



HL7 Implementation Guide for CDA® Release 2: National Health Care Surveys (NHCS), Release 1 - US Realm

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Structure of This Guide

Two volumes comprise this *HL7 Implementation Guide for CDA® Release 2: National Health Care Surveys (NHCS), Release 1 - US Realm DSTU*. Volume 1 provides narrative introductory and background material pertinent to this implementation guide, including information on how to understand and use the templates in Volume 2. Volume 2 contains the Clinical Document Architecture (CDA) templates for this guide along with lists of templates, code systems, and value sets used.

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1 DOCUMENT-LEVEL TEMPLATES

Document-level templates describe the purpose and rules for constructing a conforming CDA document. Document templates include constraints on the CDA header and indicate contained section-level templates.

Each document-level template contains the following information:

- Scope and intended use of the document type
- Description and explanatory narrative
- Template metadata (e.g., templateId, etc.)
- Header constraints (e.g., document type, template id, participants)
- Required and optional section-level templates

1.1 US Realm Header (V2)

```
[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09 (open)]
```

Table 1: US Realm Header (V2) Contexts

Contained By:	Contains:
	US Realm Address (AD.US.FIELDED) US Realm Date and Time (DTM.US.FIELDED) US Realm Person Name (PN.US.FIELDED)

This template defines constraints that represent common administrative and demographic concepts for US Realm CDA documents. Further specification, such as ClinicalDocument/code, are provided in document templates that conform to this template.

Table 2: US Realm Header (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09)					
realmCode	1..1	SHALL		1098-16791	US
typeId	1..1	SHALL		1098-5361	
@root	1..1	SHALL		1098-5250	2.16.840.1.113883.1.3
@extension	1..1	SHALL		1098-5251	POCD_HD000040
templateId	1..1	SHALL		1098-5252	
@root	1..1	SHALL		1098-10036	2.16.840.1.113883.10.20.22.1.1
@extension	1..1	SHALL		1098-32503	2014-06-09
id	1..1	SHALL		1098-5363	
code	1..1	SHALL		1098-5253	
title	1..1	SHALL		1098-5254	
effectiveTime	1..1	SHALL		1098-5256	US Realm Date and Time (DTM.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4)
confidentialityCode	1..1	SHALL		1098-5259	2.16.840.1.113883.1.11.16926 (HL7 BasicConfidentialityKind)
languageCode	1..1	SHALL		1098-5372	2.16.840.1.113883.1.11.11526 (Language)
setId	0..1	MAY		1098-5261	
versionNumber	0..1	MAY		1098-5264	
recordTarget	1..*	SHALL		1098-5266	
patientRole	1..1	SHALL		1098-5267	
id	1..*	SHALL		1098-5268	
addr	1..*	SHALL		1098-5271	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	1..*	SHALL		1098-5280	
@use	0..1	SHOULD		1098-5375	2.16.840.1.113883.1.11.20.9.20 (Telecom Use (US Realm Header))
patient	1..1	SHALL		1098-5283	
name	1..*	SHALL		1098-5284	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
administrative GenderCode	1..1	SHALL		1098-6394	2.16.840.1.113883.1.11.1 (Administrative Gender (HL7 V3))
birthTime	1..1	SHALL		1098-5298	
maritalStatusCode	0..1	SHOULD		1098-5303	2.16.840.1.113883.1.11.12212 (Marital Status)

religiousAffiliation Code	0..1	MAY		1098-5317	2.16.840.1.113883.1.11.19185 (Religious Affiliation)
raceCode	1..1	SHALL		1098-5322	2.16.840.1.113883.3.2074.1.1.3 (Race Category Excluding Nulls)
sdct:raceCode	0..*	MAY		1098-7263	2.16.840.1.113883.1.11.14914 (Race)
ethnicGroupCode	1..1	SHALL		1098-5323	2.16.840.1.114222.4.11.837 (EthnicityGroup)
guardian	0..*	MAY		1098-5325	
code	0..1	SHOULD		1098-5326	2.16.840.1.113883.11.20.12.1 (Personal And Legal Relationship Role Type)
addr	0..*	SHOULD		1098-5359	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
telecom	0..*	SHOULD		1098-5382	
@use	0..1	SHOULD		1098-7993	2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
guardianPerson	1..1	SHALL		1098-5385	
name	1..*	SHALL		1098-5386	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1
birthplace	0..1	MAY		1098-5395	
place	1..1	SHALL		1098-5396	
addr	1..1	SHALL		1098-5397	
country	0..1	SHOULD		1098-5404	2.16.840.1.113883.3.88.12.80.63 (Country)
postalCode	0..1	MAY		1098-5403	2.16.840.1.113883.3.88.12.80.2 (PostalCode)
language Communication	1..*	SHALL		1098-5406	
languageCode	1..1	SHALL		1098-5407	2.16.840.1.113883.11.20.9.64 (PatientLanguage)
modeCode	0..1	MAY		1098-5409	2.16.840.1.113883.1.11.12249 (LanguageAbilityMode)
proficiencyLevelCode	0..1	SHOULD		1098-9965	2.16.840.1.113883.1.11.12199 (LanguageAbilityProficiency)
preferenceInd	0..1	SHOULD		1098-5414	
providerOrganization	0..1	MAY		1098-5416	
id	1..*	SHALL		1098-5417	
@root	0..1	SHOULD		1098-16820	2.16.840.1.113883.4.6
name	1..*	SHALL		1098-5419	
telecom	1..*	SHALL		1098-5420	
@use	0..1	SHOULD		1098-7994	2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))

addr	1..*	SHALL		1098-5422	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
author	1..*	SHALL		1098-5444	
time	1..1	SHALL		1098-5445	US Realm Date and Time (DTM.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4
assignedAuthor	1..1	SHALL		1098-5448	
id	1..*	SHALL		1098-5449	
id	0..1	SHOULD		1098-32882	
@nullFlavor	0..1	MAY		1098-32883	2.16.840.1.113883.5.1008 (HL7NullFlavor) = UNK
@root	1..1	SHALL		1098-32884	2.16.840.1.113883.4.6
@extension	0..1	SHOULD		1098-32885	
code	0..1	SHOULD		1098-16787	
@code	1..1	SHALL		1098-16788	2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1098-5452	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
telecom	1..*	SHALL		1098-5428	
@use	0..1	SHOULD		1098-7995	2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
assignedPerson	0..1	SHOULD		1098-5430	
name	1..*	SHALL		1098-16789	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1
assignedAuthoring Device	0..1	SHOULD		1098-16783	
manufacturerModel Name	1..1	SHALL		1098-16784	
softwareName	1..1	SHALL		1098-16785	
dataEnterer	0..1	MAY		1098-5441	
assignedEntity	1..1	SHALL		1098-5442	
id	1..*	SHALL		1098-5443	
@root	0..1	SHOULD		1098-16821	2.16.840.1.113883.4.6
code	0..1	MAY		1098-32173	2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1098-5460	US Realm Address (AD.US.FIELDDED) (identifier:

					urn:oid:2.16.840.1.113883.10.20.22.5.2
telecom	1..*	SHALL		1098-5466	
@use	0..1	SHOULD		1098-7996	2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
assignedPerson	1..1	SHALL		1098-5469	
name	1..*	SHALL		1098-5470	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
informant	0..*	MAY		1098-8001	
assignedEntity	1..1	SHALL		1098-8002	
id	1..*	SHALL		1098-9945	
code	0..1	MAY		1098-32174	2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1098-8220	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
assignedPerson	1..1	SHALL		1098-8221	
name	1..*	SHALL		1098-8222	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
informant	0..*	MAY		1098-31355	
relatedEntity	1..1	SHALL		1098-31356	
custodian	1..1	SHALL		1098-5519	
assignedCustodian	1..1	SHALL		1098-5520	
representedCustodian Organization	1..1	SHALL		1098-5521	
id	1..*	SHALL		1098-5522	
@root	0..1	SHOULD		1098-16822	2.16.840.1.113883.4.6
name	1..1	SHALL		1098-5524	
telecom	1..1	SHALL		1098-5525	
@use	0..1	SHOULD		1098-7998	2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
addr	1..1	SHALL		1098-5559	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
informationRecipient	0..*	MAY		1098-5565	
intendedRecipient	1..1	SHALL		1098-5566	
id	0..*	MAY		1098-32399	
informationRecipient	0..1	MAY		1098-5567	

name	1..*	SHALL		1098-5568	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
receivedOrganization	0..1	MAY		1098-5577	
name	1..1	SHALL		1098-5578	
legalAuthenticator	0..1	SHOULD		1098-5579	
time	1..1	SHALL		1098-5580	US Realm Date and Time (DTM.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4)
signatureCode	1..1	SHALL		1098-5583	
@code	1..1	SHALL		1098-5584	2.16.840.1.113883.5.89 (Participationsignature) = S
sdtc:signatureText	0..1	MAY		1098-30810	
assignedEntity	1..1	SHALL		1098-5585	
id	1..*	SHALL		1098-5586	
@root	0..1	MAY		1098-16823	2.16.840.1.113883.4.6
code	0..1	MAY		1098-17000	2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1098-5589	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	1..*	SHALL		1098-5595	
@use	0..1	SHOULD		1098-7999	2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
assignedPerson	1..1	SHALL		1098-5597	
name	1..*	SHALL		1098-5598	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
authenticator	0..*	MAY		1098-5607	
time	1..1	SHALL		1098-5608	US Realm Date and Time (DTM.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4)
signatureCode	1..1	SHALL		1098-5610	
@code	1..1	SHALL		1098-5611	2.16.840.1.113883.5.89 (Participationsignature) = S
sdtc:signatureText	0..1	MAY		1098-30811	
assignedEntity	1..1	SHALL		1098-5612	
id	1..*	SHALL		1098-5613	
@root	0..1	SHOULD		1098-16824	2.16.840.1.113883.4.6
code	0..1	MAY		1098-16825	

@code	0..1	MAY		1098-16826	2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1098-5616	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	1..*	SHALL		1098-5622	
@use	0..1	SHOULD		1098-8000	2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
assignedPerson	1..1	SHALL		1098-5624	
name	1..*	SHALL		1098-5625	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
participant	0..*	MAY		1098-10003	
time	0..1	MAY		1098-10004	
inFulfillmentOf	0..*	MAY		1098-9952	
order	1..1	SHALL		1098-9953	
id	1..*	SHALL		1098-9954	
documentationOf	0..*	MAY		1098-14835	
serviceEvent	1..1	SHALL		1098-14836	
effectiveTime	1..1	SHALL		1098-14837	
low	1..1	SHALL		1098-14838	
performer	0..*	SHOULD		1098-14839	
@typeCode	1..1	SHALL		1098-14840	2.16.840.1.113883.1.11.19601 (x_ServiceEventPerformer)
functionCode	0..1	MAY		1098-16818	
@code	0..1	SHOULD		1098-32889	2.16.840.1.113883.1.11.10267 (ParticipationFunction)
assignedEntity	1..1	SHALL		1098-14841	
id	1..*	SHALL		1098-14846	
@root	0..1	SHOULD		1098-14847	2.16.840.1.113883.4.6
code	0..1	SHOULD		1098-14842	2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
authorization	0..*	MAY		1098-16792	
consent	1..1	SHALL		1098-16793	
id	0..*	MAY		1098-16794	
code	0..1	MAY		1098-16795	
statusCode	1..1	SHALL		1098-16797	
@code	1..1	SHALL		1098-16798	2.16.840.1.113883.5.6 (HL7ActClass) = completed
componentOf	0..1	MAY		1098-9955	

encompassing Encounter	1..1	SHALL		1098-9956	
id	1..*	SHALL		1098-9959	
effectiveTime	1..1	SHALL		1098-9958	

1.1.1 Properties

1.1.1.1 realmCode

1. **SHALL** contain exactly one [1..1] **realmCode**="US" (CONF:1098-16791).

Figure 1: US Realm Header (V2) Example

```
<ClinicalDocument>
  <realmCode code="US" />
  <typeId extension="POCD_HD000040" root="2.16.840.1.113883.1.3" />
  <!-- CCD template -->
  <templateId root="2.16.840.1.113883.10.20.22.1.1" extension="2014-06-09" />
  <!-- Globally unique identifier for the document -->
  <id extension="TT988" root="2.16.840.1.113883.19.5.99999.1" />
  <code code="34133-9" displayName="Summarization of Episode Note"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <!-- Title of the document -->
  <title>Patient Chart Summary</title>
  <effectiveTime value="201209151030-0800" />
  <confidentialityCode code="N" displayName="normal" codeSystem="2.16.840.1.113883.5.25"
codeSystemName="Confidentiality" />
  <languageCode code="en-US" />
  <setId extension="sTT988" root="2.16.840.1.113883.19.5.99999.19" />
  <!-- Version of the document -->
  <versionNumber value="1" />
  . . .
</ClinicalDocument>
```

2. **SHALL** contain exactly one [1..1] **typeId** (CONF:1098-5361).
 - a. This **typeId** **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.1.3" (CONF:1098-5250).
 - b. This **typeId** **SHALL** contain exactly one [1..1] **@extension**="POCD_HD000040" (CONF:1098-5251).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-5252) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.1" (CONF:1098-10036).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32503).
4. **SHALL** contain exactly one [1..1] **id** (CONF:1098-5363).
 - a. This **id** **SHALL** be a globally unique identifier for the document (CONF:1098-9991).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-5253).
 - a. This **code** **SHALL** specify the particular kind of document (e.g., History and Physical, Discharge Summary, Progress Note) (CONF:1098-9992).

6. **SHALL** contain exactly one [1..1] **title** (CONF:1098-5254).
Note: The title can either be a locally defined name or the displayName corresponding to clinicalDocument/code
7. **SHALL** contain exactly one [1..1] **US Realm Date and Time (DTM.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:1098-5256).
8. **SHALL** contain exactly one [1..1] **confidentialityCode**, which **SHOULD** be selected from ValueSet **HL7 BasicConfidentialityKind** 2.16.840.1.113883.1.11.16926 **STATIC** 2010-04-21 (CONF:1098-5259).
9. **SHALL** contain exactly one [1..1] **languageCode**, which **SHALL** be selected from ValueSet **Language** 2.16.840.1.113883.1.11.11526 **DYNAMIC** (CONF:1098-5372).
10. **MAY** contain zero or one [0..1] **setId** (CONF:1098-5261).
 - a. If setId is present versionNumber **SHALL** be present (CONF:1098-6380).
11. **MAY** contain zero or one [0..1] **versionNumber** (CONF:1098-5264).
 - a. If versionNumber is present setId **SHALL** be present (CONF:1098-6387).

1.1.1.2 recordTarget

The recordTarget records the administrative and demographic data of the patient whose health information is described by the clinical document; each recordTarget must contain at least one patientRole element

12. **SHALL** contain at least one [1..*] **recordTarget** (CONF:1098-5266).
 - a. Such recordTargets **SHALL** contain exactly one [1..1] **patientRole** (CONF:1098-5267).
 - i. This patientRole **SHALL** contain at least one [1..*] **id** (CONF:1098-5268).
 - ii. This patientRole **SHALL** contain at least one [1..*] **US Realm Address (AD.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-5271).
 - iii. This patientRole **SHALL** contain at least one [1..*] **telecom** (CONF:1098-5280).
 1. Such telecoms **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet **Telecom Use (US Realm Header)** 2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1098-5375).
 - iv. This patientRole **SHALL** contain exactly one [1..1] **patient** (CONF:1098-5283).
 1. This patient **SHALL** contain at least one [1..*] **US Realm Person Name (PN.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1098-5284).
 2. This patient **SHALL** contain exactly one [1..1] **administrativeGenderCode**, which **SHALL** be selected from ValueSet **Administrative Gender (HL7 V3)** 2.16.840.1.113883.1.11.1 **DYNAMIC** (CONF:1098-6394).
 3. This patient **SHALL** contain exactly one [1..1] **birthTime** (CONF:1098-5298).
 - a. **SHALL** be precise to year (CONF:1098-5299).

- b. **SHOULD** be precise to day (CONF:1098-5300).

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

- c. **MAY** be precise to the minute (CONF:1098-32418).

- 4. This patient **SHOULD** contain zero or one [0..1] **maritalStatusCode**, which **SHALL** be selected from ValueSet [Marital Status](#) 2.16.840.1.113883.1.11.12212 **DYNAMIC** (CONF:1098-5303).
- 5. This patient **MAY** contain zero or one [0..1] **religiousAffiliationCode**, which **SHALL** be selected from ValueSet [Religious Affiliation](#) 2.16.840.1.113883.1.11.19185 **DYNAMIC** (CONF:1098-5317).
- 6. This patient **SHALL** contain exactly one [1..1] **raceCode**, which **SHALL** be selected from ValueSet [Race Category Excluding Nulls](#) 2.16.840.1.113883.3.2074.1.1.3 **DYNAMIC** (CONF:1098-5322).
- 7. This patient **MAY** contain zero or more [0..*] **sdtc:raceCode**, which **SHALL** be selected from ValueSet [Race](#) 2.16.840.1.113883.1.11.14914 **DYNAMIC** (CONF:1098-7263).
Note: The sdtc:raceCode is only used to record additional values when the patient has indicated multiple races or additional race detail beyond the five categories required for Meaningful Use Stage 2. The prefix sdtc: **SHALL** be bound to the namespace “urn:hl7-org:sdtc”. The use of the namespace provides a necessary extension to CDA R2 for the use of the additional raceCode elements.
 - a. If sdtc:raceCode is present, then the patient **SHALL** contain [1..1] raceCode (CONF:1098-31347).
- 8. This patient **SHALL** contain exactly one [1..1] **ethnicGroupCode**, which **SHALL** be selected from ValueSet [EthnicityGroup](#) 2.16.840.1.114222.4.11.837 **DYNAMIC** (CONF:1098-5323).
- 9. This patient **MAY** contain zero or more [0..*] **guardian** (CONF:1098-5325).
 - a. The guardian, if present, **SHOULD** contain zero or one [0..1] **code**, which **SHALL** be selected from ValueSet [Personal And Legal Relationship Role Type](#) 2.16.840.1.113883.11.20.12.1 **DYNAMIC** (CONF:1098-5326).
 - b. The guardian, if present, **SHOULD** contain zero or more [0..*] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-5359).
 - c. The guardian, if present, **SHOULD** contain zero or more [0..*] **telecom** (CONF:1098-5382).
 - i. The telecom, if present, **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet [Telecom Use \(US Realm Header\)](#) 2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1098-7993).

- d. The guardian, if present, **SHALL** contain exactly one [1..1] **guardianPerson** (CONF:1098-5385).
 - i. This guardianPerson **SHALL** contain at least one [1..*] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1098-5386).
10. This patient **MAY** contain zero or one [0..1] **birthplace** (CONF:1098-5395).
- a. The birthplace, if present, **SHALL** contain exactly one [1..1] **place** (CONF:1098-5396).
 - i. This place **SHALL** contain exactly one [1..1] **addr** (CONF:1098-5397).
 - 1. This addr **SHOULD** contain zero or one [0..1] **country**, which **SHALL** be selected from ValueSet [Country](#) 2.16.840.1.113883.3.88.12.80.63 **DYNAMIC** (CONF:1098-5404).
 - 2. This addr **MAY** contain zero or one [0..1] **postalCode**, which **SHALL** be selected from ValueSet [PostalCode](#) 2.16.840.1.113883.3.88.12.80.2 **DYNAMIC** (CONF:1098-5403).
 - 3. If country is US, this addr **SHOULD** contain zero to one [0..1] **state**, which **SHALL** be selected from ValueSet [StateValueSet](#) 2.16.840.1.113883.3.88.12.80.1 **DYNAMIC** (CONF:1098-5402).
11. This patient **SHALL** contain at least one [1..*] **languageCommunication** (CONF:1098-5406).
- a. Such languageCommunications **SHALL** contain exactly one [1..1] **languageCode**, which **SHALL** be selected from ValueSet [PatientLanguage](#) 2.16.840.1.113883.11.20.9.64 **DYNAMIC** (CONF:1098-5407).
 - b. Such languageCommunications **MAY** contain zero or one [0..1] **modeCode**, which **SHALL** be selected from ValueSet [LanguageAbilityMode](#) 2.16.840.1.113883.1.11.12249 **DYNAMIC** (CONF:1098-5409).
 - c. Such languageCommunications **SHOULD** contain zero or one [0..1] **proficiencyLevelCode**, which **SHALL** be selected from ValueSet [LanguageAbilityProficiency](#) 2.16.840.1.113883.1.11.12199 **DYNAMIC** (CONF:1098-9965).
 - d. Such languageCommunications **SHOULD** contain zero or one [0..1] **preferenceInd** (CONF:1098-5414).
- v. This patientRole **MAY** contain zero or one [0..1] **providerOrganization** (CONF:1098-5416).

