapeutic agent that was provided to a patient (i.e., number of doses, number of tablets or pills, volume of medication). Dispensed to a patient to be taken at a later time.</p>	<p>This template represents the QDM data type: Medication, Order. This represents an order for a medication, intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease and that is not dependent on being metabolized to achieve any of its primary intended purposes.</p> <p>Timing: The time the order is signed; author dateTime.</p> <p>Timing: The Relevant Period addresses:</p> <p>startTime = when the first administration of the medication is expected. The first administration may be expected at the time of the order or at a specified future date (i.e., the active time for the order); such information should be identified in the medication order. If the startTime is not specified in the order, the startTime defaults to the Author dateTime (the time the order is signed).</p> <p>stopTime = when the medication supply provided by the medication order is expected to be completed, including all fulfillments covered by the number of refills.</p> <p>Dosage: Details of how medication is/is to be taken, i.e., the quantity</p>

<b>Change</b>	<b>Old</b>	<b>New</b>
		(mg, cc, tablets) to be taken at a single administration. Supply: The quantity (amount) of therapeutic agent that was provided to a patient (i.e., number of doses, number of tablets or pills, volume of medication). Dispensed to a patient to be taken at a later time.
CONF #: 3346-34816 Added		MAY contain zero or one [0..1] effectiveTime (CONF:3346-34816) such that it Note: QDM Attribute: Frequency
CONF #: 3346-34817 Added		MAY contain zero or one [0..1] period (CONF:3346-34817).
CONF #: 3346-34818 Added		SHALL contain exactly one [1..1] Supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01) (CONF:3346-34818).
CONF #: 3346-34859 Added		MAY contain zero or one [0..1] high (CONF:3346-34859). Note: stopTime = when the medication supply provided by the medication order is expected to be completed, including all fulfillments covered by the number of refills
CONF #: 3335-34453 Removed	SHALL contain exactly one [1..1] Dosage (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.125:2017-05-01) (CONF:3335-34453).	
CONF #: 3335-31061 Removed	MAY contain zero or one [0..1] outboundRelationship (CONF:3335-31061) such that it Note: QDM Attribute: Frequency	
CONF #: 3335-31063 Removed	SHALL contain exactly one [1..1] Frequency (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.99:2017-05-01) (CONF:3335-31063).	
CONF #: 3335-34117 Removed	SHALL contain exactly one [1..1] @typeCode="REFR" Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-34117).	
CONF #: 3346-29051 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-29051).	SHALL contain exactly one [1..1] item (CONF:3346-29051).

<b>Change</b>	<b>Old</b>	<b>New</b>
CONF #: 3346-33443 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33443).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33443).
CONF #: 3346-31035 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] low (CONF:3335-31035). Note: QDM Attribute: Active Datetime	MAY contain zero or one [0..1] low (CONF:3346-31035). Note: startTime = when the first administration of the medication is expected

## 10.25 Patient Characteristic (V2)

Patient Characteristic (V2) (<urn:hl7ii:2.16.840.1.113883.10.20.28.4.53:2017-08-01>)

<b>Change</b>	<b>Old</b>	<b>New</b>
Status	Published	Published
Name	Patient Characteristic	Patient Characteristic (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.53:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.53:2017-08-01
CONF #: 3346-31606 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-31606).	SHALL contain exactly one [1..1] item (CONF:3346-31606).
CONF #: 3346-34456 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-34456).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-34456).
CONF #: 3346-31616 Modified	The effectiveTime, if present, SHALL contain exactly one [1..1] low (CONF:3335-31616). Note: QDM Attribute: Author Time (The time the characteristic is authored)	SHALL contain exactly one [1..1] low (CONF:3346-31616). Note: QDM Attribute: Author dateTime (The time the characteristic is authored)
CONF #: 3346-31604 Modified	MAY contain zero or one [0..1] @actionNegationInd (CONF:3335-31604). Note: QDM Attribute: Negation Rationale	SHALL NOT contain [0..0] @actionNegationInd (CONF:3346-31604).

## **10.26Physical Exam, Performed (V2)**

Physical Exam, Performed (V2) (urn:hl7ii:2.16.840.1.113883.10.20.28.4.62:2017-08-01)

<b>Change</b>	<b>Old</b>	<b>New</b>
Status	Published	Published
Name	Physical Exam, Performed	Physical Exam, Performed (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.62:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.62:2017-08-01
CONF #: 3346-33615 Modified	SHALL contain exactly one [1..1] @typeCode="REFR" Refers To (CONF:3335-33615).	SHALL contain exactly one [1..1] @typeCode="VALUE" Has value (CONF:3346-33615).
CONF #: 3346-33616 Modified	SHALL contain exactly one [1..1] Result (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-05-01) (CONF:3335-33616).	SHALL contain exactly one [1..1] Result (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01) (CONF:3346-33616).

## 10.27 Procedure, Order (V2)

Procedure, Order (V2) (urn:hl7ii:2.16.840.1.113883.10.20.28.4.66:2017-08-01)

Change	Old	New
Status	Published	Published
Name	Procedure, Order	Procedure, Order (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.66:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.66:2017-08-01
CONF #: 3335-33425 Removed	MAY contain zero or one [0..1] outboundRelationship (CONF:3335-33425) such that it Note: QDM Attribute: Radiation Duration	
CONF #: 3335-33426 Removed	SHALL contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-33426).	
CONF #: 3335-33427 Removed	SHALL contain exactly one [1..1] Radiation Duration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.107:2017-05-01) (CONF:3335-33427).	
CONF #: 3346-31123 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-31123).	SHALL contain exactly one [1..1] item (CONF:3346-31123).
CONF #: 3346-33422 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33422).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33422).

## 10.28Procedure, Performed (V2)

[Procedure, Performed \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.28.4.67:2017-08-01\)](#)

Change	Old	New
Status	Published	Published
Name	Procedure, Performed	Procedure, Performed (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.67:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.67:2017-08-01
CONF #: 3335-33405 Removed	MAY contain zero or one [0..1] outboundRelationship (CONF:3335-33405) such that it Note: QDM Attribute: Radiation Dosage	
CONF #: 3335-33608 Removed	MAY contain zero or one [0..1] outboundRelationship (CONF:3335-33608) such that it Note: QDM Attribute: Radiation Duration	
CONF #: 3335-33406 Removed	SHALL contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-33406).	
CONF #: 3335-33407 Removed	SHALL contain exactly one [1..1] Radiation Dosage (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.106:2017-05-01) (CONF:3335-33407).	
CONF #: 3335-33609 Removed	SHALL contain exactly one [1..1] @typeCode="REFR" Refers To (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-33609).	
CONF #: 3335-33610 Removed	SHALL contain exactly one [1..1] Radiation Duration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.107:2017-05-01) (CONF:3335-33610).	
CONF #: 3346-31339 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-31339).	SHALL contain exactly one [1..1] item (CONF:3346-31339).
CONF #: 3346-34557 Modified	This participation SHALL contain exactly one [1..1] time (CONF:3335-34557).	SHALL contain exactly one [1..1] time (CONF:3346-34557).
CONF #: 3346-34558 Modified	This participation SHALL contain exactly one [1..1] role (CONF:3335-34558).	SHALL contain exactly one [1..1] role (CONF:3346-34558).
CONF #: 3346-33398 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-	This item SHALL contain exactly one [1..1] @extension="2017-08-

<b>Change</b>	<b>Old</b>	<b>New</b>
	01" (CONF:3335-33398).	01" (CONF:3346-33398).
CONF #: 3346-31347 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] low (CONF:3335-31347). Note: Start Datetime (The time the procedure begins)	MAY contain zero or one [0..1] low (CONF:3346-31347). Note: startTime (The time the procedure begins)
CONF #: 3346-31348 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] high (CONF:3335-31348). Note: Stop Datetime (The time the procedure is completed)	MAY contain zero or one [0..1] high (CONF:3346-31348). Note: stopTime (The time the procedure is completed)
CONF #: 3346-31365 Modified	SHALL contain exactly one [1..1] Result (identifier: urn:hl7ii:2.16.840.1.113883.10.20. 28.4.101:2017-05-01) (CONF:3335-31365).	SHALL contain exactly one [1..1] Result (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20. 28.4.101:2017-08-01) (CONF:3346-31365).
CONF #: 3346-31368 Modified	SHALL contain exactly one [1..1] @typeCode="REFR" Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-31368).	SHALL contain exactly one [1..1] @typeCode="VALUE" Has value (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-31368).
CONF #: 3346-33410 Modified	SHALL contain exactly one [1..1] Status (identifier: urn:hl7ii:2.16.840.1.113883.10.20. 28.4.94:2017-05-01) (CONF:3335- 33410).	SHALL contain exactly one [1..1] Status (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20. 28.4.94:2017-08-01) (CONF:3346- 33410).
CONF #: 3346-34559 Modified	This participation SHALL contain exactly one [1..1] @typeCode="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3335-34559).	SHALL contain exactly one [1..1] @typeCode="AUT" Author (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3346-34559).