1. The providerOrganization, if present, **SHALL** contain at least one [1..*] **id** (CONF:1098-5417).
 - a. Such ids **SHOULD** contain zero or one [0..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1098-16820).
2. The providerOrganization, if present, **SHALL** contain at least one [1..*] **name** (CONF:1098-5419).
3. The providerOrganization, if present, **SHALL** contain at least one [1..*] **telecom** (CONF:1098-5420).
 - a. Such telecoms **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet Telecom Use (US Realm Header) 2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1098-7994).
4. The providerOrganization, if present, **SHALL** contain at least one [1..*] US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-5422).

Figure 2: recordTarget Example

```

<recordTarget>
  <patientRole>
    <id extension="444-22-2222" root="2.16.840.1.113883.4.1" />
    <!-- Example Social Security Number using the actual SSN OID. -->
    <addr use="HP">
      <!-- HP is "primary home" from codeSystem 2.16.840.1.113883.5.1119 -->
      <streetAddressLine>2222 Home Street</streetAddressLine>
      <city>Beaverton</city>
      <state>OR</state>
      <postalCode>97867</postalCode>
      <country>US</country>
      <!-- US is "United States" from ISO 3166-1 Country Codes: 1.0.3166.1 -->
    </addr>
    <telecom value="tel:+1(555)555-2003" use="HP" />
    <!-- HP is "primary home" from HL7 AddressUse 2.16.840.1.113883.5.1119 -->
  </patient>
  <!-- The first name element represents what the patient is known as -->
  <name use="L">
    <given>Eve</given>
    <!-- The "SP" is "Spouse" from
         HL7 Code System EntityNamePartQualifier 2.16.840.1.113883.5.43 -->
    <family qualifier="SP">Betterhalf</family>
  </name>
  <!-- The second name element represents another name
       associated with the patient -->
  <name>
    <given>Eve</given>
    <!-- The "BR" is "Birth" from
         HL7 Code System EntityNamePartQualifier 2.16.840.1.113883.5.43 -->
    <family qualifier="BR">Everywoman</family>
  </name>
  <administrativeGenderCode code="F" displayName="Female"
codeSystem="2.16.840.1.113883.5.1" codeSystemName="AdministrativeGender" />
  <!-- Date of birth need only be precise to the day -->
  <birthTime value="19750501" />
  <maritalStatusCode code="M" displayName="Married"
codeSystem="2.16.840.1.113883.5.2" codeSystemName="MaritalStatusCode" />
  <religiousAffiliationCode code="1013" displayName="Christian (non-Catholic,
non-specific)" codeSystem="2.16.840.1.113883.5.1076" codeSystemName="HL7 Religious
Affiliation" />
  <!-- CDC Race and Ethnicity code set contains the five minimum
       race and ethnicity categories defined by OMB Standards -->
  <raceCode code="2106-3" displayName="White"
codeSystem="2.16.840.1.113883.6.238" codeSystemName="Race & Ethnicity - CDC" />
  <!-- The raceCode extension is only used if raceCode is valued -->
  <sdtc:raceCode code="2076-8" displayName="Hawaiian or Other Pacific Islander"
codeSystem="2.16.840.1.113883.6.238" codeSystemName="Race & Ethnicity - CDC" />
  <ethnicGroupCode code="2186-5" displayName="Not Hispanic or Latino"
codeSystem="2.16.840.1.113883.6.238" codeSystemName="Race & Ethnicity - CDC" />
  <guardian>
    <code code="POWATT" displayName="Power of Attorney"
codeSystem="2.16.840.1.113883.1.11.19830" codeSystemName="ResponsibleParty" />
    <addr use="HP">
      <streetAddressLine>2222 Home Street</streetAddressLine>
      <city>Beaverton</city>
    </addr>
  </guardian>

```

```

        <state>OR</state>
        <postalCode>97867</postalCode>
        <country>US</country>
    </addr>
    <telecom value="tel:+1(555)555-2008" use="MC" />
    <guardianPerson>
        <name>
            <given>Boris</given>
            <given qualifier="CL">Bo</given>
            <family>Betterhalf</family>
        </name>
    </guardianPerson>
</guardian>
<birthplace>
    <place>
        <addr>
            <streetAddressLine>4444 Home Street</streetAddressLine>
            <city>Beaverton</city>
            <state>OR</state>
            <postalCode>97867</postalCode>
            <country>US</country>
        </addr>
    </place>
</birthplace>
<languageCommunication>
    <languageCode code="eng" />
    <!-- "eng" is ISO 639-2 alpha-3 code for "English" -->
    <modeCode code="ESP" displayName="Expressed spoken"
codeSystem="2.16.840.1.113883.5.60" codeSystemName="LanguageAbilityMode" />
    <proficiencyLevelCode code="G" displayName="Good"
codeSystem="2.16.840.1.113883.5.61" codeSystemName="LanguageAbilityProficiency" />
    <!-- Patient's preferred language -->
    <preferenceInd value="true" />
</languageCommunication>
</patient>
<providerOrganization>
    <id extension="219BX" root="1.1.1.1.1.1.1.2" />
    <name>The DoctorsTogether Physician Group</name>
    <telecom use="WP" value="tel: +(555)-555-5000" />
    <addr>
        <streetAddressLine>1007 Health Drive</streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
    </addr>
</providerOrganization>
</patientRole>
</recordTarget>

```

1.1.1.3 author

The author element represents the creator of the clinical document. The author may be a device or a person.

13. **SHALL** contain at least one [1..*] **author** (CONF:1098-5444).

- a. Such authors **SHALL** contain exactly one [1..1] **US Realm Date and Time (DTM.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:1098-5445).
- b. Such authors **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:1098-5448).
 - i. This assignedAuthor **SHALL** contain at least one [1..*] **id** (CONF:1098-5449).

If this assignedAuthor is an assignedPerson

- ii. This assignedAuthor **SHOULD** contain zero or one [0..1] **id** (CONF:1098-32882) such that it

If id with @root="2.16.840.1.113883.4.6" National Provider Identifier is unknown then

1. **MAY** contain zero or one [0..1] **@nullFlavor="UNK"** Unknown (CodeSystem: HL7NullFlavor 2.16.840.1.113883.5.1008) (CONF:1098-32883).
2. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.4.6"** National Provider Identifier (CONF:1098-32884).
3. **SHOULD** contain zero or one [0..1] **@extension** (CONF:1098-32885).

Only if this assignedAuthor is an assignedPerson should the assignedAuthor contain a code.

- iii. This assignedAuthor **SHOULD** contain zero or one [0..1] **code** (CONF:1098-16787).
 1. The code, if present, **SHALL** contain exactly one [1..1] **@code**, which **SHOULD** be selected from ValueSet **Healthcare Provider Taxonomy (HIPAA)** 2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1098-16788).
- iv. This assignedAuthor **SHALL** contain at least one [1..*] **US Realm Address (AD.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-5452).
- v. This assignedAuthor **SHALL** contain at least one [1..*] **telecom** (CONF:1098-5428).
 1. Such telecoms **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet **Telecom Use (US Realm Header)** 2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1098-7995).
- vi. This assignedAuthor **SHOULD** contain zero or one [0..1] **assignedPerson** (CONF:1098-5430).
 1. The assignedPerson, if present, **SHALL** contain at least one [1..*] **US Realm Person Name (PN.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1098-16789).
- vii. This assignedAuthor **SHOULD** contain zero or one [0..1] **assignedAuthoringDevice** (CONF:1098-16783).
 1. The assignedAuthoringDevice, if present, **SHALL** contain exactly one [1..1] **manufacturerModelName** (CONF:1098-16784).
 2. The assignedAuthoringDevice, if present, **SHALL** contain exactly one [1..1] **softwareName** (CONF:1098-16785).

- viii. There **SHALL** be exactly one assignedAuthor/assignedPerson or exactly one assignedAuthor/assignedAuthoringDevice (CONF:1098-16790).

Figure 3: author Example

```
<author>
  <time value="201209151030-0800" />
  <assignedAuthor>
    <id extension="5555555555" root="2.16.840.1.113883.4.6" />
    <code code="163W00000X" displayName="Registered nurse"
codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
    <addr>
      <streetAddressLine>1004 Healthcare Drive </streetAddressLine>
      <city>Portland</city>
      <state>OR</state>
      <postalCode>99123</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:+1(555)555-1004" />
    <assignedPerson>
      <name>
        <given>Patricia</given>
        <given qualifier="CL">Patty</given>
        <family>Primary</family>
        <suffix qualifier="AC">M.D.</suffix>
      </name>
    </assignedPerson>
  </assignedAuthor>
</author>
```

1.1.1.4 dataEnterer

The dataEnterer element represents the person who transferred the content, written or dictated, into the clinical document. To clarify, an author provides the content found within the header or body of a document, subject to their own interpretation; a dataEnterer adds an author's information to the electronic system.

14. **MAY** contain zero or one [0..1] **dataEnterer** (CONF:1098-5441).

- a. The dataEnterer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-5442).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1098-5443).
 1. Such ids **SHOULD** contain zero or one [0..1]
@root="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1098-16821).
 - ii. This assignedEntity **MAY** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet Healthcare Provider Taxonomy (HIPAA) 2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1098-32173).
 - iii. This assignedEntity **SHALL** contain at least one [1..*] US Realm Address (AD.US.FIELDDED) (identifier:
urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-5460).

- iv. This assignedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1098-5466).
 - 1. Such telecoms **SHOULD** contain zero or one [0..1] @use, which **SHALL** be selected from ValueSet [Telecom Use \(US Realm Header\)](#) 2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1098-7996).
- v. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:1098-5469).
 - 1. This assignedPerson **SHALL** contain at least one [1..*] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1098-5470).

Figure 4: dateEnterer Example

```

<dataEnterer>
  <assignedEntity>
    <id extension="333777777" root="2.16.840.1.113883.4.6" />
    <addr>
      <streetAddressLine>1007 Healthcare Drive</streetAddressLine>
      <city>Portland</city>
      <state>OR</state>
      <postalCode>99123</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:+1(555)555-1050" />
    <assignedPerson>
      <name>
        <given>Ellen</given>
        <family>Enter</family>
      </name>
    </assignedPerson>
  </assignedEntity>
</dataEnterer>

```

1.1.1.5 informant

The informant element describes an information source for any content within the clinical document. This informant is constrained for use when the source of information is an assigned health care provider for the patient.

- 15. **MAY** contain zero or more [0..*] **informant** (CONF:1098-8001) such that it
 - a. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-8002).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1098-9945).
 - 1. If assignedEntity/id is a provider then this id, **SHOULD** include zero or one [0..1] id where id/@root="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1098-9946).
 - ii. This assignedEntity **MAY** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy \(HIPAA\)](#) 2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1098-32174).

- iii. This assignedEntity **SHALL** contain at least one [1..*] US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-8220).
- iv. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:1098-8221).
 1. This assignedPerson **SHALL** contain at least one [1..*] US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1098-8222).

Figure 5: Assigned Health Care Provider informant Example

```

<informant>
  <assignedEntity>
    <id extension="888888888" root="1.1.1.1.1.1.1.3" />
    <addr>
      <streetAddressLine>1007 Healthcare Drive</streetAddressLine>
      <city>Portland</city>
      <state>OR</state>
      <postalCode>99123</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:+1(555)555-1003" />
    <assignedPerson>
      <name>
        <given>Harold</given>
        <family>Hippocrates</family>
        <suffix qualifier="AC">M.D.</suffix>
      </name>
    </assignedPerson>
    <representedOrganization>
      <name>The DoctorsApart Physician Group</name>
    </representedOrganization>
  </assignedEntity>
</informant>

```

1.1.1.6 informant

The informant element describes an information source (who is not a provider) for any content within the clinical document. This informant would be used when the source of information has a personal relationship with the patient or is the patient.

16. **MAY** contain zero or more [0..*] **informant** (CONF:1098-31355) such that it
 - a. **SHALL** contain exactly one [1..1] **relatedEntity** (CONF:1098-31356).

Figure 6: Personal Relation informant Example

```
<informant>
  <relatedEntity classCode="PRS">
    <!-- classCode "PRS" represents a person with personal relationship with the patient -->
    <code code="SPS" displayName="SPOUSE" codeSystem="2.16.840.1.113883.1.11.19563"
codeSystemName="Personal Relationship Role Type Value Set" />
    <relatedPerson>
      <name>
        <given>Boris</given>
        <given qualifier="CL">Bo</given>
        <family>Betterhalf</family>
      </name>
    </relatedPerson>
  </relatedEntity>
</informant>
```

1.1.1.7 custodian

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

There is only one custodian per CDA document. Allowing that a CDA document may not represent the original form of the authenticated document, the custodian represents the steward of the original source document. The custodian may be the document originator, a health information exchange, or other responsible party.

17. **SHALL** contain exactly one [1..1] **custodian** (CONF:1098-5519).

- a. This custodian **SHALL** contain exactly one [1..1] **assignedCustodian** (CONF:1098-5520).
 - i. This assignedCustodian **SHALL** contain exactly one [1..1] **representedCustodianOrganization** (CONF:1098-5521).
 1. This representedCustodianOrganization **SHALL** contain at least one [1..*] **id** (CONF:1098-5522).
 - a. Such ids **SHOULD** contain zero or one [0..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1098-16822).
 2. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **name** (CONF:1098-5524).
 3. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **telecom** (CONF:1098-5525).
 - a. This telecom **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet [Telecom Use \(US Realm Header\)](#) 2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1098-7998).
 4. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **US Realm Address (AD.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-5559).

Figure 7: custodian Example

```
<custodian>
  <assignedCustodian>
    <representedCustodianOrganization>
      <id extension="321CX" root="1.1.1.1.1.1.1.1.3" />
      <name>Good Health HIE</name>
      <telecom use="WP" value="tel:+1(555)555-1009" />
      <addr use="WP">
        <streetAddressLine>1009 Healthcare Drive </streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
    </representedCustodianOrganization>
  </assignedCustodian>
</custodian>
```

1.1.1.8 informationRecipient

The informationRecipient element records the intended recipient of the information at the time the document was created. In cases where the intended recipient of the document is the patient's health chart, set the receivedOrganization to the scoping organization for that chart.

18. **MAY** contain zero or more [0..*] **informationRecipient** (CONF:1098-5565).

a. The informationRecipient, if present, **SHALL** contain exactly one [1..1] **intendedRecipient** (CONF:1098-5566).

i. This intendedRecipient **MAY** contain zero or more [0..*] **id** (CONF:1098-32399).

ii. This intendedRecipient **MAY** contain zero or one [0..1] **informationRecipient** (CONF:1098-5567).

1. The informationRecipient, if present, **SHALL** contain at least one [1..*] **US Realm Person Name (PN.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1098-5568).

iii. This intendedRecipient **MAY** contain zero or one [0..1] **receivedOrganization** (CONF:1098-5577).

1. The receivedOrganization, if present, **SHALL** contain exactly one [1..1] **name** (CONF:1098-5578).

Figure 8: informationRecipient Example

```
<informationRecipient>
  <intendedRecipient>
    <informationRecipient>
      <name>
        <given>Sara</given>
        <family>Specialize</family>
        <suffix qualifier="AC">M.D.</suffix>
      </name>
    </informationRecipient>
    <receivedOrganization>
      <name>The DoctorsApart Physician Group</name>
    </receivedOrganization>
  </intendedRecipient>
</informationRecipient>
```

1.1.1.9 legalAuthenticator

The legalAuthenticator identifies the single person legally responsible for the document and must be present if the document has been legally authenticated. A clinical document that does not contain this element has not been legally authenticated.

The act of legal authentication requires a certain privilege be granted to the legal authenticator depending upon local policy. Based on local practice, clinical documents may be released before legal authentication.

All clinical documents have the potential for legal authentication, given the appropriate credentials.

Local policies MAY choose to delegate the function of legal authentication to a device or system that generates the clinical document. In these cases, the legal authenticator is a person accepting responsibility for the document, not the generating device or system.

Note that the legal authenticator, if present, must be a person.

19. **SHOULD** contain zero or one [0..1] **legalAuthenticator** (CONF:1098-5579).

- a. The legalAuthenticator, if present, **SHALL** contain exactly one [1..1] **US Realm Date and Time (DTM.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:1098-5580).
- b. The legalAuthenticator, if present, **SHALL** contain exactly one [1..1] **signatureCode** (CONF:1098-5583).
 - i. This signatureCode **SHALL** contain exactly one [1..1] **@code="S"** (CodeSystem: Participationsignature 2.16.840.1.113883.5.89 **STATIC**) (CONF:1098-5584).

1.1.1.10 sdtc:signatureText

The sdtc:signatureText extension provides a location in CDA for a textual or multimedia depiction of the signature by which the participant endorses and accepts responsibility for his or her participation in the Act as specified in the Participation.typeCode. Details of what goes in the field are described in the HL7 CDA Digital Signature Standard balloted in Fall of 2013.

- c. The legalAuthenticator, if present, **MAY** contain zero or one [0..1] **sdtc:signatureText** (CONF:1098-30810).
 Note: The signature can be represented either inline or by reference according to the ED data type. Typical cases for CDA are:
 1) Electronic signature: this attribute can represent virtually any electronic signature scheme.
 2) Digital signature: this attribute can represent digital signatures by reference to a signature data block that is constructed in accordance to a digital signature standard, such as XML-DSIG, PKCS#7, PGP, etc.

Figure 9: Digital signature Example

```
<sdtc:signatureText mediaType="text/xml"
representation="B64">omSJUEdmde9j44zmMiromSJUEdmde9j44zmMirdMDSsWdIJdksIJR3373jeu83
6edjzMMIjdMDSsWdIJdksIJR3373jeu83MNYD83jmMdomSJUEdmde9j44zmMir
... MNYD83jmMdomSJUEdmde9j44zmMir6edjzMMIjdMDSsWdIJdksIJR3373jeu83
4zmMir6edjzMMIjdMDSsWdIJdksIJR3373jeu83==</sdtc:signatureText>
```

- d. The legalAuthenticator, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-5585).
- i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1098-5586).
 1. Such ids **MAY** contain zero or one [0..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1098-16823).
 - ii. This assignedEntity **MAY** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy \(HIPAA\)](#) 2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1098-17000).
 - iii. This assignedEntity **SHALL** contain at least one [1..*] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-5589).
 - iv. This assignedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1098-5595).
 1. Such telecoms **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet [Telecom Use \(US Realm Header\)](#) 2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1098-7999).
 - v. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:1098-5597).
 1. This assignedPerson **SHALL** contain at least one [1..*] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1098-5598).

Figure 10: legalAuthenticator Example

```
<legalAuthenticator>
  <time value="20120915223615-0800" />
  <signatureCode code="S" />
  <assignedEntity>
    <id extension="5555555555" root="2.16.840.1.113883.4.6" />
    <code code="207QA0505X" displayName="Adult Medicine"
codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
    <addr>
      <streetAddressLine>1004 Healthcare Drive </streetAddressLine>
      <city>Portland</city>
      <state>OR</state>
      <postalCode>99123</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:+1(555)555-1004" />
    <assignedPerson>
      <name>
        <given>Patricia</given>
        <given qualifier="CL">Patty</given>
        <family>Primary</family>
        <suffix qualifier="AC">M.D.</suffix>
      </name>
    </assignedPerson>
  </assignedEntity>
</legalAuthenticator>
```

1.1.1.11 authenticator

The authenticator identifies a participant or participants who attest to the accuracy of the information in the document.