## 10.29 Provider Characteristic (V2)

Provider Characteristic (V2) (urn:hl7ii:2.16.840.1.113883.10.20.28.4.71:2017-08-01)

Change	Old	New
Status	Published	Published
Name	Provider Characteristic	Provider Characteristic (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.71:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.71:2017-08-01
CONF #: 3346-34837 Added		This role SHALL contain exactly one [1..1] playingEntity (CONF:3346-34837).
CONF #: 3346-34838 Added		This playingEntity SHALL contain exactly one [1..1] @classCode="PSN" Person (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:3346-34838).
CONF #: 3346-34839 Added		This playingEntity SHALL contain exactly one [1..1] @determinerCode="KIND" (CodeSystem: EntityDeterminer urn:oid:2.16.840.1.113883.5.30) (CONF:3346-34839).
CONF #: 3346-34840 Added		This playingEntity SHALL contain exactly one [1..1] code (CONF:3346-34840). Note: QDM Attribute: Code
CONF #: 3346-34841 Added		This code SHOULD contain zero or one [0..1] @valueSet (CONF:3346-34841).
CONF #: 3346-34842 Added		SHALL contain exactly one [1..1] @typeCode="DRIV" Is derived from (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3346-34842).
CONF #: 3335-31755 Removed	This role SHALL contain exactly one [1..1] playingDevice (CONF:3335-31755).	
CONF #: 3335-31758 Removed	This playingDevice SHALL contain exactly one [1..1] code (CONF:3335-31758).	
CONF #: 3335-31759 Removed	This code SHOULD contain zero or one [0..1] @valueSet (CONF:3335-31759).	
CONF #: 3335-31756 Removed	This playingDevice SHALL contain exactly one [1..1] @classCode="DEV" Device (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90)	

<b>Change</b>	<b>Old</b>	<b>New</b>
	(CONF:3335-31756).	
CONF #: 3335-31757 Removed	This playingDevice SHALL contain exactly one [1..1] @determinerCode="KIND" Kind (CONF:3335-31757).	
CONF #: 3346-34121 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-34121).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-34121).

## **10.30 Radiation Dosage (RETIRED)**

Radiation Dosage (RETIRED) (urn:hl7ii:2.16.840.1.113883.10.20.28.4.106:2017-08-01)

<b>Change</b>	<b>Old</b>	<b>New</b>
Status	Published	Retired
Name	Radiation Dosage	Radiation Dosage (RETIRED)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.106:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.106:2017-08-01

## **10.31 Radiation Duration (RETIRED)**

Radiation Duration (RETIRED) (urn:hl7ii:2.16.840.1.113883.10.20.28.4.107:2017-08-01)

<b>Change</b>	<b>Old</b>	<b>New</b>
Status	Published	Retired
Name	Radiation Duration	Radiation Duration (RETIRED)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.107:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.107:2017-08-01

## 10.32 Result (V2)

[Result \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01\)](#)

Change	Old	New
Status	Published	Published
Name	Result	Result (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.101:2017-08-01
Description	<p>This template represents the QDM attribute: Result.</p> <p>This represents the final consequences or data collected from a sequence of actions or events, or observable entities including, but not limited to procedures, laboratory tests, physical examinations, or diagnostic tests. This template is used to represent result in all actCriteria except observationCriteria, where result is represented directly using observationCriteria/value.</p>	<p>This template represents the QDM attribute: Result.</p> <p>This represents the final consequences or data collected from a sequence of actions or events, or observable entities including, but not limited to procedures, laboratory tests, physical examinations, or diagnostic tests.</p> <p>This template is used to represent result in all actCriteria except observationCriteria, where result is represented directly using observationCriteria/value.</p> <p>However, even though "Diagnostic Study, Performed" and "Laboratory Test, Performed" are observationCriteria, because these two data types also contain Result dateTime attribute, this Result template is also used to represent result in lieu of observation/value.</p>
CONF #: 3346-34761 Added		MAY contain zero or one [0..1] effectiveTime (CONF:3346-34761). Note: QDM Attribute: Result dateTime (The time the result report is generated and saved in the database)
CONF #: 3346-34762 Added		The effectiveTime, if present, SHALL contain exactly one [1..1] low (CONF:3346-34762).
CONF #: 3335-32191 Removed	SHALL contain exactly one [1..1] id (CONF:3335-32191).	
CONF #: 3346-34653 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-34653).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-34653).