20. **MAY** contain zero or more [0..*] **authenticator** (CONF:1098-5607) such that it
- SHALL** contain exactly one [1..1] **US Realm Date and Time (DTM.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:1098-5608).
 - SHALL** contain exactly one [1..1] **signatureCode** (CONF:1098-5610).
 - This signatureCode **SHALL** contain exactly one [1..1] **@code="S"** (CodeSystem: Participationsignature 2.16.840.1.113883.5.89 **STATIC**) (CONF:1098-5611).

The sdtc:signatureText extension provides a location in CDA for a textual or multimedia depiction of the signature by which the participant endorses and accepts responsibility for his or her participation in the Act as specified in the Participation.typeCode. Details of what goes in the field are described in the HL7 CDA Digital Signature Standard balloted in Fall of 2013.

- MAY** contain zero or one [0..1] **sdtc:signatureText** (CONF:1098-30811).

Note: The signature can be represented either inline or by reference according to the ED data type. Typical cases for CDA are:

 - Electronic signature: this attribute can represent virtually any electronic signature scheme.
 - Digital signature: this attribute can represent digital signatures by reference to a

signature data block that is constructed in accordance to a digital signature standard, such as XML-DSIG, PKCS#7, PGP, etc.

- d. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-5612).
 - i. This **assignedEntity** **SHALL** contain at least one [1..*] **id** (CONF:1098-5613).
 - 1. Such **ids** **SHOULD** contain zero or one [0..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1098-16824).
 - ii. This **assignedEntity** **MAY** contain zero or one [0..1] **code** (CONF:1098-16825).
 - 1. The code, if present, **MAY** contain zero or one [0..1] **@code**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy \(HIPAA\)](#) 2.16.840.1.114222.4.11.1066 **STATIC** (CONF:1098-16826).
 - iii. This **assignedEntity** **SHALL** contain at least one [1..*] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-5616).
 - iv. This **assignedEntity** **SHALL** contain at least one [1..*] **telecom** (CONF:1098-5622).
 - 1. Such **telecoms** **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet [Telecom Use \(US Realm Header\)](#) 2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1098-8000).
 - v. This **assignedEntity** **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:1098-5624).
 - 1. This **assignedPerson** **SHALL** contain at least one [1..*] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1098-5625).

Figure 11: authenticator Example

```
<authenticator>
  <time value="201209151030-0800" />
  <signatureCode code="S" />
  <assignedEntity>
    <id extension="5555555555" root="2.16.840.1.113883.4.6" />
    <code code="207QA0505X" displayName="Adult Medicine"
codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
    <addr>
      <streetAddressLine>1004 Healthcare Drive</streetAddressLine>
      <city>Portland</city>
      <state>OR</state>
      <postalCode>99123</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:+1(555)555-1004" />
    <assignedPerson>
      <name>
        <given>Patricia</given>
        <given qualifier="CL">Patty</given>
        <family>Primary</family>
        <suffix qualifier="AC">M.D.</suffix>
      </name>
    </assignedPerson>
  </assignedEntity>
</authenticator>
```

1.1.1.12 participant

The participant element identifies supporting entities, including parents, relatives, caregivers, insurance policyholders, guarantors, and others related in some way to the patient.

A supporting person or organization is an individual or an organization with a relationship to the patient. A supporting person who is playing multiple roles would be recorded in multiple participants (e.g., emergency contact and next-of-kin).

21. **MAY** contain zero or more [0..*] **participant** (CONF:1098-10003) such that it
- MAY** contain zero or one [0..1] **time** (CONF:1098-10004).
 - SHALL** contain associatedEntity/associatedPerson **AND/OR** associatedEntity/scopingOrganization (CONF:1098-10006).
 - When participant/@typeCode is **IND**, associatedEntity/@classCode **SHOULD** be selected from ValueSet 2.16.840.1.113883.11.20.9.33 INDRoleclassCodes **STATIC 2011-09-30** (CONF:1098-10007).

Figure 12: Supporting Person participant Example

```
<participant typeCode="IND">
  <!-- typeCode "IND" represents an individual -->
  <associatedEntity classCode="NOK">
    <!-- classCode "NOK" represents the patient's next of kin-->
    <addr use="HP">
      <streetAddressLine>2222 Home Street</streetAddressLine>
      <city>Beaverton</city>
      <state>OR</state>
      <postalCode>97867</postalCode>
      <country>US</country>
    </addr>
    <telecom value="tel:+1(555)555-2008" use="MC" />
    <associatedPerson>
      <name>
        <given>Boris</given>
        <given qualifier="CL">Bo</given>
        <family>Betterhalf</family>
      </name>
    </associatedPerson>
  </associatedEntity>
</participant>
<!-- Entities playing multiple roles are recorded in multiple participants -->
<participant typeCode="IND">
  <associatedEntity classCode="ECON">
    <!-- classCode "ECON" represents an emergency contact -->
    <addr use="HP">
      <streetAddressLine>2222 Home Street</streetAddressLine>
      <city>Beaverton</city>
      <state>OR</state>
      <postalCode>97867</postalCode>
      <country>US</country>
    </addr>
    <telecom value="tel:+1(555)555-2008" use="MC" />
    <associatedPerson>
      <name>
        <given>Boris</given>
        <given qualifier="CL">Bo</given>
        <family>Betterhalf</family>
      </name>
    </associatedPerson>
  </associatedEntity>
</participant>
```

1.1.1.13 inFulfillmentOf

The inFulfillmentOf element represents orders that are fulfilled by this document such as a radiologists' report of an x-ray.

22. **MAY** contain zero or more [0..*] inFulfillmentOf (CONF:1098-9952).

- a. The inFulfillmentOf, if present, **SHALL** contain exactly one [1..1] **order** (CONF:1098-9953).
 - i. This order **SHALL** contain at least one [1..*] **id** (CONF:1098-9954).

Figure 13: inFulfillmentOf Example

```
<inFulfillmentOf typeCode="FLFS">
  <order classCode="ACT" moodCode="RQO">
    <id root="2.16.840.1.113883.6.96" extension="1298989898" />
    <code code="388975008" displayName="Weight Reduction Consultation"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="CPT4" />
  </order>
</inFulfillmentOf>
```

1.1.1.14 documentationOf

23. **MAY** contain zero or more [0..*] **documentationOf** (CONF:1098-14835).

A serviceEvent represents the main act being documented, such as a colonoscopy or a cardiac stress study. In a provision of healthcare serviceEvent, the care providers, PCP, or other longitudinal providers, are recorded within the serviceEvent. If the document is about a single encounter, the providers associated can be recorded in the componentOf/encompassingEncounter template.

- a. The documentationOf, if present, **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:1098-14836).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-14837).
 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1098-14838).

1.1.1.15 performer

The performer participant represents clinicians who actually and principally carry out the serviceEvent. In a transfer of care this represents the healthcare providers involved in the current or pertinent historical care of the patient. Preferably, the patient's key healthcare care team members would be listed, particularly their primary physician and any active consulting physicians, therapists, and counselors.

- ii. This serviceEvent **SHOULD** contain zero or more [0..*] **performer** (CONF:1098-14839).
 1. The performer, if present, **SHALL** contain exactly one [1..1] **@typeCode**, which **SHALL** be selected from ValueSet [x ServiceEventPerformer](#) 2.16.840.1.113883.1.11.19601 **STATIC** 2014-09-01 (CONF:1098-14840).
 2. The performer, if present, **MAY** contain zero or one [0..1] **functionCode** (CONF:1098-16818).
 - a. The functionCode, if present, **SHOULD** contain zero or one [0..1] **@code**, which **SHOULD** be selected from ValueSet [ParticipationFunction](#) 2.16.840.1.113883.1.11.10267 **STATIC** 2014-09-01 (CONF:1098-32889).
 3. The performer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-14841).

- a. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1098-14846).
 - i. Such ids **SHOULD** contain zero or one [0..1]
@root="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1098-14847).
- b. This assignedEntity **SHOULD** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy \(HIPAA\)](#) 2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1098-14842).

Figure 14: performer Example

```
<performer typeCode="PRF">
  <functionCode code="PCP"
    displayName="Primary Care Provider"
    codeSystem="2.16.840.1.113883.5.88"
    codeSystemName="ParticipationFunction">
    <originalText>Primary Care Provider</originalText>
  </functionCode>
  <assignedEntity>
    <id extension="5555555555" root="2.16.840.1.113883.4.6" />
    <code code="207QA0505X" displayName="Adult Medicine"
codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
    <addr>
      <streetAddressLine>1004 Healthcare Drive </streetAddressLine>
      <city>Portland</city>
      <state>OR</state>
      <postalCode>99123</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:+1(555)555-1004" />
    <assignedPerson>
      <name>
        <given>Patricia</given>
        <given qualifier="CL">Patty</given>
        <family>Primary</family>
        <suffix qualifier="AC">M.D.</suffix>
      </name>
    </assignedPerson>
    <representedOrganization>
      <id extension="219BX" root="1.1.1.1.1.1.1.2" />
      <name>The DoctorsTogether Physician Group</name>
      <telecom use="WP" value="tel: +(555)-555-5000" />
      <addr>
        <streetAddressLine>1004 Health Drive</streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
    </representedOrganization>
  </assignedEntity>
</performer>
```

Figure 15: documentationOf Example

```
<documentationOf>
  <serviceEvent classCode="PCPR">
    <!-- The effectiveTime reflects the provision of care summarized in the document.
    In this scenario, the provision of care summarized is the lifetime for the patient -->
    <effectiveTime>
      <low value="19750501" />
      <!-- The low value represents when the summarized provision of care began.
      In this scenario, the patient's date of birth -->
      <high value="20120915" />
      <!-- The high value represents when the summarized provision of care being ended.
      In this scenario, when chart summary was created -->
    </effectiveTime>
    <performer typeCode="PRF">
      <functionCode code="PCP"
                    displayName="Primary Care Provider"
                    codeSystem="2.16.840.1.113883.5.88"
                    codeSystemName="ParticipationFunction">
        <originalText>Primary Care Provider</originalText>
      </functionCode>
      <assignedEntity>
        <id extension="5555555555" root="2.16.840.1.113883.4.6" />
        <code code="207QA0505X" displayName="Adult Medicine"
              codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
        <addr>
          <streetAddressLine>1004 Healthcare Drive </streetAddressLine>
          <city>Portland</city>
          <state>OR</state>
          <postalCode>99123</postalCode>
          <country>US</country>
        </addr>
        <telecom use="WP" value="tel:+1(555)555-1004" />
        <assignedPerson>
          <name>
            <given>Patricia</given>
            <given qualifier="CL">Patty</given>
            <family>Primary</family>
            <suffix qualifier="AC">M.D.</suffix>
          </name>
        </assignedPerson>
        <representedOrganization>
          <id extension="219BX" root="1.1.1.1.1.1.1.1.2" />
          <name>The DoctorsTogether Physician Group</name>
          <telecom use="WP" value="tel: +(555)-555-5000" />
          <addr>
            <streetAddressLine>1004 Health Drive</streetAddressLine>
            <city>Portland</city>
            <state>OR</state>
            <postalCode>99123</postalCode>
            <country>US</country>
          </addr>
        </representedOrganization>
      </assignedEntity>
    </performer>
  </serviceEvent>
</documentationOf>
```

1.1.1.16 authorization

The authorization element represents information about the patient's consent.

The type of consent is conveyed in consent/code. Consents in the header have been finalized (consent/statusCode must equal Completed) and should be on file. This specification does not address how 'Privacy Consent' is represented, but does not preclude the inclusion of 'Privacy Consent'.

The authorization consent is used for referring to consents that are documented elsewhere in the EHR or medical record for a health condition and/or treatment that is described in the CDA document.

24. **MAY** contain zero or more [0..*] **authorization** (CONF:1098-16792) such that it
- a. **SHALL** contain exactly one [1..1] **consent** (CONF:1098-16793).
 - i. This consent **MAY** contain zero or more [0..*] **id** (CONF:1098-16794).
 - ii. This consent **MAY** contain zero or one [0..1] **code** (CONF:1098-16795).
Note: The type of consent (e.g., a consent to perform the related serviceEvent) is conveyed in consent/code.
 - iii. This consent **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-16797).
 1. This statusCode **SHALL** contain exactly one [1..1]
@code="completed" Completed (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC) (CONF:1098-16798).

Figure 16: authorization Example

```
<authorization typeCode="AUTH">
  <consent classCode="CONS" moodCode="EVN">
    <id root="629deb70-5306-11df-9879-0800200c9a66" />
    <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" code="64293-4"
    displayName="Procedure consent" />
    <statusCode code="completed" />
  </consent>
</authorization>
```

1.1.1.17 componentOf

The encompassing encounter represents the setting of the clinical encounter during which the document act(s) or ServiceEvent(s) occurred.

In order to represent providers associated with a specific encounter, they are recorded within the encompassingEncounter as participants.

In a CCD, the encompassingEncounter may be used when documenting a specific encounter and its participants. All relevant encounters in a CCD may be listed in the encounters section.

25. **MAY** contain zero or one [0..1] **componentOf** (CONF:1098-9955).

- a. The componentOf, if present, **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:1098-9956).
 - i. This encompassingEncounter **SHALL** contain at least one [1..*] **id** (CONF:1098-9959).
 - ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-9958).

Table 3: HL7 BasicConfidentialityKind

Value Set: HL7 BasicConfidentialityKind 2.16.840.1.113883.1.11.16926 A value set of HL7 Code indication the level of confidentiality an act. Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
N	ConfidentialityCode	2.16.840.1.113883.5.25	normal
R	ConfidentialityCode	2.16.840.1.113883.5.25	restricted
V	ConfidentialityCode	2.16.840.1.113883.5.25	very restricted

Table 4: Language

Value Set: Language 2.16.840.1.113883.1.11.11526 A value set of codes defined by Internet RFC 4646 (replacing RFC 3066). Please see ISO 639 language code set maintained by Library of Congress for enumeration of language codes. Value Set Source: http://www.ietf.org/rfc/rfc4646.txt			
Code	Code System	Code System OID	Print Name
aa	Language	2.16.840.1.113883.6.121	Afar
ab	Language	2.16.840.1.113883.6.121	Abkhazian
ace	Language	2.16.840.1.113883.6.121	Achinese
ach	Language	2.16.840.1.113883.6.121	Acoli
ada	Language	2.16.840.1.113883.6.121	Adangme
ady	Language	2.16.840.1.113883.6.121	Adyghe; Adygei
ae	Language	2.16.840.1.113883.6.121	Avestan
af	Language	2.16.840.1.113883.6.121	Afrikaans
afa	Language	2.16.840.1.113883.6.121	Afro-Asiatic (Other)
afh	Language	2.16.840.1.113883.6.121	Afrihili
ain	Language	2.16.840.1.113883.6.121	Ainu
ak	Language	2.16.840.1.113883.6.121	Akan
akk	Language	2.16.840.1.113883.6.121	Akkadian
ale	Language	2.16.840.1.113883.6.121	Aleut
alg	Language	2.16.840.1.113883.6.121	Algonquian languages
...			

Table 5: Telecom Use (US Realm Header)

Value Set: Telecom Use (US Realm Header) 2.16.840.1.113883.11.20.9.20			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
HP	AddressUse	2.16.840.1.113883.5.1119	Primary home
HV	AddressUse	2.16.840.1.113883.5.1119	Vacation home
WP	AddressUse	2.16.840.1.113883.5.1119	Work place
MC	AddressUse	2.16.840.1.113883.5.1119	Mobile contact

Table 6: Administrative Gender (HL7 V3)

Value Set: Administrative Gender (HL7 V3) 2.16.840.1.113883.1.11.1			
Administrative Gender based upon HL7 V3 vocabulary. This value set contains only male, female and undifferentiated concepts.			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
F	AdministrativeGender	2.16.840.1.113883.5.1	Female
M	AdministrativeGender	2.16.840.1.113883.5.1	Male
UN	AdministrativeGender	2.16.840.1.113883.5.1	Undifferentiated

Table 7: Marital Status

Value Set: Marital Status 2.16.840.1.113883.1.11.12212			
Marital Status is the domestic partnership status of a person.			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
A	MaritalStatus	2.16.840.1.113883.5.2	Annulled
D	MaritalStatus	2.16.840.1.113883.5.2	Divorced
T	MaritalStatus	2.16.840.1.113883.5.2	Domestic partner
I	MaritalStatus	2.16.840.1.113883.5.2	Interlocutory
L	MaritalStatus	2.16.840.1.113883.5.2	Legally Separated
M	MaritalStatus	2.16.840.1.113883.5.2	Married
S	MaritalStatus	2.16.840.1.113883.5.2	Never Married
P	MaritalStatus	2.16.840.1.113883.5.2	Polygamous
W	MaritalStatus	2.16.840.1.113883.5.2	Widowed

Table 8: Religious Affiliation

Value Set: Religious Affiliation 2.16.840.1.113883.1.11.19185			
A value set of codes that reflect spiritual faith affiliation.			
Value Set Source: http://www.hl7.org/v3ballotarchive_temp_16B8D83E-1C23-BA17-0CBFC625BE7BA72F/v3ballot/html/infrastructure/vocabulary/vocabulary.html#voc-sets			
Code	Code System	Code System OID	Print Name
1001	ReligiousAffiliation	2.16.840.1.113883.5.1076	Adventist
1002	ReligiousAffiliation	2.16.840.1.113883.5.1076	African Religions
1003	ReligiousAffiliation	2.16.840.1.113883.5.1076	Afro-Caribbean Religions
1004	ReligiousAffiliation	2.16.840.1.113883.5.1076	Agnosticism
1005	ReligiousAffiliation	2.16.840.1.113883.5.1076	Anglican
1006	ReligiousAffiliation	2.16.840.1.113883.5.1076	Animism
1007	ReligiousAffiliation	2.16.840.1.113883.5.1076	Atheism
1008	ReligiousAffiliation	2.16.840.1.113883.5.1076	Babi & Baha'I faiths
1009	ReligiousAffiliation	2.16.840.1.113883.5.1076	Baptist
1010	ReligiousAffiliation	2.16.840.1.113883.5.1076	Bon
1011	ReligiousAffiliation	2.16.840.1.113883.5.1076	Cao Dai
1012	ReligiousAffiliation	2.16.840.1.113883.5.1076	Celticism
1013	ReligiousAffiliation	2.16.840.1.113883.5.1076	Christian (non-Catholic, non-specific)
1014	ReligiousAffiliation	2.16.840.1.113883.5.1076	Confucianism
1015	ReligiousAffiliation	2.16.840.1.113883.5.1076	Cyberculture Religions
...			

Table 9: Race Category Excluding Nulls

Value Set: Race Category Excluding Nulls 2.16.840.1.113883.3.2074.1.1.3			
Code	Code System	Code System OID	Print Name
1002-5	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	American Indian or Alaska Native
2028-9	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Asian
2054-5	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Black or African American
2076-8	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Native Hawaiian or Other Pacific Islander
2106-3	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	White

Table 10: EthnicityGroup

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

Table 11: Personal And Legal Relationship Role Type

Value Set: Personal And Legal Relationship Role Type 2.16.840.1.113883.11.20.12.1			
A personal or legal relationship records the role of a person in relation to another person, or a person to himself or herself. This value set is to be used when recording relationships based on personal or family ties or through legal assignment of responsibility.			
Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/inrastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
SELF	RoleCode	2.16.840.1.113883.5.111	self
MTH	RoleCode	2.16.840.1.113883.5.111	mother
FTH	RoleCode	2.16.840.1.113883.5.111	father
DAU	RoleCode	2.16.840.1.113883.5.111	natural daughter
SON	RoleCode	2.16.840.1.113883.5.111	natural son
DAUINLAW	RoleCode	2.16.840.1.113883.5.111	daughter in-law
SONINLAW	RoleCode	2.16.840.1.113883.5.111	son in-law
GUARD	RoleCode	2.16.840.1.113883.5.111	guardian
HPOWATT	RoleCode	2.16.840.1.113883.5.111	healthcare power of attorney
...			

Table 12: Country

Value Set: Country 2.16.840.1.113883.3.88.12.80.63			
This identifies the codes for the representation of names of countries, territories and areas of geographical interest.			
Value Set Source: http://www.iso.org/iso/country_codes/iso_3166_code_lists.htm			
Code	Code System	Code System OID	Print Name
AW	Country	2.16.840.1.113883.3.88.12.80.63	Aruba
IL	Country	2.16.840.1.113883.3.88.12.80.63	Israel
...			

Table 13: PostalCode

Value Set: PostalCode 2.16.840.1.113883.3.88.12.80.2			
A value set of postal (ZIP) Code of an address in the United States			
Value Set Source: http://ushik.ahrq.gov/ViewItemDetails?system=mdr&itemKey=86671000			
Code	Code System	Code System OID	Print Name
19009	USPostalCodes	2.16.840.1.113883.6.231	Bryn Athyn
92869-1736	USPostalCodes	2.16.840.1.113883.6.231	Orange, CA
32830-8413	USPostalCodes	2.16.840.1.113883.6.231	Lake Buena Vista, FL
...			

Table 14: PatientLanguage

Value Set: PatientLanguage 2.16.840.1.113883.11.20.9.64			
This value set contains codes for the representation of language names as defined by the Library of Congress, the ISO 639-2 registration authority. This value set contains a subset of the ISO 639-2 alpha-3 code set, limited to those that have a corresponding ISO 639-1 alpha-2 code as required for representing a patient's language under Meaningful Use Stage 2.			
Value Set Source: http://www.loc.gov/standards/iso639-2/php/code_list.php			
Code	Code System	Code System OID	Print Name
aar	Language	2.16.840.1.113883.6.121	Afar
abk	Language	2.16.840.1.113883.6.121	Abkhazian
afr	Language	2.16.840.1.113883.6.121	Afrikaans
aka	Language	2.16.840.1.113883.6.121	Akan
sqi	Language	2.16.840.1.113883.6.121	Albanian
amh	Language	2.16.840.1.113883.6.121	Amharic
ara	Language	2.16.840.1.113883.6.121	Arabic
arg	Language	2.16.840.1.113883.6.121	Aragonese
hye	Language	2.16.840.1.113883.6.121	Armenian
asm	Language	2.16.840.1.113883.6.121	Assamese
ava	Language	2.16.840.1.113883.6.121	Avaric
ave	Language	2.16.840.1.113883.6.121	Avestan
aym	Language	2.16.840.1.113883.6.121	Aymara
aze	Language	2.16.840.1.113883.6.121	Azerbaijani
bak	Language	2.16.840.1.113883.6.121	Bashkir
...			

Table 15: LanguageAbilityMode

Value Set: LanguageAbilityMode 2.16.840.1.113883.1.11.12249 This identifies the language ability of the individual. A value representing the method of expression of the language. Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
ESGN	LanguageAbilityMode	2.16.840.1.113883.5.60	Expressed signed
ESP	LanguageAbilityMode	2.16.840.1.113883.5.60	Expressed spoken
EWR	LanguageAbilityMode	2.16.840.1.113883.5.60	Expressed written
RSGN	LanguageAbilityMode	2.16.840.1.113883.5.60	Received signed
RSP	LanguageAbilityMode	2.16.840.1.113883.5.60	Received spoken
RWR	LanguageAbilityMode	2.16.840.1.113883.5.60	Received written

Table 16: LanguageAbilityProficiency

Value Set: LanguageAbilityProficiency 2.16.840.1.113883.1.11.12199 Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
E	LanguageAbilityProficiency	2.16.840.1.113883.5.61	Excellent
F	LanguageAbilityProficiency	2.16.840.1.113883.5.61	Fair
G	LanguageAbilityProficiency	2.16.840.1.113883.5.61	Good
P	LanguageAbilityProficiency	2.16.840.1.113883.5.61	Poor

Table 17: Race

Value Set: Race 2.16.840.1.113883.1.11.14914

Concepts in the race value set include the 5 minimum categories for race specified by OMB along with a more detailed set of race categories used by the Bureau of Census.

Value Set Source:

<http://phinvads.cdc.gov/vads/ViewCodeSystemConcept.action?oid=2.16.840.1.113883.6.238&code=1000-9>

Code	Code System	Code System OID	Print Name
1002-5	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	American Indian or Alaska Native
2028-9	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Asian
2054-5	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Black or African American
2076-8	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Native Hawaiian or Other Pacific Islander
2106-3	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	White
1006-6	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Abenaki
1579-2	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Absentee Shawnee
1490-2	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Acoma
2126-1	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Afghanistani
1740-0	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Ahtna
1654-3	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Ak-Chin
1993-5	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Akhiok
1897-8	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Akiachak
1898-6	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Akiak
2007-3	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Akutan
...			

Table 18: Healthcare Provider Taxonomy (HIPAA)

<p>Value Set: Healthcare Provider Taxonomy (HIPAA) 2.16.840.1.114222.4.11.1066</p> <p>The Health Care Provider Taxonomy value set is a collection of unique alphanumeric codes, ten characters in length. The code set is structured into three distinct Levels including Provider Type, Classification, and Area of Specialization. The Health Care Provider Taxonomy code set allows a single provider (individual, group, or institution) to identify their specialty category. Providers may have one or more than one value associated to them. When determining what value or values to associate with a provider, the user needs to review the requirements of the trading partner with which the value(s) are being used.</p> <p>Value Set Source: http://www.nucc.org/index.php?option=com_content&view=article&id=14&Itemid=125</p>			
Code	Code System	Code System OID	Print Name
171100000X	Healthcare Provider Taxonomy (HIPAA)	2.16.840.1.113883.6.101	Acupuncturist
363LA2100X	Healthcare Provider Taxonomy (HIPAA)	2.16.840.1.113883.6.101	Nurse Practitioner - Acute Care
364SA2100X	Healthcare Provider Taxonomy (HIPAA)	2.16.840.1.113883.6.101	Clinical Nurse Specialist - Acute Care
101YA0400X	Healthcare Provider Taxonomy (HIPAA)	2.16.840.1.113883.6.101	Counselor - Addiction (Substance Use Disorder)
103TA0400X	Healthcare Provider Taxonomy (HIPAA)	2.16.840.1.113883.6.101	Psychologist - Addiction (Substance Use Disorder)
163WA0400X	Healthcare Provider Taxonomy (HIPAA)	2.16.840.1.113883.6.101	Registered Nurse - Addiction (Substance Use Disorder)
207LA0401X	Healthcare Provider Taxonomy (HIPAA)	2.16.840.1.113883.6.101	Anesthesiology - Addiction Medicine
207QA0401X	Healthcare Provider Taxonomy (HIPAA)	2.16.840.1.113883.6.101	Family Medicine - Addiction Medicine
207RA0401X	Healthcare Provider Taxonomy (HIPAA)	2.16.840.1.113883.6.101	Internal Medicine - Addiction Medicine
2084A0401X	Healthcare Provider Taxonomy (HIPAA)	2.16.840.1.113883.6.101	Psychiatry & Neurology - Addiction Medicine
2084P0802X	Healthcare Provider Taxonomy (HIPAA)	2.16.840.1.113883.6.101	Addiction Psychiatry
163WA2000X	Healthcare Provider Taxonomy (HIPAA)	2.16.840.1.113883.6.101	Administrator
261QM0855X	Healthcare Provider Taxonomy (HIPAA)	2.16.840.1.113883.6.101	Adolescent and Children Mental Health
2080A0000X	Healthcare Provider Taxonomy (HIPAA)	2.16.840.1.113883.6.101	Adolescent Medicine
207RA0000X	Healthcare Provider Taxonomy (HIPAA)	2.16.840.1.113883.6.101	Adolescent Medicine
...			

Table 19: INDRoleclassCodes

Value Set: INDRoleclassCodes 2.16.840.1.113883.11.20.9.33			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
PRS	RoleClass	2.16.840.1.113883.5.110	personal relationship
NOK	RoleClass	2.16.840.1.113883.5.110	next of kin
CAREGIVER	RoleClass	2.16.840.1.113883.5.110	caregiver
AGNT	RoleClass	2.16.840.1.113883.5.110	agent
GUAR	RoleClass	2.16.840.1.113883.5.110	guarantor
ECON	RoleClass	2.16.840.1.113883.5.110	emergency contact

Table 20: x_ServiceEventPerformer

Value Set: x_ServiceEventPerformer 2.16.840.1.113883.1.11.19601			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
PRF	HL7ParticipationType	2.16.840.1.113883.5.90	performer
SPRF	HL7ParticipationType	2.16.840.1.113883.5.90	secondary performer
PPRF	HL7ParticipationType	2.16.840.1.113883.5.90	primary performer

Table 21: ParticipationFunction

Value Set: ParticipationFunction 2.16.840.1.113883.1.11.10267			
This HL7-defined value set can be used to specify the exact function an actor had in a service in all necessary detail.			
Value Set Source: http://www.hl7.org/			
Code	Code System	Code System OID	Print Name
SNRS	participationFunction	2.16.840.1.113883.5.88	Scrub nurse
SASST	participationFunction	2.16.840.1.113883.5.88	Second assistant surgeon
...			

1.1.2 National Health Care Surveys

[ClinicalDocument: identifier urn:oid:2.16.840.1.113883.10.20.34.1.1 (open)]

This document-level template describes constraints that apply to three National Health Care Surveys: the National Ambulatory Medical Care Survey (NAMCS), the National Hospital Ambulatory Medical Care Survey Outpatient Department (NHAMCS OPD) and the National Hospital Ambulatory Medical Care Survey Emergency Department (NHAMCS ED). These surveys are used to collect data from physicians and to provide an analytic base that expands information on ambulatory care collected through other National Center for Health Statistics (NCHS) surveys. Physicians are assigned a one-week reporting period during which data for a random sample of patient visits are recorded on an encounter form. Data captured include

information on patient symptoms, diagnoses, and medications. The form also includes information on diagnostic procedures, patient management, and planned future treatment.

Table 22: National Health Care Surveys Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:oid:2.16.840.1.113883.10.20.34.1.1)					
templateId	1..1	SHALL		1106-1	
@root	1..1	SHALL		1106-2	2.16.840.1.113883.10.20.34.1.1
code	1..1	SHALL		1106-3	
@code	1..1	SHALL		1106-4	75619-7
@codeSystem	1..1	SHALL		1106-5	2.16.840.1.113883.6.1
recordTarget	1..*	SHALL		1106-6	
patientRole	1..1	SHALL		1106-7	
id	1..1	SHALL		1106-8	
addr	1..1	SHALL		1106-9	
country	1..1	SHALL		1106-38	US
state	1..1	SHALL		1106-39	
@nullFlavor	1..1	SHALL		1106-42	2.16.840.1.113883.5.1008 (HL7NullFlavor) = MSK
city	1..1	SHALL		1106-40	
@nullFlavor	1..1	SHALL		1106-41	2.16.840.1.113883.5.1008 (HL7NullFlavor) = MSK
postalCode	1..1	SHALL		1106-10	
streetAddressLine	1..1	SHALL		1106-43	
@nullFlavor	1..1	SHALL		1106-44	2.16.840.1.113883.5.1008 (HL7NullFlavor) = MSK
telecom	1..1	SHALL		1106-45	
@nullFlavor	1..1	SHALL		1106-46	2.16.840.1.113883.5.1008 (HL7NullFlavor) = MSK
patient	1..1	SHALL		1106-11	
name	1..1	SHALL		1106-47	
family	1..1	SHALL		1106-48	
@nullFlavor	1..1	SHALL		1106-49	2.16.840.1.113883.5.1008 (HL7NullFlavor) = MSK
given	1..1	SHALL		1106-50	
@nullFlavor	1..1	SHALL		1106-51	2.16.840.1.113883.5.1008 (HL7NullFlavor) = MSK
administrative GenderCode	1..1	SHALL		1106-12	
@nullFlavor	0..1	MAY		1106-643	OTH
@code	0..1	SHOULD		1106-644	

birthTime	1..1	SHALL		1106-13	
raceCode	1..1	SHALL		1106-15	
ethnicGroupCode	1..1	SHALL		1106-16	
documentationOf	0..*	MAY		1106-20	
serviceEvent	1..1	SHALL		1106-21	
performer	0..*	SHOULD		1106-22	
assignedEntity	1..1	SHALL		1106-53	
id	1..1	SHALL		1106-54	
@nullFlavor	1..1	SHALL		1106-55	2.16.840.1.113883.5.1008 (HL7NullFlavor) = MSK
code	1..1	SHALL		1106-56	2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
componentOf	0..1	MAY		1106-17	
encompassingEncounter	1..1	SHALL		1106-18	
id	0..1	SHOULD		1106-361	
effectiveTime	1..1	SHALL		1106-23	
low	1..1	SHALL		1106-198	
dischargeDisposition Code	1..1	SHALL		1106-19	2.16.840.1.114222.4.11.7436 (Disposition (NCHS))
component	1..1	SHALL		1106-24	
structuredBody	1..1	SHALL		1106-25	

1.1.3 Properties

1. Conforms to [US Realm Header \(V2\)](#) template (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09).

1.1.3.1 templateId

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-1) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.1.1" (CONF:1106-2).

Figure 17: National Health Care Surveys Example

```

<ClinicalDocument>
  <realmCode code="US"/>
  <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
  <!-- Conforms to US Realm Header Template -->
  <templateId root="2.16.840.1.113883.10.20.22.1.1" extension="2014-06-09" />
  <!-- Conforms to National Health Care Survey Document requirements -->
  <templateId root="2.16.840.1.113883.10.20.34.1.1"/>
  ...
</ClinicalDocument>

```

3. **SHALL** contain exactly one [1..1] **code** (CONF:1106-3).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="75619-7" National healthcare survey panel NAMCS (CONF:1106-4).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CONF:1106-5).

1.1.3.2 recordTarget

4. **SHALL** contain at least one [1..*] **recordTarget** (CONF:1106-6).
 - a. Such recordTargets **SHALL** contain exactly one [1..1] **patientRole** (CONF:1106-7).
 - i. This patientRole **SHALL** contain exactly one [1..1] **id** (CONF:1106-8).
Note: Form Element: Patient medical record No.
 - ii. This patientRole **SHALL** contain exactly one [1..1] **addr** (CONF:1106-9).
 1. This addr **SHALL** contain exactly one [1..1] **country**="US" (CONF:1106-38).
 2. This addr **SHALL** contain exactly one [1..1] **state** (CONF:1106-39).
 - a. This state **SHALL** contain exactly one [1..1] **@nullFlavor**="MSK" Masked (CodeSystem: HL7NullFlavor 2.16.840.1.113883.5.1008) (CONF:1106-42).
 3. This addr **SHALL** contain exactly one [1..1] **city** (CONF:1106-40).
 - a. This city **SHALL** contain exactly one [1..1] **@nullFlavor**="MSK" Masked (CodeSystem: HL7NullFlavor 2.16.840.1.113883.5.1008) (CONF:1106-41).
 4. This addr **SHALL** contain exactly one [1..1] **postalCode** (CONF:1106-10).
Note: Form Element: ZIP Code
 5. This addr **SHALL** contain exactly one [1..1] **streetAddressLine** (CONF:1106-43).
 - a. This streetAddressLine **SHALL** contain exactly one [1..1] **@nullFlavor**="MSK" Masked (CodeSystem: HL7NullFlavor 2.16.840.1.113883.5.1008) (CONF:1106-44).
 - iii. This patientRole **SHALL** contain exactly one [1..1] **telecom** (CONF:1106-45).
 1. This telecom **SHALL** contain exactly one [1..1] **@nullFlavor**="MSK" Masked (CodeSystem: HL7NullFlavor 2.16.840.1.113883.5.1008) (CONF:1106-46).
 - iv. This patientRole **SHALL** contain exactly one [1..1] **patient** (CONF:1106-11).
 1. This patient **SHALL** contain exactly one [1..1] **name** (CONF:1106-47).
 - a. This name **SHALL** contain exactly one [1..1] **family** (CONF:1106-48).
 - i. This family **SHALL** contain exactly one [1..1] **@nullFlavor**="MSK" Masked (CodeSystem: HL7NullFlavor 2.16.840.1.113883.5.1008) (CONF:1106-49).
 - b. This name **SHALL** contain exactly one [1..1] **given** (CONF:1106-50).

- i. This given **SHALL** contain exactly one [1..1] **@nullFlavor="MSK"** Masked (CodeSystem: HL7NullFlavor 2.16.840.1.113883.5.1008) (CONF:1106-51).

Use only M (male) or F (female) for administrativeGenderCode. UN (Undifferentiated) is not allowed, in this case use **@nullFlavor="OTH"**.

2. This patient **SHALL** contain exactly one [1..1] **administrativeGenderCode** (CONF:1106-12).
Note: Form Element: Sex
 - a. This administrativeGenderCode **MAY** contain zero or one [0..1] **@nullFlavor="OTH"** (CONF:1106-643).
 - b. This administrativeGenderCode **SHOULD** contain zero or one [0..1] **@code** (CONF:1106-644).
 - i. Where code is used it **SHALL** be either M (male) or F (female) (CONF:1106-645).

See US Realm Header recordTarget/patientRole/patient/birthTime for further birthTime constraints

3. This patient **SHALL** contain exactly one [1..1] **birthTime** (CONF:1106-13).
Note: Form Element: Date of Birth
 - a. **SHOULD** be precise to month if day is not available (CONF:1106-773).

To record multiple races, use the sdhc:RaceCode extension. This extension is described in the US Realm Header (see CONF:7263).

4. This patient **SHALL** contain exactly one [1..1] **raceCode** (CONF:1106-15).
Note: Form Element: Race
5. This patient **SHALL** contain exactly one [1..1] **ethnicGroupCode** (CONF:1106-16).
Note: Form Element: Ethnicity

Figure 18: recordTarget Example

```
<recordTarget>
  <patientRole>
    <!-- The extension is patient-specific whereas the root is organization-specific. -->
    <!-- Form Element: Patient Medical Record No. -->
    <id root="dc67750c-4926-4c83-af35-9102a8ffc2c0" />
    <!-- Addr HP is "primary home" from codeSystem 2.16.840.1.113883.5.1119 -->
    <addr use="HP">
      <streetAddressLine nullFlavor="MSK" />
      <city nullFlavor="MSK" />
      <state nullFlavor="MSK" />
      <!-- Form Element: ZIP Code -->
      <postalCode>97812</postalCode>
      <country>US</country>
    </addr>
    <telecom nullFlavor="MSK" />
    <patient>
      <name>
        <given nullFlavor="MSK" />
        <family nullFlavor="MSK" />
      </name>
      <!-- Form Element: Sex -->
      <administrativeGenderCode code="F" codeSystem="2.16.840.1.113883.5.1"
        displayName="Female" />
      <!-- Form Element: Date of Birth -->
      <birthTime value="07061968" />
      <!-- Form Element: Race -->
      <raceCode code="2028-9" displayName="Asian"
        codeSystem="2.16.840.1.113883.6.238"
        codeSystemName="Race & Ethnicity - CDC" />
      <!-- Form Element: Ethnicity -->
      <ethnicGroupCode code="2186-5" displayName="Not Hispanic or Latino"
        codeSystem="2.16.840.1.113883.6.238"
        codeSystemName="Race & Ethnicity - CDC" />
      <!-- Use languageCommunication/languageCode/@nullFlavor="NA" as
        shown below -->
      <languageCommunication>
        <languageCode nullFlavor="NA" />
      </languageCommunication>
    </patient>
  </patientRole>
</recordTarget>
```

5. **MAY** contain zero or more [0..*] **documentationOf** (CONF:1106-20).

1.1.3.3 serviceEvent

- a. The **documentationOf**, if present, **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:1106-21).