## 10.33 Severity Observation (V2)

Severity Observation (V2) (<urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-08-01>)

Change	Old	New
Status	Published	Published
Name	Severity Observation	Severity Observation (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-08-01
CONF #: 3346-34843 Added		This value SHOULD contain zero or one [0..1] @valueSet (CONF:3346-34843).
CONF #: 3335-30134 Removed	SHALL contain exactly one [1..1] id (CONF:3335-30134).	
CONF #: 3346-30132 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-30132).	SHALL contain exactly one [1..1] item (CONF:3346-30132).
CONF #: 3346-33691 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33691).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33691).
CONF #: 3346-30138 Modified	SHALL contain exactly one [1..1] value (CONF:3335-30138).	SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:3346-30138).

## 10.34 Status (V2)

Status (V2) (<urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-08-01>)

Change	Old	New
Status	Published	Published
Name	Status	Status (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.94:2017-08-01
CONF #: 3346-34844 Added		This value SHOULD contain zero or one [0..1] @valueSet (CONF:3346-34844).
CONF #: 3335-30157 Removed	SHALL contain exactly one [1..1] id (CONF:3335-30157).	
CONF #: 3346-30155 Modified	This templateId SHALL contain at least one [1..*] item (CONF:3335-30155).	SHALL contain exactly one [1..1] item (CONF:3346-30155).
CONF #: 3346-30156 Modified	Such items SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.28.4.94" (CONF:3335-30156).	This item SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.28.4.94" (CONF:3346-30156).
CONF #: 3346-33690 Modified	Such items SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33690).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33690).
CONF #: 3346-30159 Modified	This code SHALL contain exactly one [1..1] @code="33999-4" Status (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3335-30159).	This code SHALL contain exactly one [1..1] @code="33999-4" Status (CONF:3346-30159).
CONF #: 3346-30162 Modified	SHALL contain exactly one [1..1] value (CONF:3335-30162).	SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:3346-30162).

## 10.35 Substance, Administered (V2)

Substance, Administered (V2) (<urn:hl7ii:2.16.840.1.113883.10.20.28.4.73:2017-08-01>)

Change	Old	New
Status	Published	Published
Name	Substance, Administered	Substance, Administered (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.73:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.73:2017-08-01
CONF #: 3346-34845 Added		MAY contain zero or one [0..1] effectiveTime (CONF:3346-34845) such that it Note: QDM Attribute: Frequency
CONF #: 3346-34846 Added		MAY contain zero or one [0..1] period (CONF:3346-34846).
CONF #: 3346-34847 Added		SHALL contain exactly one [1..1] Supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01) (CONF:3346-34847).
CONF #: 3335-34484 Removed	SHALL contain exactly one [1..1] Dosage (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.125:2017-05-01) (CONF:3335-34484).	
CONF #: 3335-32915 Removed	MAY contain zero or one [0..1] outboundRelationship (CONF:3335-32915) such that it Note: QDM Attribute: Frequency	
CONF #: 3335-32916 Removed	SHALL contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-32916).	
CONF #: 3335-32917 Removed	SHALL contain exactly one [1..1] Frequency (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.99:2017-05-01) (CONF:3335-32917).	
CONF #: 3346-32882 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-32882).	SHALL contain exactly one [1..1] item (CONF:3346-32882).
CONF #: 3346-33393 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33393).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33393).
CONF #: 3346-32891 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] low (CONF:3335-32891). Note: Start Datetime (When a single substance administration event starts (e.g., the initiation of an intravenous infusion, or	MAY contain zero or one [0..1] low (CONF:3346-32891). Note: startTime (When a single substance administration event starts (e.g., the initiation of an intravenous infusion, or

<b>Change</b>	<b>Old</b>	<b>New</b>
	an intravenous infusion, or administering a the substance orally or topically to a patient))	administering a the substance orally or topically to a patient))
CONF #: 3346-32892 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] high (CONF:3335-32892). Note: Stop Datetime (When a single substance administration event ends (e.g., the end time of the intravenous infusion, or the administration of a substance orally or topically is completed - for oral or topical administration, the start and stop times are the same)	MAY contain zero or one [0..1] high (CONF:3346-32892). Note: stopTime (When a single substance administration event ends (e.g., the end time of the intravenous infusion, or the administration of a substance orally or topically is completed - for oral or topical administration, the start and stop times are the same)

## 10.36 Substance, Order (V2)

[Substance, Order \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.28.4.77:2017-08-01\)](#)

Change	Old	New
Status	Published	Published
Name	Substance, Order	Substance, Order (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.77:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.77:2017-08-01
CONF #: 3346-34848 Added		SHALL contain exactly one [1..1] Supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01) (CONF:3346-34848).
CONF #: 3335-34487 Removed	SHALL contain exactly one [1..1] Dosage (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.125:2017-05-01) (CONF:3335-34487).	
CONF #: 3335-32660 Removed	MAY contain zero or one [0..1] outboundRelationship (CONF:3335-32660) such that it Note: QDM Attribute: Frequency	
CONF #: 3335-32661 Removed	SHALL contain exactly one [1..1] @typeCode="REFR" Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-32661).	
CONF #: 3335-32662 Removed	SHALL contain exactly one [1..1] Frequency (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.99:2017-05-01) (CONF:3335-32662).	
CONF #: 3346-32627 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-32627).	SHALL contain exactly one [1..1] item (CONF:3346-32627).
CONF #: 3346-33652 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33652).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33652).