1.1.3.4 performer

- i. This serviceEvent **SHOULD** contain zero or more [0..*] **performer** (CONF:1106-22) such that it
Note: Form Element: Provider
 1. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1106-53).
 - a. This assignedEntity **SHALL** contain exactly one [1..1] **id** (CONF:1106-54).
 - i. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="MSK" Masked (CodeSystem: HL7NullFlavor 2.16.840.1.113883.5.1008) (CONF:1106-55).
 - b. This assignedEntity **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy \(HIPAA\)](#) 2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1106-56).

Figure 19: performer Example

```
<performer typeCode="PRF">
  <assignedEntity>
    <id nullFlavor="NA" />
    <!-- Form Element: Providers (seen at this visit) -->
    <code code="163W00000X" displayName="Registered Nurse"
codeSystem="2.16.840.1.113883.5.53"
      codeSystemName="Healthcare Provider Taxonomy (HIPAA)" />
    </assignedEntity>
  </performer>
<performer typeCode="PRF">
  <assignedEntity>
    <id nullFlavor="NA" />
    <!-- Form Element: Providers (seen at this visit) -->
    <code code="363A00000X" displayName="Physician Assistant"
codeSystem="2.16.840.1.113883.5.53"
      codeSystemName="Healthcare Provider Taxonomy (HIPAA)" />
    </assignedEntity>
  </performer>
```

6. **MAY** contain zero or one [0..1] **componentOf** (CONF:1106-17).

1.1.3.5 encompassingEncounter

- a. The componentOf, if present, **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:1106-18).
 - i. This encompassingEncounter **SHOULD** contain zero or one [0..1] **id** (CONF:1106-361).
Note: Form Element: Encounter Id
 - ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1106-23).

1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1106-198).

Note: Form Element: Date of Visit/Arrival Date and Time

- iii. This encompassingEncounter **SHALL** contain exactly one [1..1] **dischargeDispositionCode**, which **SHOULD** be selected from ValueSet [Disposition \(NCHS\)](#) 2.16.840.1.114222.4.11.7436 **DYNAMIC** (CONF:1106-19).

Note: Form Element: Visit Disposition

Figure 20: encompassingEncounter Example

```
<encompassingEncounter>
  <!-- Form Element: Encounter Id -->
  <id root="57edf80c-7114-4dc3-b3f4-abf515d18c90" />
  <effectiveTime>
    <!-- Form Element: Date of Visit -->
    <low value="20130815" />
    ...
  </effectiveTime>
  <dischargeDispositionCode code="PHC1270" displayName="Refer to other physician"
    codeSystem="2.16.840.1.114222.4.5.274" codeSystemName="PHIN VADS code system" />
</encompassingEncounter>
```

7. **SHALL** contain exactly one [1..1] **component** (CONF:1106-24).

1.1.3.6 structuredBody

- a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:1106-25).

Table 23: Disposition (NCHS)

Value Set: Disposition (NCHS) 2.16.840.1.114222.4.11.7436			
This value set describes visit disposition concepts.			
Value Set Source: https://phinvads.cdc.gov/			
Code	Code System	Code System OID	Print Name
PHC1270	PHIN VADS code system	2.16.840.1.114222.4.5.274	Refer to other physician
PHC1271	PHIN VADS code system	2.16.840.1.114222.4.5.274	Return at specified time
PHC1272	PHIN VADS code system	2.16.840.1.114222.4.5.274	Refer to ER/Admit to hospital
PHC1273	PHIN VADS code system	2.16.840.1.114222.4.5.274	Other

1.1.4 National Ambulatory Medical Care Survey

[ClinicalDocument: identifier urn:oid:2.16.840.1.113883.10.20.34.1.2 (open)]

Table 24: National Ambulatory Medical Care Survey Contexts

Contained By:	Contains:
	Chief Complaint and Reason for Visit Section Continuity of Care Section Diagnoses Section Immunizations Section Medications Section Patient Information Section Payment Sources Section Results Section (entries optional) (V2) Services and Procedures Section Vital Signs Section (entries required) (V2)

This template describes constraints that are specific to the National Ambulatory Medication Care Survey.

Table 25: National Ambulatory Medical Care Survey Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:oid:2.16.840.1.113883.10.20.34.1.2)					
templateId	1..1	SHALL		1106-304	
@root	1..1	SHALL		1106-305	2.16.840.1.113883.10.20.34.1.2
documentationOf	0..*	MAY		1106-422	
serviceEvent	1..1	SHALL		1106-423	
performer	0..1	SHOULD		1106-424	
functionCode	1..1	SHALL		1106-425	
@code	1..1	SHALL		1106-426	PP
@codeSystem	1..1	SHALL		1106-427	2.16.840.1.113883.3.88.12.3221.4 (Provider Role (HL7)) = 2.16.840.1.113883.12.443
assignedEntity	1..1	SHALL		1106-428	
id	1..*	SHALL		1106-429	
@nullFlavor	1..1	SHALL		1106-430	2.16.840.1.113883.5.1008 (HL7NullFlavor) = MSK
componentOf	1..1	SHALL		1106-250	
encompassing Encounter	1..1	SHALL		1106-251	
effectiveTime	1..1	SHALL		1106-252	
width	1..1	SHALL		1106-253	
component	1..1	SHALL		1106-244	
structuredBody	1..1	SHALL		1106-245	
component	1..1	SHALL		1106-246	
section	1..1	SHALL		1106-247	Patient Information Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.5
component	1..1	SHALL		1106-248	
section	1..1	SHALL		1106-249	Payment Sources Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.4
component	1..1	SHALL		1106-254	
section	1..1	SHALL		1106-255	Vital Signs Section (entries required) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4. 1:2014-06-09
component	1..1	SHALL		1106-256	
section	1..1	SHALL		1106-257	Chief Complaint and Reason for Visit Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.13
component	1..1	SHALL		1106-258	
section	1..1	SHALL		1106-259	Continuity of Care Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.8
component	1..1	SHALL		1106-260	

section	1..1	SHALL		1106-261	Diagnoses Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.2)
component	1..1	SHALL		1106-262	
section	1..1	SHALL		1106-263	Services and Procedures Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.3)
component	1..1	SHALL		1106-264	
section	1..1	SHALL		1106-265	Medications Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.1)
component	1..1	SHALL		1106-505	
section	1..1	SHALL		1106-506	Immunizations Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.7)
component	1..1	SHALL	Com ponent3	1106-765	
section	1..1	SHALL		1106-766	Results Section (entries optional) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3: 2014-06-09)

1.1.5 Properties

1. Conforms to [National Health Care Surveys](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.34.1.1).

1.1.5.1 templateId

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-304) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.1.2" (CONF:1106-305).

Figure 21: National Ambulatory Medical Care Survey Example

```

<ClinicalDocument>
  <realmCode code="US"/>
  <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
  <!-- Conforms to US Realm Header Template -->
  <templateId root="2.16.840.1.113883.10.20.22.1.1" extension="2014-06-09" />
  <!-- Conforms to National Health Care Survey Document requirements -->
  <templateId root="2.16.840.1.113883.10.20.34.1.1"/>
  <!-- Conforms to National Ambulatory Medical Care Survey Document
        requirements -->
  <templateId root="2.16.840.1.113883.10.20.34.1.2"/>
  ...
</ClinicalDocument>

```

3. **MAY** contain zero or more [0..*] **documentationOf** (CONF:1106-422).

1.1.5.2 serviceEvent

See National Health Care Surveys template for other serviceEvent elements.

- a. The documentationOf, if present, **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:1106-423).

1.1.5.3 performer

- i. This serviceEvent **SHOULD** contain zero or one [0..1] **performer** (CONF:1106-424) such that it

Note: Form Element: Patient's Primary Care Physician

1. **SHALL** contain exactly one [1..1] **functionCode** (CONF:1106-425).
 - a. This functionCode **SHALL** contain exactly one [1..1] **@code**="PP" Primary Care Provider (CONF:1106-426).
 - b. This functionCode **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.12.443" (CodeSystem: Provider Role (HL7) 2.16.840.1.113883.3.88.12.3221.4) (CONF:1106-427).
2. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1106-428).
 - a. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1106-429).
 - i. Such ids **SHALL** contain exactly one [1..1] **@nullFlavor**="MSK" Masked (CodeSystem: HL7NullFlavor 2.16.840.1.113883.5.1008) (CONF:1106-430).

Figure 22: Performer Example

```
<performer typeCode="PRF">
  <functionCode code="PP" displayName="Primary Care Provider"
codeSystem="2.16.840.1.113883.12.443"
  codeSystemName="Provider Role" />
  <assignedEntity>
    <id nullFlavor="MSK" />
  </assignedEntity>
</performer>
```

4. **SHALL** contain exactly one [1..1] **componentOf** (CONF:1106-250).

1.1.5.4 encompassingEncounter

See National Health Care Surveys template for other encompassingEncounter elements.

- a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:1106-251).
 - i. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1106-252).
 1. This effectiveTime **SHALL** contain exactly one [1..1] **width** (CONF:1106-253).

Note: Form Element: Time Spent With Provider

Figure 23: encompassingEncounter Example

```
<encompassingEncounter>
  <!-- Form Element: Encounter Id -->
  <id root="57edf80c-7114-4dc3-b3f4-abf515d18c90" />
  <effectiveTime>
    <!-- Form Element: Date of Visit -->
    <low value="20130815" />
    <!-- Form Element: Time Spent With Provider -->
    <width value="45" unit="min" />
  </effectiveTime>
  <dischargeDispositionCode code="PHC1270" displayName="Refer to other physician"
    codeSystem="2.16.840.1.114222.4.5.274" codeSystemName="PHIN VADS code system"
  />
</encompassingEncounter>
```

5. **SHALL** contain exactly one [1..1] **component** (CONF:1106-244).

1.1.5.5 structuredBody

- a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:1106-245).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-246) such that it
 1. **SHALL** contain exactly one [1..1] [Patient Information Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.5) (CONF:1106-247).
 - ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-248) such that it
 1. **SHALL** contain exactly one [1..1] [Payment Sources Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.4) (CONF:1106-249).
 - iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-254) such that it
 1. **SHALL** contain exactly one [1..1] [Vital Signs Section \(entries required\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2014-06-09) (CONF:1106-255).
 - iv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-256) such that it
 1. **SHALL** contain exactly one [1..1] [Chief Complaint and Reason for Visit Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.13) (CONF:1106-257).
 - v. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-258) such that it
 1. **SHALL** contain exactly one [1..1] [Continuity of Care Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.8) (CONF:1106-259).

- vi. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-260) such that it
 - 1. **SHALL** contain exactly one [1..1] [Diagnoses Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.2) (CONF:1106-261).
- vii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-262) such that it
 - 1. **SHALL** contain exactly one [1..1] [Services and Procedures Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.3) (CONF:1106-263).
- viii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-264) such that it
 - 1. **SHALL** contain exactly one [1..1] [Medications Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.1) (CONF:1106-265).
- ix. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-505) such that it
 - 1. **SHALL** contain exactly one [1..1] [Immunizations Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.7) (CONF:1106-506).
- x. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-765) such that it
 - 1. **SHALL** contain exactly one [1..1] [Results Section \(entries optional\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2014-06-09) (CONF:1106-766).

1.1.6 National Hospital Ambulatory Medical Care Survey - ED

[ClinicalDocument: identifier urn:oid:2.16.840.1.113883.10.20.34.1.4 (open)]

Table 26: National Hospital Ambulatory Medical Care Survey - ED Contexts

Contained By:	Contains:
	Chief Complaint and Reason for Visit Section Continuity of Care Section Diagnoses Section Hospital Admission Section Immunizations Section Medications Section Observation Unit Stay Section Patient Information Section Payment Sources Section Services and Procedures Section Triage Section Vital Signs Section (entries required) (V2)

This template describes constraints that are specific to the National Hospital Ambulatory Medical Care Survey Emergency Department (NHAMCS ED).

Table 27: National Hospital Ambulatory Medical Care Survey - ED Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:oid:2.16.840.1.113883.10.20.34.1.4)					
templateId	1..1	SHALL		1106-570	
@root	1..1	SHALL		1106-583	2.16.840.1.113883.10.20.34.1.4
documentationOf	0..*	MAY		1106-667	
serviceEvent	1..1	SHALL		1106-668	
performer	0..*	SHOULD		1106-669	
time	1..1	SHALL		1106-670	
assignedEntity	1..1	SHALL		1106-857	
code	1..1	SHALL		1106-858	2.16.840.1.114222.4.11.7419 (Provider ED (NCHS))
@nullFlavor	0..1	MAY		1106-865	OTH
componentOf	1..1	SHALL		1106-671	
encompassingEncounter	1..1	SHALL		1106-672	
effectiveTime	1..1	SHALL		1106-673	
high	1..1	SHALL		1106-674	
dischargeDispositionCode	1..1	SHALL		1106-863	2.16.840.1.114222.4.11.7437 (Disposition ED (NCHS))
@nullFlavor	0..1	MAY		1106-864	OTH
component	1..1	SHALL		1106-571	
structuredBody	1..1	SHALL		1106-572	
component	1..1	SHALL		1106-573	
section	1..1	SHALL		1106-582	Payment Sources Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.4)
component	1..1	SHALL		1106-574	
section	1..1	SHALL		1106-584	Vital Signs Section (entries required) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2014-06-09)
component	1..1	SHALL		1106-575	
section	1..1	SHALL		1106-585	Chief Complaint and Reason for Visit Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.13)
component	1..1	SHALL		1106-576	
section	1..1	SHALL		1106-586	Diagnoses Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.2)

component	1..1	SHALL		1106-577	
section	1..1	SHALL		1106-587	Services and Procedures Section (identifier: urn:oid:2.16.840.1.113883.10.20.3 4.2.3)
component	1..1	SHALL		1106-578	
section	1..1	SHALL		1106-588	Medications Section (identifier: urn:oid:2.16.840.1.113883.10.20.3 4.2.1)
component	1..1	SHALL		1106-579	
section	1..1	SHALL		1106-589	Immunizations Section (identifier: urn:oid:2.16.840.1.113883.10.20.3 4.2.7)
component	0..1	MAY		1106-580	
section	1..1	SHALL		1106-590	Hospital Admission Section (identifier: urn:oid:2.16.840.1.113883.10.20.3 4.2.9)
component	1..1	SHALL		1106-581	
section	1..1	SHALL		1106-591	Triage Section (identifier: urn:oid:2.16.840.1.113883.10.20.3 4.2.10)
component	1..1	SHALL		1106-759	
section	1..1	SHALL		1106-760	Continuity of Care Section (identifier: urn:oid:2.16.840.1.113883.10.20.3 4.2.8)
component	0..1	MAY		1106-807	
section	1..1	SHALL		1106-808	Observation Unit Stay Section (identifier: urn:oid:2.16.840.1.113883.10.20.3 4.2.11)
component	1..1	SHALL		1106-809	
section	1..1	SHALL		1106-810	Patient Information Section (identifier: urn:oid:2.16.840.1.113883.10.20.3 4.2.5)

1.1.7 Properties

1. Conforms to [National Health Care Surveys](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.34.1.1).

1.1.7.1 templateId

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-570) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.1.4" (CONF:1106-583).

Figure 24: National Hospital Ambulatory Medical Care Survey - ED Example

```
<ClinicalDocument>
  <realmCode code="US"/>
  <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
  <!-- Conforms to US Realm Header Template -->
  <templateId root="2.16.840.1.113883.10.20.22.1.1" extension="2014-06-09" />
  <!-- Conforms to National Health Care Survey Document requirements -->
  <templateId root="2.16.840.1.113883.10.20.34.1.1"/>
  <!-- Conforms to National Hospital Ambulatory Medical Care Survey
        - ED Document requirements -->
  <templateId root="2.16.840.1.113883.10.20.34.1.4"/>
  ...
</ClinicalDocument>
```

3. **MAY** contain zero or more [0..*] **documentationOf** (CONF:1106-667).

1.1.7.2 serviceEvent

- a. The documentationOf, if present, **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:1106-668).

1.1.7.3 performer

See National Health Care Surveys template for other performer elements.

- i. This serviceEvent **SHOULD** contain zero or more [0..*] **performer** (CONF:1106-669) such that it
Note: Form Element: Provider
1. **SHALL** contain exactly one [1..1] **time** (CONF:1106-670).
Note: Form Element: Date and time seen by MD/DO/PA/NP
 2. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1106-857).
 - a. This assignedEntity **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Provider ED \(NCHS\)](#) 2.16.840.1.114222.4.11.7419 **DYNAMIC** (CONF:1106-858).
 - i. This code **MAY** contain zero or one [0..1] **@nullFlavor="OTH"** (CONF:1106-865).

Figure 25: performer Example

```
<performer typeCode="PRF">
  <time>
    <low value="201308151045"/>
  </time>
  <assignedEntity>
    <id nullFlavor="NA"/>
    <!-- Form Element: Providers (seen at this visit) -->
    <code code="405277009" displayName="Resident physician"
          codeSystem="2.16.840.1.113883.6.96"
          codeSystemName="SNOMED CT"/>
  </assignedEntity>
</performer>
```

4. **SHALL** contain exactly one [1..1] **componentOf** (CONF:1106-671).

1.1.7.4 encompassingEncounter

See National Health Care Surveys template for other encompassingEncounter elements.

- a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:1106-672).
 - i. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1106-673).
 1. This effectiveTime **SHALL** contain exactly one [1..1] **high** (CONF:1106-674).

Note: Form Element: ED Departure, if released or transferred
 - ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **dischargeDispositionCode**, which **SHOULD** be selected from ValueSet [Disposition ED \(NCHS\)](#) 2.16.840.1.114222.4.11.7437 **DYNAMIC** (CONF:1106-863).
 1. This dischargeDispositionCode **MAY** contain zero or one [0..1] **@nullFlavor="OTH"** (CONF:1106-864).

Figure 26: encompassingEncounter Example

```
<encompassingEncounter>
  <!-- Form Element: Encounter Id -->
  <id root="57edf80c-7114-4dc3-b3f4-abf515d18c90"/>
  <effectiveTime>
    <!-- Form Element: Date of Visit -->
    <low value="201308150730"/>
    <!-- Form element: ED departure, if release or transferred -->
    <high value="201308160920"/>
  </effectiveTime>
  <dischargeDispositionCode code="306253008" displayName="Referral to doctor"
    codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"/>
</encompassingEncounter>
```

5. **SHALL** contain exactly one [1..1] **component** (CONF:1106-571).

1.1.7.5 structuredBody

- a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:1106-572).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-573) such that it
 - 1. **SHALL** contain exactly one [1..1] Payment Sources Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.4) (CONF:1106-582).
 - ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-574) such that it
 - 1. **SHALL** contain exactly one [1..1] Vital Signs Section (entries required) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2014-06-09) (CONF:1106-584).
 - iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-575) such that it
 - 1. **SHALL** contain exactly one [1..1] Chief Complaint and Reason for Visit Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.13) (CONF:1106-585).
 - iv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-576) such that it
 - 1. **SHALL** contain exactly one [1..1] Diagnoses Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.2) (CONF:1106-586).
 - v. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-577) such that it
 - 1. **SHALL** contain exactly one [1..1] Services and Procedures Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.3) (CONF:1106-587).
 - vi. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-578) such that it
 - 1. **SHALL** contain exactly one [1..1] Medications Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.1) (CONF:1106-588).
 - vii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-579) such that it
 - 1. **SHALL** contain exactly one [1..1] Immunizations Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.7) (CONF:1106-589).
 - viii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1106-580) such that it

1. **SHALL** contain exactly one [1..1] [Hospital Admission Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.9) (CONF:1106-590).
- ix. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-581) such that it
 1. **SHALL** contain exactly one [1..1] [Triage Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.10) (CONF:1106-591).
- x. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-759) such that it
 1. **SHALL** contain exactly one [1..1] [Continuity of Care Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.8) (CONF:1106-760).

If the patient had an observation unit stay then it is required that the Observation Unit Stay Section is present.

- xi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1106-807) such that it
 1. **SHALL** contain exactly one [1..1] [Observation Unit Stay Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.11) (CONF:1106-808).
- xii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-809) such that it
 1. **SHALL** contain exactly one [1..1] [Patient Information Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.5) (CONF:1106-810).

Table 28: Provider ED (NCHS)

Value Set: Provider ED (NCHS) 2.16.840.1.114222.4.11.7419			
Provider types			
Value Set Source: http://www.phinvads.com			
Code	Code System	Code System OID	Print Name
405279007	SNOMED CT	2.16.840.1.113883.6.96	Attending physician
405277009	SNOMED CT	2.16.840.1.113883.6.96	Resident physician
309343006	SNOMED CT	2.16.840.1.113883.6.96	Physician
442251000124100	SNOMED CT	2.16.840.1.113883.6.96	Licensed Practical Nurse
224535009	SNOMED CT	2.16.840.1.113883.6.96	Registered nurse
224571005	SNOMED CT	2.16.840.1.113883.6.96	Nurse practitioner
449161006	SNOMED CT	2.16.840.1.113883.6.96	Physician assistant
397897005	SNOMED CT	2.16.840.1.113883.6.96	Paramedic
310191001	SNOMED CT	2.16.840.1.113883.6.96	Clinical psychologist
310190000	SNOMED CT	2.16.840.1.113883.6.96	Mental health counselor
80292009	SNOMED CT	2.16.840.1.113883.6.96	Psychiatric social worker
224583007	SNOMED CT	2.16.840.1.113883.6.96	Behavior therapist

Table 29: Disposition ED (NCHS)

Value Set: Disposition ED (NCHS) 2.16.840.1.114222.4.11.7437			
Value Set Source: http://phinivads.cdc.gov			
Code	Code System	Code System OID	Print Name
266750002	SNOMED CT	2.16.840.1.113883.6.96	No follow-up arranged
183660001	SNOMED CT	2.16.840.1.113883.6.96	Refer to Accident and Emergency department
183851006	SNOMED CT	2.16.840.1.113883.6.96	Referral to clinic
306253008	SNOMED CT	2.16.840.1.113883.6.96	Referral to doctor
445060000	SNOMED CT	2.16.840.1.113883.6.96	Left against medical advice
11545006	SNOMED CT	2.16.840.1.113883.6.96	Emergency room admission, dead on arrival
75004002	SNOMED CT	2.16.840.1.113883.6.96	Emergency room admission, died in emergency room
25675004	SNOMED CT	2.16.840.1.113883.6.96	Patient transfer to skilled nursing facility
442271000124105	SNOMED CT	2.16.840.1.113883.6.96	Patient transfer to psychiatric hospital
19712007	SNOMED CT	2.16.840.1.113883.6.96	Patient transfer, to another health care facility
183452005	SNOMED CT	2.16.840.1.113883.6.96	Emergency hospital admission
432661000124104	SNOMED CT	2.16.840.1.113883.6.96	Hospital admission, transfer from emergency department
442291000124106	SNOMED CT	2.16.840.1.113883.6.96	Discharge from observation unit
445741000124104	SNOMED CT	2.16.840.1.113883.6.96	Left after triage
445751000124102	SNOMED CT	2.16.840.1.113883.6.96	Left before triage
...			

1.1.8 National Hospital Ambulatory Medical Care Survey - OPD

[ClinicalDocument: identifier urn:oid:2.16.840.1.113883.10.20.34.1.3 (open)]

Table 30: National Hospital Ambulatory Medical Care Survey - OPD Contexts

Contained By:	Contains:
	Chief Complaint and Reason for Visit Section Continuity of Care Section Diagnoses Section Immunizations Section Medications Section Patient Information Section Payment Sources Section Results Section (entries optional) (V2) Services and Procedures Section Vital Signs Section (entries required) (V2)

This template describes constraints that are specific to the National Hospital Ambulatory Medical Care Survey Outpatient Department (NHAMCS OPD).

Table 31: National Hospital Ambulatory Medical Care Survey - OPD Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:oid:2.16.840.1.113883.10.20.34.1.3)					
templateId	1..1	SHALL		1106-306	
@root	1..1	SHALL		1106-307	2.16.840.1.113883.10.20.34.1.3
documentationOf	0..*	MAY		1106-455	
serviceEvent	1..1	SHALL		1106-456	
performer	0..1	SHOULD		1106-457	
functionCode	1..1	SHALL		1106-458	
@code	1..1	SHALL		1106-459	PP
@codeSystem	1..1	SHALL		1106-460	2.16.840.1.113883.3.88.12.3221.4
component	1..1	SHALL		1106-284	
structuredBody	1..1	SHALL		1106-285	
component	1..1	SHALL		1106-286	
section	1..1	SHALL		1106-287	Patient Information Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.5)
component	1..1	SHALL		1106-288	
section	1..1	SHALL		1106-289	Payment Sources Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.4)
component	1..1	SHALL		1106-290	
section	1..1	SHALL		1106-291	Vital Signs Section (entries required) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1: 2014-06-09)
component	1..1	SHALL		1106-292	
section	1..1	SHALL		1106-293	Chief Complaint and Reason for Visit Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.13)
component	1..1	SHALL		1106-294	
section	1..1	SHALL		1106-295	Continuity of Care Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.8)
component	1..1	SHALL		1106-296	
section	1..1	SHALL		1106-297	Diagnoses Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.2)
component	1..1	SHALL		1106-298	
section	1..1	SHALL		1106-299	Services and Procedures Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.3)
component	1..1	SHALL		1106-300	
section	1..1	SHALL		1106-301	Medications Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.1)

component	1..1	SHALL		1106-507	
section	1..1	SHALL		1106-508	Immunizations Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.7)
component	1..1	SHALL		1106-763	
section	1..1	SHALL		1106-764	Results Section (entries optional) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2014-06-09)

1.1.9 Properties

1. Conforms to [National Health Care Surveys](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.34.1.1).

1.1.9.1 templateId

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-306) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.1.3" (CONF:1106-307).

Figure 27: National Hospital Ambulatory Medical Care Survey - OPD Example

```

<ClinicalDocument>
  <realmCode code="US"/>
  <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
  <!-- Conforms to US Realm Header Template -->
  <templateId root="2.16.840.1.113883.10.20.22.1.1" extension="2014-06-09" />
  <!-- Conforms to National Health Care Survey Document requirements -->
  <templateId root="2.16.840.1.113883.10.20.34.1.1"/>
  <!-- Conforms to National Health Care Survey -
        OPD Document requirements -->
  <templateId root="2.16.840.1.113883.10.20.34.1.3"/>
  ...
</ClinicalDocument>

```

3. **MAY** contain zero or more [0..*] **documentationOf** (CONF:1106-455).

1.1.9.2 serviceEvent

See National Health Care Surveys template for other serviceEvent elements.

- a. The documentationOf, if present, **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:1106-456).

1.1.9.3 performer

- i. This serviceEvent **SHOULD** contain zero or one [0..1] **performer** (CONF:1106-457) such that it
 1. **SHALL** contain exactly one [1..1] **functionCode** (CONF:1106-458).
Note: Form Element: Patient's Primary Care Provider

- a. This functionCode **SHALL** contain exactly one [1..1] @code="PP" Primary Care Provider (CONF:1106-459).
- b. This functionCode **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.3.88.12.3221.4" (CONF:1106-460).

Figure 28: Performer Example

```
<performer typeCode="PRF">
  <!-- Form Element: Patient's Primary Care Provider -->
  <functionCode code="PP" displayName="Primary Care Provider"
    codeSystem="2.16.840.1.113883.12.443" codeSystemName="Provider Role"/>
  <assignedEntity>
    <id nullFlavor="MSK"/>
  </assignedEntity>
</performer>
```

4. **SHALL** contain exactly one [1..1] **component** (CONF:1106-284).

1.1.9.4 structuredBody

- a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:1106-285).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-286) such that it
 1. **SHALL** contain exactly one [1..1] Patient Information Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.5) (CONF:1106-287).
 - ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-288) such that it
 1. **SHALL** contain exactly one [1..1] Payment Sources Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.4) (CONF:1106-289).
 - iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-290) such that it
 1. **SHALL** contain exactly one [1..1] Vital Signs Section (entries required) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2014-06-09) (CONF:1106-291).
 - iv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-292) such that it
 1. **SHALL** contain exactly one [1..1] Chief Complaint and Reason for Visit Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.13) (CONF:1106-293).
 - v. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-294) such that it

1. **SHALL** contain exactly one [1..1] [Continuity of Care Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.8) (CONF:1106-295).
- vi. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-296) such that it
 1. **SHALL** contain exactly one [1..1] [Diagnoses Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.2) (CONF:1106-297).
- vii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-298) such that it
 1. **SHALL** contain exactly one [1..1] [Services and Procedures Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.3) (CONF:1106-299).
- viii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-300) such that it
 1. **SHALL** contain exactly one [1..1] [Medications Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.1) (CONF:1106-301).
- ix. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-507) such that it
 1. **SHALL** contain exactly one [1..1] [Immunizations Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.7) (CONF:1106-508).
- x. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1106-763) such that it
 1. **SHALL** contain exactly one [1..1] [Results Section \(entries optional\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2014-06-09) (CONF:1106-764).

2 SECTION-LEVEL TEMPLATES

This chapter contains the section-level templates referenced by one or more of the document types of this guide. These templates describe the purpose of each section and the section-level constraints.

Section-level templates are always included in a document. One and only one of each section type is allowed in a given document instance. Please see the document context tables to determine the sections that are contained in a given document type. Please see the conformance verb in the conformance statements to determine if it is required (SHALL), strongly recommended (SHOULD) or optional (MAY).

Each section-level template contains the following:

- Template metadata (e.g., templateId, etc.)
- Description and explanatory narrative
- LOINC section code
- Section title
- Requirements for a text element
- Entry-level template names and Ids for referenced templates (required and optional)

Narrative Text

The text element within the section stores the narrative to be rendered, as described in the CDA R2 specification, and is referred to as the CDA narrative block.

The content model of the CDA narrative block schema is hand crafted to meet requirements of human readability and rendering. The schema is registered as a MIME type (text/x-hl7-text+xml), which is the fixed media type for the text element.

As noted in the CDA R2 specification, the document originator is responsible for ensuring that the narrative block contains the complete, human readable, attested content of the section. Structured entries support computer processing and computation and are not a replacement for the attestable, human-readable content of the CDA narrative block. The special case of structured entries with an entry relationship of "DRIV" (is derived from) indicates to the receiving application that the source of the narrative block is the structured entries, and that the contents of the two are clinically equivalent.

As for all CDA documents—even when a report consisting entirely of structured entries is transformed into CDA—the encoding application must ensure that the authenticated content (narrative plus multimedia) is a faithful and complete rendering of the clinical content of the structured source data. As a general guideline, a generated narrative block should include the same human readable content that would be available to users viewing that content in the originating system. Although content formatting in the narrative block need not be identical to that in the originating system, the narrative block should use elements from the CDA narrative block schema to provide sufficient formatting to support human readability when rendered according to the rules defined in Section Narrative Block (§ 4.3.5) of the CDA R2 specification.

By definition, a receiving application cannot assume that all clinical content in a section (i.e., in the narrative block and multimedia) is contained in the structured entries unless the entries in the section have an entry relationship of "DRIV".

Additional specification information for the CDA narrative block can be found in the CDA R2 specification in sections 1.2.1, 1.2.3, 1.3, 1.3.1, 1.3.2, 4.3.4.2, and 6.

2.1 Chief Complaint and Reason for Visit Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.22.2.13 (open)]

Table 32: Chief Complaint and Reason for Visit Section Contexts

Contained By:	Contains:
National Ambulatory Medical Care Survey (required) National Hospital Ambulatory Medical Care Survey - OPD (required) National Hospital Ambulatory Medical Care Survey - ED (required)	

This section records the patient's chief complaint (the patient's own description) and/or the reason for the patient's visit (the provider's description of the reason for visit). Local policy determines whether the information is divided into two sections or recorded in one section serving both purposes.

Table 33: Chief Complaint and Reason for Visit Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.13)					
templateId	1..1	SHALL		81-7840	
@root	1..1	SHALL		81-10383	2.16.840.1.113883.10.20.22.2.13
code	1..1	SHALL		81-15449	
@code	1..1	SHALL		81-15450	46239-0
@codeSystem	1..1	SHALL		81-26473	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-7842	
text	1..1	SHALL		81-7843	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7840) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.13" (CONF:81-10383).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15449).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="46239-0" Chief Complaint and Reason for Visit (CONF:81-15450).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:81-26473).

3. **SHALL** contain exactly one [1..1] **title** (CONF:81-7842).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-7843).

Figure 29: Chief Complaint and Reason for Visit Example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.13"/>
  <code code="46239-0"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="CHIEF COMPLAINT AND REASON FOR VISIT"/>
  <title> CHIEF COMPLAINT</title>
  <text>Back Pain</text>
</section>
```

2.2 Diagnoses Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.34.2.2 (open)]

Table 34: Diagnoses Section Contexts

Contained By:	Contains:
National Ambulatory Medical Care Survey (required) National Hospital Ambulatory Medical Care Survey - OPD (required) National Hospital Ambulatory Medical Care Survey - ED (required)	Adverse Effect of Medical Treatment Asthma Diagnosis Observation Co-morbid Condition Observation Diagnosis Observation Injury or Poisoning Observation Primary Diagnosis Observation

This section contains diagnoses, including chronic conditions.

Table 35: Diagnoses Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.2)					
templateId	1..1	SHALL		1106-67	
@root	1..1	SHALL		1106-68	2.16.840.1.113883.10.20.34.2.2
code	1..1	SHALL		1106-509	
@code	1..1	SHALL		1106-510	11450-4
@codeSystem	1..1	SHALL		1106-511	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1106-512	
text	1..1	SHALL		1106-513	
entry	1..1	SHALL		1106-74	
observation	1..1	SHALL		1106-75	Primary Diagnosis Observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.6)
entry	0..*	SHOULD		1106-332	
observation	1..1	SHALL		1106-333	Diagnosis Observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.1)
entry	0..*	SHOULD		1106-337	
observation	1..1	SHALL		1106-338	Co-morbid Condition Observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.4)
entry	0..1	MAY		1106-346	
observation	1..1	SHALL		1106-347	Asthma Diagnosis Observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.5)
entry	0..*	MAY		1106-415	
observation	1..1	SHALL		1106-416	Injury or Poisoning Observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.17)
entry	0..1	MAY		1106-497	
observation	1..1	SHALL		1106-498	Adverse Effect of Medical Treatment (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.14)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-67) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.2.2" (CONF:1106-68).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1106-509).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="11450-4" Problem List (CONF:1106-510).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1106-511).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1106-512).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1106-513).

5. **SHALL** contain exactly one [1..1] **entry** (CONF:1106-74) such that it
 - a. **SHALL** contain exactly one [1..1] [Primary Diagnosis Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.6) (CONF:1106-75).
6. **SHOULD** contain zero or more [0..*] **entry** (CONF:1106-332) such that it
 - a. **SHALL** contain exactly one [1..1] [Diagnosis Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.1) (CONF:1106-333).
7. **SHOULD** contain zero or more [0..*] **entry** (CONF:1106-337) such that it
 - a. **SHALL** contain exactly one [1..1] [Co-morbid Condition Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.4) (CONF:1106-338).
8. **MAY** contain zero or one [0..1] **entry** (CONF:1106-346) such that it
 - a. **SHALL** contain exactly one [1..1] [Asthma Diagnosis Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.5) (CONF:1106-347).
9. **MAY** contain zero or more [0..*] **entry** (CONF:1106-415) such that it
 - a. **SHALL** contain exactly one [1..1] [Injury or Poisoning Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.17) (CONF:1106-416).
10. **MAY** contain zero or one [0..1] **entry** (CONF:1106-497) such that it
 - a. **SHALL** contain exactly one [1..1] [Adverse Effect of Medical Treatment](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.14) (CONF:1106-498).

Figure 30: Diagnoses Section Example

```
<section>
  <!-- Diagnoses Section -->
  <templateId root="2.16.840.1.113883.10.20.34.2.2" />
  <code code="11450-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    displayName="PROBLEM LIST" />
  <title>Diagnoses</title>
  <text>
    ...
  </text>
  <entry>
    <!-- This observation represents the primary diagnosis -->
    <observation classCode="OBS" moodCode="EVN">
      <!-- Conforms to C-CDA R2 Problem Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
      <!-- Primary Diagnosis Observation -->
      <templateId root="2.16.840.1.113883.10.20.34.3.6" />
      ...
    </observation>
  </entry>
  <entry>
    <!-- This observation represents a diagnosis -->
    <observation classCode="OBS" moodCode="EVN">
      <!-- Conforms to C-CDA R2 Problem Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
      <!-- Diagnosis Observation -->
      <templateId root="2.16.840.1.113883.10.20.34.3.1" />
      ...
    </observation>
  </entry>
  <entry>
    <!-- This observation represents a co-morbid condition -->
    <observation classCode="OBS" moodCode="EVN">
      <!-- Conforms to C-CDA R2 Problem Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
      <!-- Co-morbid Condition Observation -->
      <templateId root="2.16.840.1.113883.10.20.34.3.4" />
      ...
    </observation>
  </entry>
  <!-- This entryRelationship represents an asthma diagnosis -->
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- Conforms to C-CDA R2 Problem Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
      <!-- Asthma Diagnosis Observation -->
      <templateId root="2.16.840.1.113883.10.20.34.3.5" />
      ...
    </observation>
  </entry>
  <!-- This entry represents whether the visit was related to an injury
    or poisoning -->
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- Conforms to C-CDA R2 Problem Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
```

```

        <!-- Injury or Poisoning Observation -->
        <templateId root="2.16.840.1.113883.10.20.34.3.17" />
        ...
    </observation>
</entry>
<!-- This entry represents whether the visit was related to adverse
     effect of medical treatment -->
<entry>
    <observation classCode="OBS" moodCode="EVN">
        <!-- Conforms to C-CDA R2 Problem Observation (V2) -->
        <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
        <!-- Adverse Effect of Medical Treatment -->
        <templateId root="2.16.840.1.113883.10.20.34.3.14" />
        ...
    </observation>
</entry>
</section>

```

2.3 Encounters Section (entries optional) (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.22:2014-06-09
(open)]

Table 36: Encounters Section (entries optional) (V2) Contexts

Contained By:	Contains:
	Encounter Activity (V2)

This section lists and describes any healthcare encounters pertinent to the patient’s current health status or historical health history. An encounter is an interaction, regardless of the setting, between a patient and a practitioner who is vested with primary responsibility for diagnosing, evaluating, or treating the patient’s condition. It may include visits, appointments, or non-face-to-face interactions. It is also a contact between a patient and a practitioner who has primary responsibility (exercising independent judgment) for assessing and treating the patient at a given contact. This section may contain all encounters for the time period being summarized, but should include notable encounters.

Table 37: Encounters Section (entries optional) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.22:2014-06-09)					
templateId	1..1	SHALL		1098-7940	
@root	1..1	SHALL		1098-10386	2.16.840.1.113883.10.20.22.2.22
@extension	1..1	SHALL		1098-32547	2014-06-09
code	1..1	SHALL		1098-15461	
@code	1..1	SHALL		1098-15462	46240-8
@codeSystem	1..1	SHALL		1098-31136	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-7942	
text	1..1	SHALL		1098-7943	
entry	0..*	SHOULD		1098-7951	
encounter	1..1	SHALL		1098-15465	Encounter Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2014-06-09)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7940) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.22" (CONF:1098-10386).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32547).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15461).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="46240-8" Encounters (CONF:1098-15462).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1098-31136).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-7942).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-7943).
5. **SHOULD** contain zero or more [0..*] **entry** (CONF:1098-7951) such that it
 - a. **SHALL** contain exactly one [1..1] [Encounter Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2014-06-09) (CONF:1098-15465).

2.3.1 Continuity of Care Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.34.2.8 (open)]

Table 38: Continuity of Care Section Contexts

Contained By:	Contains:
National Ambulatory Medical Care Survey (required) National Hospital Ambulatory Medical Care Survey - OPD (required) National Hospital Ambulatory Medical Care Survey - ED (required)	Current Visit

This section contains continuity of care information such as previous visits to the practice.

Table 39: Continuity of Care Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.8)					
templateId	1..1	SHALL		1106-431	
@root	1..1	SHALL		1106-432	2.16.840.1.113883.10.20.34.2.8
entry	0..*	MAY		1106-439	
encounter	1..1	SHALL		1106-440	Current Visit (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.10)

1. Conforms to [Encounters Section \(entries optional\) \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.22:2014-06-09).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-431) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.2.8" (CONF:1106-432).
3. **MAY** contain zero or more [0..*] **entry** (CONF:1106-439) such that it
 - a. **SHALL** contain exactly one [1..1] [Current Visit](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.10) (CONF:1106-440).

Figure 31: Continuity of Care Section Example