## 10.37 Substance, Recommended (V2)

Substance, Recommended (V2) (<urn:hl7ii:2.16.840.1.113883.10.20.28.4.78:2017-08-01>)

Change	Old	New
Status	Published	Published
Name	Substance, Recommended	Substance, Recommended (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.78:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.78:2017-08-01
CONF #: 3346-34849 Added		SHALL contain exactly one [1..1] Supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.129:2017-08-01) (CONF:3346-34849).
CONF #: 3335-34490 Removed	SHALL contain exactly one [1..1] Dosage (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.125:2017-05-01) (CONF:3335-34490).	
CONF #: 3335-34133 Removed	MAY contain zero or one [0..1] outboundRelationship (CONF:3335-34133) such that it Note: QDM Attribute: Frequency	
CONF #: 3335-34472 Removed	SHALL contain exactly one [1..1] @typeCode="REFR" Refers To (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-34472).	
CONF #: 3335-34135 Removed	SHALL contain exactly one [1..1] Frequency (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.99:2017-05-01) (CONF:3335-34135).	
CONF #: 3346-32125 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-32125).	SHALL contain exactly one [1..1] item (CONF:3346-32125).
CONF #: 3346-33693 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33693).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33693).

## 10.38 Symptom (V2)

[Symptom \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.28.4.116:2017-08-01\)](#)

Change	Old	New
Status	Published	Published
Name	Symptom	Symptom (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.4.116:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.4.116:2017-08-01
CONF #: 3346-34080 Modified	This templateId SHALL contain exactly one [1..1] item (CONF:3335-34080).	SHALL contain exactly one [1..1] item (CONF:3346-34080).
CONF #: 3346-34091 Modified	SHALL contain exactly one [1..1] Severity Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-05-01) (CONF:3335-34091).	SHALL contain exactly one [1..1] Severity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.93:2017-08-01) (CONF:3346-34091).
CONF #: 3346-34480 Modified	This item SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-34480).	This item SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-34480).
CONF #: 3346-34098 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] low (CONF:3335-34098). Note: Onset Datetime	MAY contain zero or one [0..1] low (CONF:3346-34098). Note: Onset dateTime
CONF #: 3346-34099 Modified	The effectiveTime, if present, MAY contain zero or one [0..1] high (CONF:3335-34099). Note: Abatement Datetime (If the abatement datetime is null, then the symptom is considered to still be active)	MAY contain zero or one [0..1] high (CONF:3346-34099). Note: Abatement dateTime (If the abatement datetime is null, then the symptom is considered to still be active)

## 10.39 Data Criteria Section (V2)

Data Criteria Section (V2) (<urn:hl7ii:2.16.840.1.113883.10.20.28.2.6:2017-08-01>)

Change	Old	New
Status	Published	Published
Name	Data Criteria Section	Data Criteria Section (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.2.6:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.2.6:2017-08-01
CONF #: 3335-32727 Removed	MAY contain zero or more [0..*] entry (CONF:3335-32727) such that it	
CONF #: 3335-32728 Removed	SHALL contain exactly one [1..1] @typeCode="DRIV" Is Derived From (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3335-32728).	
CONF #: 3335-32729 Removed	SHALL contain exactly one [1..1] Encounter, Active (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.26:2017-05-01) (CONF:3335-32729).	
CONF #: 3346-18805 Modified	This templateId SHALL contain at least one [1..*] item (CONF:3335-18805) such that it	SHALL contain at least one [1..*] item (CONF:3346-18805) such that it
CONF #: 3346-32669 Modified	SHALL contain exactly one [1..1] Care Goal (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.7:2017-05-01) (CONF:3335-32669).	SHALL contain exactly one [1..1] Care Goal (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.7:2017-08-01) (CONF:3346-32669).
CONF #: 3346-33440 Modified	SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-33440).	SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-33440).
CONF #: 3346-34481 Modified	SHALL contain exactly one [1..1] Communication: From Patient to Provider (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.8:2017-05-01) (CONF:3335-34481).	SHALL contain exactly one [1..1] Communication: From Patient to Provider (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.8:2017-08-01) (CONF:3346-34481).
CONF #: 3346-32675 Modified	SHALL contain exactly one [1..1] Communication: From Provider to Patient (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.9:2017-05-01) (CONF:3335-32675).	SHALL contain exactly one [1..1] Communication: From Provider to Patient (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.9:2017-08-01) (CONF:3346-32675).
CONF #: 3346-32678 Modified	SHALL contain exactly one [1..1] Communication: From Provider to Provider (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.10:2017-05-01) (CONF:3335-32678).	SHALL contain exactly one [1..1] Communication: From Provider to Provider (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.10:2017-08-01) (CONF:3346-32678).

<b>Change</b>	<b>Old</b>	<b>New</b>
CONF #: 3346-32717 Modified	SHALL contain exactly one [1..1] Diagnostic Study, Order (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.22:2017-05-01) (CONF:3335-32717).	SHALL contain exactly one [1..1] Diagnostic Study, Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.22:2017-08-01) (CONF:3346-32717).
CONF #: 3346-32720 Modified	SHALL contain exactly one [1..1] Diagnostic Study, Performed (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.23:2017-05-01) (CONF:3335-32720).	SHALL contain exactly one [1..1] Diagnostic Study, Performed (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.23:2017-08-01) (CONF:3346-32720).
CONF #: 3346-32723 Modified	SHALL contain exactly one [1..1] Diagnostic Study, Recommended (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.24:2017-05-01) (CONF:3335-32723).	SHALL contain exactly one [1..1] Diagnostic Study, Recommended (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.24:2017-08-01) (CONF:3346-32723).
CONF #: 3346-32735 Modified	SHALL contain exactly one [1..1] Encounter, Performed (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.5:2017-05-01) (CONF:3335-32735).	SHALL contain exactly one [1..1] Encounter, Performed (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.5:2017-08-01) (CONF:3346-32735).
CONF #: 3346-32762 Modified	SHALL contain exactly one [1..1] Intervention, Performed (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.36:2017-05-01) (CONF:3335-32762).	SHALL contain exactly one [1..1] Intervention, Performed (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.36:2017-08-01) (CONF:3346-32762).
CONF #: 3346-32780 Modified	SHALL contain exactly one [1..1] Laboratory Test, Performed (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.42:2017-05-01) (CONF:3335-32780).	SHALL contain exactly one [1..1] Laboratory Test, Performed (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.42:2017-08-01) (CONF:3346-32780).
CONF #: 3346-32789 Modified	SHALL contain exactly one [1..1] Medication, Active (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.44:2017-05-01) (CONF:3335-32789).	SHALL contain exactly one [1..1] Medication, Active (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.44:2017-08-01) (CONF:3346-32789).
CONF #: 3346-32792 Modified	SHALL contain exactly one [1..1] Medication, Administered (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.45:2017-05-01) (CONF:3335-32792).	SHALL contain exactly one [1..1] Medication, Administered (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.45:2017-08-01) (CONF:3346-32792).
CONF #: 3346-32804 Modified	SHALL contain exactly one [1..1] Medication, Discharge (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.48:2017-05-01) (CONF:3335-32804).	SHALL contain exactly one [1..1] Medication, Discharge (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.48:2017-08-01) (CONF:3346-

<b>Change</b>	<b>Old</b>	<b>New</b>
		32804).
CONF #: 3346-32806 Modified	SHALL contain exactly one [1..1] Medication, Order (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.51:2017-05-01) (CONF:3335-32806).	SHALL contain exactly one [1..1] Medication, Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.51:2017-08-01) (CONF:3346-32806).
CONF #: 3346-32808 Modified	SHALL contain exactly one [1..1] Medication, Dispensed (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.49:2017-05-01) (CONF:3335-32808).	SHALL contain exactly one [1..1] Medication, Dispensed (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.49:2017-08-01) (CONF:3346-32808).
CONF #: 3346-32824 Modified	SHALL contain exactly one [1..1] Patient Characteristic (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.53:2017-05-01) (CONF:3335-32824).	SHALL contain exactly one [1..1] Patient Characteristic (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.53:2017-08-01) (CONF:3346-32824).
CONF #: 3346-32849 Modified	SHALL contain exactly one [1..1] Physical Exam, Performed (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.62:2017-05-01) (CONF:3335-32849).	SHALL contain exactly one [1..1] Physical Exam, Performed (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.62:2017-08-01) (CONF:3346-32849).
CONF #: 3346-32858 Modified	SHALL contain exactly one [1..1] Procedure, Performed (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.67:2017-05-01) (CONF:3335-32858).	SHALL contain exactly one [1..1] Procedure, Performed (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.67:2017-08-01) (CONF:3346-32858).
CONF #: 3346-32864 Modified	SHALL contain exactly one [1..1] Procedure, Order (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.66:2017-05-01) (CONF:3335-32864).	SHALL contain exactly one [1..1] Procedure, Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.66:2017-08-01) (CONF:3346-32864).
CONF #: 3346-32873 Modified	SHALL contain exactly one [1..1] Provider Characteristic (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.71:2017-05-01) (CONF:3335-32873).	SHALL contain exactly one [1..1] Provider Characteristic (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.71:2017-08-01) (CONF:3346-32873).
CONF #: 3346-32998 Modified	SHALL contain exactly one [1..1] Substance, Administered (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.73:2017-05-01) (CONF:3335-32998).	SHALL contain exactly one [1..1] Substance, Administered (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.73:2017-08-01) (CONF:3346-32998).
CONF #: 3346-33007 Modified	SHALL contain exactly one [1..1] Substance, Order (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.77:2017-05-01) (CONF:3335-33007).	SHALL contain exactly one [1..1] Substance, Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.77:2017-08-01) (CONF:3346-33007).