```
<section>
  <!-- Conforms to C-CDA Encounters Section (entries optional) (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.2.22" extension="2014-06-09" />
  <!-- Continuity of Care Section -->
  <templateId root="2.16.840.1.113883.10.20.34.2.8" />
  <code code="46240-8" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    displayName="History of encounters" />
  <title>Continuity of Care</title>
  <text>
    ...
  </text>
  <!-- Current Visit -->
  <entry>
    <encounter classCode="ENC" moodCode="EVN">
      <!-- Conforms to C-CDA R2 Encounter Activity (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.49" extension="2014-06-09" />
      <!-- Current Visit -->
      <templateId root="2.16.840.1.113883.10.20.34.3.10" />
      ...
    </encounter>
  </entry>
</section>
```

2.3.2 Hospital Admission Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.34.2.9 (open)]

Table 40: Hospital Admission Section Contexts

Contained By:	Contains:
National Hospital Ambulatory Medical Care Survey - ED (optional)	Hospital Admission Encounter

This section contains hospital admission information such as admitted-to unit, admission and discharge dates, and admitting clinician.

Table 41: Hospital Admission Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.9)					
templateId	1..1	SHALL		1106-557	
@root	1..1	SHALL		1106-559	2.16.840.1.113883.10.20.34.2.9
entry	1..1	SHALL		1106-556	
encounter	1..1	SHALL		1106-558	Hospital Admission Encounter (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.18)

1. Conforms to [Encounters Section \(entries optional\) \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.22:2014-06-09).

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-557) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.2.9" (CONF:1106-559).
3. **SHALL** contain exactly one [1..1] **entry** (CONF:1106-556).
 - a. This entry **SHALL** contain exactly one [1..1] [Hospital Admission Encounter](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.18) (CONF:1106-558).

Figure 32: Hospital Admission Section Example

```
<section>
  <!-- Conforms to C-CDA Encounters Section (entries optional) (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.2.22" extension="2014-06-09" />
  <!-- Hospital Admission Section -->
  <templateId root="2.16.840.1.113883.10.20.34.2.9" />
  <code code="46240-8" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    displayName="Encounters" />
  <title>Hospital Admission</title>
  <text>
    ...
  </text>
  <!-- Hospital Admission-->
  <entry>
    <encounter classCode="ENC" moodCode="EVN">
      <!-- Conforms to C-CDA R2 Encounter Activity (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.49" extension="2014-06-09" />
      <!-- Hospital Admission Encounter -->
      <templateId root="2.16.840.1.113883.10.20.34.3.18" />
      ...
    </encounter>
  </entry>
</section>
```

2.3.3 Observation Unit Stay Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.34.2.11 (open)]

Table 42: Observation Unit Stay Section Contexts

Contained By:	Contains:
National Hospital Ambulatory Medical Care Survey - ED (optional)	Observation Unit Stay Encounter

This section contains observation unit stay information such as observation unit stay discharge date and time.

Table 43: Observation Unit Stay Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.11)					
templateId	1..1	SHALL		1106-804	
@root	1..1	SHALL		1106-806	2.16.840.1.113883.10.20.34.2.11
entry	1..1	SHALL		1106-803	
encounter	1..1	SHALL		1106-805	Observation Unit Stay Encounter (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.33)

1. Conforms to [Encounters Section \(entries optional\) \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.22:2014-06-09).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-804) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.2.11" (CONF:1106-806).
3. **SHALL** contain exactly one [1..1] **entry** (CONF:1106-803).
 - a. This entry **SHALL** contain exactly one [1..1] [Observation Unit Stay Encounter](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.33) (CONF:1106-805).

Figure 33: Observation Unit Stay Section Example

```

<section>
  <!-- Conforms to C-CDA Encounters Section (entries optional) (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.2.22" extension="2014-06-09" />
  <!-- Observation Unit Stay Section -->
  <templateId root="2.16.840.1.113883.10.20.34.2.11" />
  <code code="46240-8" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    displayName="Encounters" />
  <title>Observation Unit Stay</title>
  <text>
    ...
  </text>
  <!-- Form Element: Observation Unit Stay-->
  <entry>
    <encounter classCode="ENC" moodCode="EVN">
      <!-- Conforms to C-CDA R2 Encounter Activity (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.49" extension="2014-06-09" />
      <!-- Observation Unit Stay Encounter -->
      <templateId root="2.16.840.1.113883.10.20.34.3.33" />
      ...
    </encounter>
  </entry>
</section>

```

2.4 Medications Section (entries optional) (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.1:2014-06-09
(open)]

Table 44: Medications Section (entries optional) (V2) Contexts

Contained By:	Contains:
	Medication Activity (V2)

The Medications Section contains a patient's current medications and pertinent medication history. At a minimum, the currently active medications are listed. An entire medication history is an option. The section can describe a patient's prescription and dispense history and information about intended drug monitoring.

Table 45: Medications Section (entries optional) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.1:2014-06-09)					
templateId	1..1	SHALL		1098-7791	
@root	1..1	SHALL		1098-10432	2.16.840.1.113883.10.20.22.2.1
@extension	1..1	SHALL		1098-32500	2014-06-09
code	1..1	SHALL		1098-15385	
@code	1..1	SHALL		1098-15386	10160-0
@codeSystem	1..1	SHALL		1098-30824	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-7793	
text	1..1	SHALL		1098-7794	
entry	0..*	SHOULD		1098-7795	
substanceAdministration	1..1	SHALL		1098-10076	Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7791) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.1" (CONF:1098-10432).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32500).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15385).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="10160-0" History of medication use (CONF:1098-15386).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1098-30824).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-7793).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-7794).

5. **SHOULD** contain zero or more [0..*] **entry** (CONF:1098-7795) such that it
 - a. **SHALL** contain exactly one [1..1] [Medication Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09) (CONF:1098-10076).

2.4.1 Immunizations Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.34.2.7 (open)]

Table 46: Immunizations Section Contexts

Contained By:	Contains:
National Ambulatory Medical Care Survey (required) National Hospital Ambulatory Medical Care Survey - OPD (required) National Hospital Ambulatory Medical Care Survey - ED (required)	Immunization Activity (V2) Planned Immunization Activity

This section contains immunizations that were ordered, supplied, administered, or continued during this visit.

Table 47: Immunizations Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.7)					
templateId	1..1	SHALL		1106-501	
@root	1..1	SHALL		1106-504	2.16.840.1.113883.10.20.34.2.7
entry	0..*	SHOULD		1106-499	
substanceAdministration	1..1	SHALL		1106-502	Immunization Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.2.4.52:2014-06-09)
entry	0..*	SHOULD		1106-500	
substanceAdministration	1..1	SHALL		1106-503	Planned Immunization Activity (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.120)

1. Conforms to [Medications Section \(entries optional\) \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.1:2014-06-09).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-501) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.2.7" (CONF:1106-504).
3. **SHOULD** contain zero or more [0..*] **entry** (CONF:1106-499) such that it
 - a. **SHALL** contain exactly one [1..1] [Immunization Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2014-06-09) (CONF:1106-502).
4. **SHOULD** contain zero or more [0..*] **entry** (CONF:1106-500) such that it
 - a. **SHALL** contain exactly one [1..1] [Planned Immunization Activity](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.120) (CONF:1106-503).

Figure 34: Immunizations Section Example

```
<section>
  <!-- Conforms to C-CDA Medications Section (entries optional) (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.2.1" extension="2014-06-09" />
  <!-- Immunizations Section -->
  <templateId root="2.16.840.1.113883.10.20.34.2.7" />
  <code code="10160-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    displayName="HISTORY OF MEDICATION USE" />
  <title>Immunizations</title>
  <text>
    ...
  </text>
  <entry typeCode="DRIV">
    <substanceAdministration classCode="SBADM" moodCode="EVN">
      <!-- C-CDA Immunization Activity (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.52" extension="2014-06-09" />
      ...
    </substanceAdministration>
  </entry>
  <entry typeCode="DRIV">
    <substanceAdministration classCode="SBADM" moodCode="RQO">
      <!-- C-CDA R2 Planned Immunization Activity (NEW) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.120" />
      ...
    </substanceAdministration>
  </entry>
</section>
```

2.4.2 Medications Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.34.2.1 (open)]

Table 48: Medications Section Contexts

Contained By:	Contains:
National Ambulatory Medical Care Survey (required)	Medication Activity (V2)
National Hospital Ambulatory Medical Care Survey - OPD (required)	Planned Medication Activity (V2)
National Hospital Ambulatory Medical Care Survey - ED (required)	

This section contains medications (other than immunizations) that were ordered, supplied, administered, or continued during this visit. It includes Rx and OTC drugs, allergy shots, oxygen, anesthetics, chemotherapy, and dietary supplements.

Table 49: Medications Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.1)					
templateId	1..1	SHALL		1106-356	
@root	1..1	SHALL		1106-357	2.16.840.1.113883.10.20.34.2.1
entry	0..*	SHOULD		1106-348	
substanceAdministration	1..1	SHALL		1106-349	Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.2.4.16:2014-06-09)
entry	0..*	SHOULD		1106-350	
substanceAdministration	1..1	SHALL		1106-351	Planned Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.2.4.42:2014-06-09)

1. Conforms to [Medications Section \(entries optional\) \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.1:2014-06-09).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-356) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.2.1" (CONF:1106-357).
3. **SHOULD** contain zero or more [0..*] **entry** (CONF:1106-348) such that it
 - a. **SHALL** contain exactly one [1..1] [Medication Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09) (CONF:1106-349).
4. **SHOULD** contain zero or more [0..*] **entry** (CONF:1106-350) such that it
 - a. **SHALL** contain exactly one [1..1] [Planned Medication Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09) (CONF:1106-351).

Figure 35: Medications Section Example

```
<section>
  <!-- Conforms to C-CDA Medications Section (entries optional) (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.2.1" extension="2014-06-09" />
  <!-- Medications Section -->
  <templateId root="2.16.840.1.113883.10.20.34.2.1" />
  <code code="10160-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    displayName="HISTORY OF MEDICATION USE" />
  <title>Medications</title>
  <text>
    ...
  </text>
  <entry typeCode="DRIV">
    <substanceAdministration classCode="SBADM" moodCode="EVN">
      <!-- C-CDA R2 Medication Activity (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09" />
      ...
    </substanceAdministration>
  </entry>
  <entry typeCode="DRIV">
    <substanceAdministration classCode="SBADM" moodCode="RQO">
      <!-- C-CDA R2 Planned Medication Activity (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.42" extension="2014-06-09" />
      ...
    </substanceAdministration>
  </entry>
</section>
```

2.5 Payers Section (V2)

```
[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2014-06-09
(open)]
```

Table 50: Payers Section (V2) Contexts

Contained By:	Contains:
	Coverage Activity (V2)

The Payers Section contains data on the patient's payers, whether "third party" insurance, self-pay, other payer or guarantor, or some combination of payers, and is used to define which entity is the responsible fiduciary for the financial aspects of a patient's care.

Each unique instance of a payer and all the pertinent data needed to contact, bill to, and collect from that payer should be included. Authorization information that can be used to define pertinent referral, authorization tracking number, procedure, therapy, intervention, device, or similar authorizations for the patient or provider, or both should be included. At a minimum, the patient's pertinent current payment sources should be listed.

The sources of payment are represented as a Coverage Activity, which identifies all of the insurance policies or government or other programs that cover some or all of the patient's healthcare expenses. The policies or programs are sequenced by preference. The Coverage

Activity has a sequence number that represents the preference order. Each policy or program identifies the covered party with respect to the payer, so that the identifiers can be recorded.

Table 51: Payers Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2014-06-09)					
templateId	1..1	SHALL		1098-7924	
@root	1..1	SHALL		1098-10434	2.16.840.1.113883.10.20.22.2.18
@extension	1..1	SHALL		1098-32597	2014-06-09
code	1..1	SHALL		1098-15395	
@code	1..1	SHALL		1098-15396	48768-6
@codeSystem	1..1	SHALL		1098-32149	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-7926	
text	1..1	SHALL		1098-7927	
entry	0..*	SHOULD		1098-7959	
act	1..1	SHALL		1098-15501	Coverage Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.60:2014-06-09)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7924) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.18" (CONF:1098-10434).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32597).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15395).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="48768-6" Payers (CONF:1098-15396).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1098-32149).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-7926).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-7927).
5. **SHOULD** contain zero or more [0..*] **entry** (CONF:1098-7959) such that it
 - a. **SHALL** contain exactly one [1..1] [Coverage Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.60:2014-06-09) (CONF:1098-15501).

Figure 36: Payers Section (V2) Example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.18" extension="2014-06-09" />
  <!-- ***** Payers section template ***** -->
  <code code="48768-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Payers" />
  <title>Insurance Providers</title>
  <text>
    . . .
  </text>
  <entry typeCode="DRIV">
    <act classCode="ACT" moodCode="DEF">
      <templateId root="2.16.840.1.113883.10.20.22.4.60" extension="2014-06-09" />
      <!-- **** Coverage entry template **** -->
      ...
    </act>
  </entry>
</section>
```

2.5.1 Payment Sources Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.34.2.4 (open)]

Table 52: Payment Sources Section Contexts

Contained By:	Contains:
National Ambulatory Medical Care Survey (required) National Hospital Ambulatory Medical Care Survey - OPD (required) National Hospital Ambulatory Medical Care Survey - ED (required)	Planned Coverage

This section contains the expected sources of payment for this visit.

Table 53: Payment Sources Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.4)					
templateId	1..1	SHALL		1106-199	
@root	1..1	SHALL		1106-200	2.16.840.1.113883.10.20.34.2.4
entry	0..*	SHOULD		1106-201	
act	1..1	SHALL		1106-202	Planned Coverage (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.129

1. Conforms to [Payers Section \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2014-06-09).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-199) such that it

- a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.34.2.4" (CONF:1106-200).
3. **SHOULD** contain zero or more [0..*] **entry** (CONF:1106-201) such that it
 - a. **SHALL** contain exactly one [1..1] [Planned Coverage](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.129) (CONF:1106-202).

Figure 37: Payment Sources Section Example

```
<section>
  <!-- Conforms to C-CDA Payers Section (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.2.18" extension="2014-06-09" />
  <!-- Payment Sources Section -->
  <templateId root="2.16.840.1.113883.10.20.34.2.4" />
  <code code="48768-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    displayName="Payers" />
  <title>Payment Sources Section</title>
  <text>
    ...
  </text>
  <entry>
    <!-- Form Element: Expected source of payment for this visit -->
    <act classCode="ACT" moodCode="INT">
      <!-- Planned Coverage -->
      <templateId root="2.16.840.1.113883.10.20.22.4.129" />
      ...
    </act>
  </entry>
  <entry>
    <!-- Form Element: Expected source of payment for this visit -->
    <act classCode="ACT" moodCode="INT">
      <!-- Planned Coverage -->
      <templateId root="2.16.840.1.113883.10.20.22.4.129" />
      ...
    </act>
  </entry>
</section>
```

2.6 Results Section (entries optional) (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2014-06-09
(open)]

Table 54: Results Section (entries optional) (V2) Contexts

Contained By:	Contains:
National Ambulatory Medical Care Survey (required)	Result Organizer (V2)
National Hospital Ambulatory Medical Care Survey - OPD (required)	

This section contains the results of observations generated by laboratories, imaging and other procedures. The scope includes observations of hematology, chemistry, serology, virology, toxicology, microbiology, plain x-ray, ultrasound, CT, MRI, angiography, echocardiography, nuclear medicine, pathology, and procedure observations.

This section often includes notable results such as abnormal values or relevant trends. It can contain all results for the period of time being documented.

Laboratory results are typically generated by laboratories providing analytic services in areas such as chemistry, hematology, serology, histology, cytology, anatomic pathology, microbiology, and/or virology. These observations are based on analysis of specimens obtained from the patient and submitted to the laboratory.

Imaging results are typically generated by a clinician reviewing the output of an imaging procedure, such as where a cardiologist reports the left ventricular ejection fraction based on the review of a cardiac echocardiogram.

Procedure results are typically generated by a clinician to provide more granular information about component observations made during a procedure, such as where a gastroenterologist reports the size of a polyp observed during a colonoscopy.

Table 55: Results Section (entries optional) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2014-06-09)					
templateId	1..1	SHALL		1098-7116	
@root	1..1	SHALL		1098-9136	2.16.840.1.113883.10.20.22.2.3
@extension	1..1	SHALL		1098-32591	2014-06-09
code	1..1	SHALL		1098-15431	
@code	1..1	SHALL		1098-15432	30954-2
@codeSystem	1..1	SHALL		1098-31041	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-8891	
text	1..1	SHALL		1098-7118	
entry	0..*	SHOULD		1098-7119	
organizer	1..1	SHALL		1098-15515	Result Organizer (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2014-06-09)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7116) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.3" (CONF:1098-9136).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32591).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15431).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="30954-2" Relevant diagnostic tests and/or laboratory data (CONF:1098-15432).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1098-31041).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-8891).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-7118).

5. **SHOULD** contain zero or more [0..*] **entry** (CONF:1098-7119) such that it
- a. **SHALL** contain exactly one [1..1] **Result Organizer (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2014-06-09) (CONF:1098-15515).

2.7 Services and Procedures Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.34.2.3 (open)]

Table 56: Services and Procedures Section Contexts

Contained By:	Contains:
National Ambulatory Medical Care Survey (required) National Hospital Ambulatory Medical Care Survey - OPD (required) National Hospital Ambulatory Medical Care Survey - ED (required)	Ordered Service Act Ordered Service Observation Ordered Service Procedure Provided Service Act Provided Service Observation Provided Service Procedure

This section contains services and procedures such as examinations, blood tests, imaging, other tests, non-medication treatment, and health education ordered for or provided to the patient.

Table 57: Services and Procedures Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.3)					
templateId	1..1	SHALL		1106-76	
@root	1..1	SHALL		1106-86	2.16.840.1.113883.10.20.34.2.3
entry	0..*	MAY		1106-82	
act	1..1	SHALL		1106-275	Provided Service Act (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.20)
entry	0..*	MAY		1106-84	
act	1..1	SHALL		1106-85	Ordered Service Act (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.19)
entry	0..*	MAY		1106-276	
observation	1..1	SHALL		1106-277	Provided Service Observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.3)
entry	0..*	MAY		1106-278	
observation	1..1	SHALL		1106-279	Ordered Service Observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.2)
entry	0..*	MAY		1106-280	
procedure	1..1	SHALL		1106-281	Provided Service Procedure (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.12)
entry	0..*	MAY		1106-282	
procedure	1..1	SHALL		1106-283	Ordered Service Procedure (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.11)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-76) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.2.3" (CONF:1106-86).
2. **MAY** contain zero or more [0..*] **entry** (CONF:1106-82) such that it
 - a. **SHALL** contain exactly one [1..1] [Provided Service Act](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.20) (CONF:1106-275).
Note: Form Element Categories (Services): Provided Other Tests and Procedures (except Excision of Tissue), Provided Non-medication treatment, Provided Health Education/Counseling
3. **MAY** contain zero or more [0..*] **entry** (CONF:1106-84) such that it
 - a. **SHALL** contain exactly one [1..1] [Ordered Service Act](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.19) (CONF:1106-85).
Note: Form Element Categories (Services): Ordered Other Tests and Procedures (except Excision of Tissue), Ordered Non-medication treatment, Ordered Health Education/Counseling
4. **MAY** contain zero or more [0..*] **entry** (CONF:1106-276) such that it
 - a. **SHALL** contain exactly one [1..1] [Provided Service Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.3) (CONF:1106-277).