<b>Change</b>	<b>Old</b>	<b>New</b>
CONF #: 3346-33013 Modified	SHALL contain exactly one [1..1] Substance, Recommended (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.78:2017-05-01) (CONF:3335-33013).	SHALL contain exactly one [1..1] Substance, Recommended (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.78:2017-08-01) (CONF:3346-33013).
CONF #: 3346-33951 Modified	SHALL contain exactly one [1..1] Immunization, Administered (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.112:2017-05-01) (CONF:3335-33951).	SHALL contain exactly one [1..1] Immunization, Administered (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.112:2017-08-01) (CONF:3346-33951).
CONF #: 3346-34037 Modified	SHALL contain exactly one [1..1] Immunization, Order (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.113:2017-05-01) (CONF:3335-34037).	SHALL contain exactly one [1..1] Immunization, Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.113:2017-08-01) (CONF:3346-34037).
CONF #: 3346-34057 Modified	SHALL contain exactly one [1..1] Diagnosis (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.110:2017-05-01) (CONF:3335-34057).	SHALL contain exactly one [1..1] Diagnosis (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.110:2017-08-01) (CONF:3346-34057).
CONF #: 3346-34113 Modified	SHALL contain exactly one [1..1] Symptom (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.116:2017-05-01) (CONF:3335-34113).	SHALL contain exactly one [1..1] Symptom (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.116:2017-08-01) (CONF:3346-34113).
CONF #: 3346-34178 Modified	SHALL contain exactly one [1..1] Assessment, Performed (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.117:2017-05-01) (CONF:3335-34178).	SHALL contain exactly one [1..1] Assessment, Performed (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.117:2017-08-01) (CONF:3346-34178).
CONF #: 3346-34260 Modified	SHALL contain exactly one [1..1] Adverse Event (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.120:2017-05-01) (CONF:3335-34260).	SHALL contain exactly one [1..1] Adverse Event (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.120:2017-08-01) (CONF:3346-34260).
CONF #: 3346-34263 Modified	SHALL contain exactly one [1..1] Allergy/Intolerance (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.119:2017-05-01) (CONF:3335-34263).	SHALL contain exactly one [1..1] Allergy Intolerance (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.28.4.119:2017-08-01) (CONF:3346-34263).

## 10.40 Population Criteria Section (V2)

[Population Criteria Section \(V2\) \(urn:hl7ii:2.16.840.1.113883.10.20.28.2.7:2017-08-01\)](#)

Change	Old	New
Status	Published	Published
Name	Population Criteria Section	Population Criteria Section (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.28.2.7:2017-05-01	urn:hl7ii:2.16.840.1.113883.10.20.28.2.7:2017-08-01
CONF #: 3346-34868 Added		This initialPopulationCriteria SHALL contain at least one [1..*] precondition (CONF:3346-34868).
CONF #: 3346-34869 Added		Such preconditions SHALL contain exactly one [1..1] criteriaReference (CONF:3346-34869).
CONF #: 3346-34870 Added		This criteriaReference SHALL contain exactly one [1..1] id (CONF:3346-34870).
CONF #: 3346-34871 Added		This numeratorCriteria SHALL contain at least one [1..*] precondition (CONF:3346-34871).
CONF #: 3346-34872 Added		Such preconditions SHALL contain exactly one [1..1] criteriaReference (CONF:3346-34872).
CONF #: 3346-34873 Added		This criteriaReference SHALL contain exactly one [1..1] id (CONF:3346-34873).
CONF #: 3346-34874 Added		This denominatorCriteria SHALL contain at least one [1..*] precondition (CONF:3346-34874).
CONF #: 3346-34875 Added		Such preconditions SHALL contain exactly one [1..1] criteriaReference (CONF:3346-34875).
CONF #: 3346-34876 Added		This criteriaReference SHALL contain exactly one [1..1] id (CONF:3346-34876).
CONF #: 3346-34877 Added		This measurePopulationCriteria SHALL contain at least one [1..*] precondition (CONF:3346-34877).
CONF #: 3346-34878 Added		Such preconditions SHALL contain exactly one [1..1] criteriaReference (CONF:3346-34878).
CONF #: 3346-34879 Added		This criteriaReference SHALL contain exactly one [1..1] id (CONF:3346-34879).
CONF #: 3346-34880 Added		This denominatorExceptionCriteria SHALL contain at least one [1..*] precondition (CONF:3346-34880).
CONF #: 3346-34881 Added		Such preconditions SHALL contain

<b>Change</b>	<b>Old</b>	<b>New</b>
		exactly one [1..1] criteriaReference (CONF:3346-34881).
CONF #: 3346-34882 Added		This criteriaReference SHALL contain exactly one [1..1] id (CONF:3346-34882).
CONF #: 3346-34883 Added		This denominatorExclusionCriteria SHALL contain at least one [1..*] precondition (CONF:3346-34883).
CONF #: 3346-34884 Added		Such preconditions SHALL contain exactly one [1..1] criteriaReference (CONF:3346-34884).
CONF #: 3346-34885 Added		This criteriaReference SHALL contain exactly one [1..1] id (CONF:3346-34885).
CONF #: 3346-34886 Added		This id SHALL contain exactly one [1..1] @root (CONF:3346-34886).
CONF #: 3346-34887 Added		This id SHALL contain exactly one [1..1] @extension (CONF:3346-34887).
CONF #: 3346-34888 Added		This id SHALL contain exactly one [1..1] @root (CONF:3346-34888).
CONF #: 3346-34889 Added		This id SHALL contain exactly one [1..1] @extension (CONF:3346-34889).
CONF #: 3346-34890 Added		This id SHALL contain exactly one [1..1] @root (CONF:3346-34890).
CONF #: 3346-34891 Added		This id SHALL contain exactly one [1..1] @extension (CONF:3346-34891).
CONF #: 3346-34892 Added		This id SHALL contain exactly one [1..1] @root (CONF:3346-34892).
CONF #: 3346-34893 Added		This id SHALL contain exactly one [1..1] @extension (CONF:3346-34893).
CONF #: 3346-34894 Added		This id SHALL contain exactly one [1..1] @root (CONF:3346-34894).
CONF #: 3346-34895 Added		This id SHALL contain exactly one [1..1] @extension (CONF:3346-34895).
CONF #: 3346-34896 Added		This id SHALL contain exactly one [1..1] @root (CONF:3346-34896).
CONF #: 3346-34897 Added		This id SHALL contain exactly one [1..1] @extension (CONF:3346-34897).
CONF #: 3346-34898 Added		This numeratorExclusionCriteria SHALL contain at least one [1..*] precondition (CONF:3346-34898).
CONF #: 3346-34899 Added		Such preconditions SHALL contain

<b>Change</b>	<b>Old</b>	<b>New</b>
		exactly one [1..1] criteriaReference (CONF:3346-34899).
CONF #: 3346-34900 Added		This criteriaReference SHALL contain exactly one [1..1] id (CONF:3346-34900).
CONF #: 3346-34901 Added		This measurePopulationExclusionCriteria SHALL contain at least one [1..*] precondition (CONF:3346-34901).
CONF #: 3346-34902 Added		Such preconditions SHALL contain exactly one [1..1] criteriaReference (CONF:3346-34902).
CONF #: 3346-34903 Added		This criteriaReference SHALL contain exactly one [1..1] id (CONF:3346-34903).
CONF #: 3346-34904 Added		This id SHALL contain exactly one [1..1] @root (CONF:3346-34904).
CONF #: 3346-34905 Added		This id SHALL contain exactly one [1..1] @extension (CONF:3346-34905).
CONF #: 3346-34906 Added		This id SHALL contain exactly one [1..1] @root (CONF:3346-34906).
CONF #: 3346-34907 Added		This id SHALL contain exactly one [1..1] @extension (CONF:3346-34907).
CONF #: 3346-34633 Modified	SHALL contain exactly one [1..1] @extension="2017-05-01" (CONF:3335-34633).	SHALL contain exactly one [1..1] @extension="2017-08-01" (CONF:3346-34633).