Note: Form Element Categories (Services): Provided Examinations, Provided Blood Tests, Provided Imaging

5. **MAY** contain zero or more [0..*] **entry** (CONF:1106-278) such that it
 - a. **SHALL** contain exactly one [1..1] [Ordered Service Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.2) (CONF:1106-279).
Note: Form Element Categories (Services): Ordered Examinations, Ordered Blood Tests, Ordered Imaging
6. **MAY** contain zero or more [0..*] **entry** (CONF:1106-280) such that it
 - a. **SHALL** contain exactly one [1..1] [Provided Service Procedure](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.12) (CONF:1106-281).
Note: Form Element (Services): Provided Excision of Tissue
7. **MAY** contain zero or more [0..*] **entry** (CONF:1106-282) such that it
 - a. **SHALL** contain exactly one [1..1] [Ordered Service Procedure](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.11) (CONF:1106-283).
Note: Form Element (Services): Ordered Excision of Tissue

Figure 38: Services and Procedures Section Example

```
<section>
  <!-- Services and Procedures Section -->
  <templateId root="2.16.840.1.113883.10.20.34.2.3" />
  <code code="62387-6" displayName="Interventions Provided"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <title>Services and Procedures Section</title>
  <text>
    ...
  </text>
  <!-- This entry represents a service activity that has been ordered,
    but not yet provided -->
  <entry>
    <act classCode="ACT" moodCode="RQO">
      <!-- Confirms to C-CDA R2 Planned Act (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.39" extension="2014-06-09" />
      <!-- Ordered Service Act -->
      <templateId root="2.16.840.1.113883.10.20.34.3.19" />
      ...
    </act>
  </entry>
  <!-- This entry represents a procedure service that has been ordered,
    but not yet provided -->
  <entry>
    <procedure classCode="PROC" moodCode="RQO">
      <!-- Confirms to C-CDA R2 Planned Procedure (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.41" extension="2014-06-09" />
      <!-- Ordered Service Procedure -->
      <templateId root="2.16.840.1.113883.10.20.34.3.11" />
      ...
    </procedure>
  </entry>
  <!-- This entry represents an observation service that has been ordered,
    but not yet provided -->
  <entry>
    <observation classCode="OBS" moodCode="RQO">
      <!-- Confirms to C-CDA R2 Planned Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.44" extension="2014-06-09" />
      <!-- Ordered Service Observation -->
      <templateId root="2.16.840.1.113883.10.20.34.3.2" />
      ...
    </observation>
  </entry>
  <!-- This entry represents a service act that has been provided -->
  <entry>
    <act classCode="ACT" moodCode="EVN">
      <!-- Confirms to C-CDA R2 Procedure Activity Act (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.12" extension="2014-06-09" />
      <!-- Provided Service Act -->
      <templateId root="2.16.840.1.113883.10.20.34.3.20" />
      ...
    </act>
  </entry>
  <!-- This entry represents weight-reducing diet education service act
    that has been provided -->
  <entry>
```

```

<act classCode="ACT" moodCode="EVN">
  <!-- Conforms to C-CDA R2 Procedure Activity Act (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.12" extension="2014-06-09" />
  <!-- Provided Service Act -->
  <templateId root="2.16.840.1.113883.10.20.34.3.20" />
  ...
</act>
</entry>
<!-- This entry represents a procedure service that has been provided -->
<entry>
  <procedure classCode="PROC" moodCode="EVN">
    <!-- Conforms to C-CDA R2 Procedure Activity Procedure (V2) -->
    <templateId root="2.16.840.1.113883.10.20.22.4.14" extension="2014-06-09" />
    <!-- Provided Service Procedure -->
    <templateId root="2.16.840.1.113883.10.20.34.3.12" />
    ...
  </procedure>
</entry>
<!-- This entry represents an observation service that has been provided -->
<entry>
  <observation classCode="OBS" moodCode="EVN">
    <!-- Conforms to C-CDA R2 Procedure Activity Observation (V2) -->
    <templateId root="2.16.840.1.113883.10.20.22.4.13" extension="2014-06-09" />
    <!-- Provided Service Observation -->
    <templateId root="2.16.840.1.113883.10.20.34.3.3" />
    ...
  </observation>
</entry>
</section>

```

2.8 Social History Section (V2)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.17:2014-06-09
(open)]

Table 58: Social History Section (V2) Contexts

Contained By:	Contains:
	Caregiver Characteristics Characteristics of Home Environment Cultural and Religious Observation Pregnancy Observation Smoking Status - Meaningful Use (V2) Social History Observation (V2) Tobacco Use (V2)

This section contains social history data that influence a patient's physical, psychological or emotional health (e.g., smoking status, pregnancy). Demographic data, such as marital status, race, ethnicity, and religious affiliation, is captured in the header.

Table 59: Social History Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2014-06-09)					
templateId	1..1	SHALL		1098-7936	
@root	1..1	SHALL		1098-10449	2.16.840.1.113883.10.20.22.2.17
@extension	1..1	SHALL		1098-32494	2014-06-09
code	1..1	SHALL		1098-14819	
@code	1..1	SHALL		1098-14820	29762-2
@codeSystem	1..1	SHALL		1098-30814	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-7938	
text	1..1	SHALL		1098-7939	
entry	0..*	MAY		1098-7953	
observation	1..1	SHALL		1098-14821	Social History Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2014-06-09)
entry	0..*	MAY		1098-9132	
observation	1..1	SHALL		1098-14822	Pregnancy Observation (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.8)
entry	0..*	SHOULD		1098-14823	
observation	1..1	SHALL		1098-14824	Smoking Status - Meaningful Use (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09)
entry	0..*	MAY		1098-16816	
observation	1..1	SHALL		1098-16817	Tobacco Use (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09)
entry	0..*	MAY		1098-28361	
observation	1..1	SHALL		1098-28362	Caregiver Characteristics (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.72)
entry	0..*	MAY		1098-28366	
observation	1..1	SHALL		1098-28367	Cultural and Religious Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.111)
entry	0..*	MAY		1098-28825	
observation	1..1	SHALL		1098-28826	Characteristics of Home Environment (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.109)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7936) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.17" (CONF:1098-10449).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32494).

2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-14819).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="29762-2" Social History (CONF:1098-14820).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1098-30814).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-7938).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-7939).
5. **MAY** contain zero or more [0..*] **entry** (CONF:1098-7953) such that it
 - a. **SHALL** contain exactly one [1..1] [Social History Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2014-06-09) (CONF:1098-14821).
6. **MAY** contain zero or more [0..*] **entry** (CONF:1098-9132) such that it
 - a. **SHALL** contain exactly one [1..1] [Pregnancy Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.8) (CONF:1098-14822).
7. **SHOULD** contain zero or more [0..*] **entry** (CONF:1098-14823) such that it
 - a. **SHALL** contain exactly one [1..1] [Smoking Status - Meaningful Use \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09) (CONF:1098-14824).
8. **MAY** contain zero or more [0..*] **entry** (CONF:1098-16816) such that it
 - a. **SHALL** contain exactly one [1..1] [Tobacco Use \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09) (CONF:1098-16817).
9. **MAY** contain zero or more [0..*] **entry** (CONF:1098-28361) such that it
 - a. **SHALL** contain exactly one [1..1] [Caregiver Characteristics](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.72) (CONF:1098-28362).
10. **MAY** contain zero or more [0..*] **entry** (CONF:1098-28366) such that it
 - a. **SHALL** contain exactly one [1..1] [Cultural and Religious Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.111) (CONF:1098-28367).
11. **MAY** contain zero or more [0..*] **entry** (CONF:1098-28825) such that it
 - a. **SHALL** contain exactly one [1..1] [Characteristics of Home Environment](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.109) (CONF:1098-28826).

Figure 39: Social History Section (V2) Example

```
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.22.2.17" extension="2014-06-09" />
    <code code="29762-2" codeSystem="2.16.840.1.113883.6.1" displayName="Social
History" />
    <title>SOCIAL HISTORY</title>
    <text>
      . . .
    </text>
    <entry>
      <observation classCode="OBS" moodCode="EVN">
        <!-- Social History Observation (V2)-->
        <templateId root="2.16.840.1.113883.10.20.22.4.38" extension="2014-06-09"
/>
      ...

      </observation>
    </entry>
    <entry>
      <observation classCode="OBS" moodCode="EVN">
        <!-- Smoking Status - Meaningful Use (V2) -->
        <templateId root="2.16.840.1.113883.10.20.22.4.78" extension="2014-06-09"
/>
      ...

      </observation>
    </entry>
    <entry>
      <observation classCode="OBS" moodCode="EVN">
        <!-- Caregiver Characteristics -->
        <templateId root="2.16.840.1.113883.10.20.22.4.72" />
      ...

      </observation>
    </entry>
    <entry>
      <observation classCode="OBS" moodCode="EVN">
        <!-- **Cultural and Religious Observation**-->
        <templateId root="2.16.840.1.113883.10.20.22.4.111" />
      ...

      </observation>
    </entry>
    <entry>
      <observation classCode="OBS" moodCode="EVN">
        <!-- ** Characteristics of Home Environment** -->
        <templateId root="2.16.840.1.113883.10.20.22.4.109" />
      ...

      </observation>
    </entry>
  </section>
</component>
```

```
</section></component>
```

2.8.1 Patient Information Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.34.2.5 (open)]

Table 60: Patient Information Section Contexts

Contained By:	Contains:
National Ambulatory Medical Care Survey (required)	Patient Residence Observation
National Hospital Ambulatory Medical Care Survey - OPD (required)	Pregnancy Observation
National Hospital Ambulatory Medical Care Survey - ED (required)	Tobacco Use (V2)

This section contains patient information such as tobacco use, pregnancy status, mode of arrival at hospital, and whether or not the patient was on oxygen on arrival at the hospital.

Table 61: Patient Information Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.5)					
templateId	1..1	SHALL		1106-203	
@root	1..1	SHALL		1106-204	2.16.840.1.113883.10.20.34.2.5
entry	0..1	MAY		1106-205	
observation	1..1	SHALL		1106-206	Tobacco Use (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09)
entry	0..1	MAY		1106-207	
observation	1..1	SHALL		1106-208	Pregnancy Observation (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.8)
entry	0..1	MAY		1106-676	
observation	1..1	SHALL		1106-677	Patient Residence Observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.25)

1. Conforms to [Social History Section \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2014-06-09).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-203) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.2.5" (CONF:1106-204).
3. **MAY** contain zero or one [0..1] **entry** (CONF:1106-205) such that it
 - a. **SHALL** contain exactly one [1..1] [Tobacco Use \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09) (CONF:1106-206).
 - b. If the document is a National Ambulatory Medical Care Survey (templateId: 2.16.840.1.113883.10.20.34.1.2) or a National Hospital Ambulatory Medical Care

Survey - OPD (templateId: 2.16.840.1.113883.10.20.34.1.3) then this entry **SHALL** be present (CONF:1106-663).

4. **MAY** contain zero or one [0..1] **entry** (CONF:1106-207) such that it
 - a. **SHALL** contain exactly one [1..1] Pregnancy Observation (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.8) (CONF:1106-208).
 - b. If the patient is male, then this section **SHALL NOT** contain this entry.
If the document is a National Ambulatory Medical Care Survey (templateId: 2.16.840.1.113883.10.20.34.1.2) or a National Hospital Ambulatory Medical Care Survey - OPD (templateId: 2.16.840.1.113883.10.20.34.1.3) then this entry **MAY** be present (CONF:1106-514).
5. **MAY** contain zero or one [0..1] **entry** (CONF:1106-676) such that it
 - a. **SHALL** contain exactly one [1..1] Patient Residence Observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.25) (CONF:1106-677).
 - b. If the document is a National Hospital Ambulatory Medical Care Survey - ED (templateId: 2.16.840.1.113883.10.20.34.1.4) then this entry **SHALL** be present (CONF:1106-678).

Figure 40: Patient Information Section Example 1

```
<section>
  <!-- Conforms to C-CDA Social History Section (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.2.17" extension="2014-06-09" />
  <!-- Patient Information Section -->
  <templateId root="2.16.840.1.113883.10.20.34.2.5" />
  <code code="29762-2" codeSystem="2.16.840.1.113883.6.1"
    displayName="Social History" />
  <title>Patient Information</title>
  <text>
    ...
  </text>
  <entry>
    <!-- Form Element: Tobacco Use -->
    <observation classCode="OBS" moodCode="EVN">
      <!-- Tobacco Use (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.85" extension="2014-06-09" />
      ...
    </observation>
  </entry>
  <entry>
    <!-- Form Element: Is Female Patient Pregnant -->
    <observation classCode="OBS" moodCode="EVN">
      <!-- C-CDA R2 Pregnancy Observation -->
      <templateId root="2.16.840.1.113883.10.20.15.3.8" />
      ...
    </observation>
  </entryRelationship>
</observation>
</entry>
</section>
```

Figure 41: Patient Information Section Example 2

```
<section>
  <!-- Conforms to C-CDA Social History Section (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.2.17" extension="2014-06-09" />
  <!-- Patient Information Section -->
  <templateId root="2.16.840.1.113883.10.20.34.2.5" />
  <code code="29762-2" codeSystem="2.16.840.1.113883.6.1"
    displayName="Social History" />
  <title>Patient Information Section</title>
  <text>
    ...
  </text>
  <entry>
    <!-- Patient Residence Observation-->
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.34.3.25" />
      ...
    </observation>
  </entry>
</section>
```

2.9 Triage Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.34.2.10 (open)]

Table 62: Triage Section Contexts

Contained By:	Contains:
National Hospital Ambulatory Medical Care Survey - ED (required)	On Oxygen on Arrival Observation Pain Assessment Scale Observation Triage Level Assigned Observation

This section contains triage information such as triage index, pain scale and whether the patient was on oxygen on arrival.

Table 63: Triage Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.10)					
templateId	1..1	SHALL		1106-646	
@root	1..1	SHALL		1106-647	2.16.840.1.113883.10.20.34.2.10
code	1..1	SHALL		1106-648	
@code	0..1	MAY		1106-649	54094-8
@codeSystem	0..1	MAY		1106-650	2.16.840.1.113883.6.1
title	1..1	SHALL		1106-651	
text	1..1	SHALL		1106-652	
entry	1..1	SHALL		1106-622	
observation	1..1	SHALL		1106-624	Triage Level Assigned Observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.23)
entry	1..1	SHALL		1106-623	
observation	1..1	SHALL		1106-625	Pain Assessment Scale Observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.22)
entry	1..1	SHALL		1106-716	
observation	1..1	SHALL		1106-717	On Oxygen on Arrival Observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.29)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-646) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.2.10" (CONF:1106-647).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1106-648).
 - a. This code **MAY** contain zero or one [0..1] **@code**="54094-8" Triage Note (CONF:1106-649).
 - b. This code **MAY** contain zero or one [0..1] **@codeSystem**="2.16.840.1.113883.6.1" (CONF:1106-650).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1106-651).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1106-652).
5. **SHALL** contain exactly one [1..1] **entry** (CONF:1106-622) such that it
 - a. **SHALL** contain exactly one [1..1] [Triage Level Assigned Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.23) (CONF:1106-624).
6. **SHALL** contain exactly one [1..1] **entry** (CONF:1106-623) such that it
 - a. **SHALL** contain exactly one [1..1] [Pain Assessment Scale Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.22) (CONF:1106-625).
7. **SHALL** contain exactly one [1..1] **entry** (CONF:1106-716) such that it
 - a. **SHALL** contain exactly one [1..1] [On Oxygen on Arrival Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.29) (CONF:1106-717).

Figure 42: Triage Section Example

```
<section>
  <!-- Triage Section -->
  <templateId root="2.16.840.1.113883.10.20.34.2.10" />
  <code code="54094-8" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    displayName="Triage Note" />
  <title>Triage Section</title>
  <text>
    ...
  </text>
  <entry>
    <!-- Triage Level Assigned Observation -->
    <observation classCode="OBS" moodCode="EVN">
      <!-- Conforms to C-CDA R2 Assessment Scale Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.69" />
      <!-- Triage Level Assigned Observation -->
      <templateId root="2.16.840.1.113883.10.20.34.3.23" />
      ...
    </observation>
  </entry>
  <entry>
    <!-- Pain Assessment Scale Observation -->
    <observation classCode="OBS" moodCode="EVN">
      <!-- Conforms to C-CDA R2 Assessment Scale Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.69" />
      <!-- Pain Assessment Scale Observation -->
      <templateId root="2.16.840.1.113883.10.20.34.3.22" />
      ...
    </observation>
  </entry>
  <entry>
    <!-- On Oxygen on Arrival Observation -->
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.34.3.29" />
      ...
    </observation>
  </entry>
</section>
```

2.10 Vital Signs Section (entries optional) (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.4:2014-06-09
(open)]

Table 64: Vital Signs Section (entries optional) (V2) Contexts

Contained By:	Contains:
	Vital Signs Organizer (V2)

The Vital Signs Section contains relevant vital signs for the context and use case of the document type, such as blood pressure, heart rate, respiratory rate, height, weight, body mass index, head circumference, pulse oximetry, temperature, and body surface area. The section

should include notable vital signs such as the most recent, maximum and/or minimum, baseline, or relevant trends.

Vital signs are represented in the same way as other results, but are aggregated into their own section to follow clinical conventions.

Table 65: Vital Signs Section (entries optional) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4:2014-06-09)					
templateId	1..1	SHALL		1098-7268	
@root	1..1	SHALL		1098-10451	2.16.840.1.113883.10.20.22.2.4
@extension	1..1	SHALL		1098-32584	2014-06-09
code	1..1	SHALL		1098-15242	
@code	1..1	SHALL		1098-15243	8716-3
@codeSystem	1..1	SHALL		1098-30902	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-9966	
text	1..1	SHALL		1098-7270	
entry	0..*	SHOULD		1098-7271	
organizer	1..1	SHALL		1098-15517	Vital Signs Organizer (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2014-06-09)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7268) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.4" (CONF:1098-10451).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32584).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15242).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="8716-3" Vital Signs (CONF:1098-15243).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1098-30902).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-9966).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-7270).
5. **SHOULD** contain zero or more [0..*] **entry** (CONF:1098-7271) such that it
 - a. **SHALL** contain exactly one [1..1] [Vital Signs Organizer \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2014-06-09) (CONF:1098-15517).

2.10.1 Vital Signs Section (entries required) (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2014-06-09
(open)]

Table 66: Vital Signs Section (entries required) (V2) Contexts

Contained By:	Contains:
National Ambulatory Medical Care Survey (required) National Hospital Ambulatory Medical Care Survey - OPD (required) National Hospital Ambulatory Medical Care Survey - ED (required)	Vital Signs Organizer (V2)

The Vital Signs Section contains relevant vital signs for the context and use case of the document type, such as blood pressure, heart rate, respiratory rate, height, weight, body mass index, head circumference, pulse oximetry, temperature, and body surface area. The section should include notable vital signs such as the most recent, maximum and/or minimum, baseline, or relevant trends.

Vital signs are represented in the same way as other results, but are aggregated into their own section to follow clinical conventions.

Table 67: Vital Signs Section (entries required) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2014-06-09)					
@nullFlavor	0..1	MAY		1098-32874	2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1098-7273	
@root	1..1	SHALL		1098-10452	2.16.840.1.113883.10.20.22.2.4.1
@extension	1..1	SHALL		1098-32585	2014-06-09
code	1..1	SHALL		1098-15962	
@code	1..1	SHALL		1098-15963	8716-3
@codeSystem	1..1	SHALL		1098-30903	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-9967	
text	1..1	SHALL		1098-7275	
entry	1..*	SHALL		1098-7276	
organizer	1..1	SHALL		1098-15964	Vital Signs Organizer (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2014-06-09)

1. Conforms to [Vital Signs Section \(entries optional\) \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4:2014-06-09).
2. **MAY** contain zero or one [0..1] @nullFlavor="NI" No information (CodeSystem: HL7NullFlavor 2.16.840.1.113883.5.1008) (CONF:1098-32874).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-7273) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.4.1" (CONF:1098-10452).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32585).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15962).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="8716-3" Vital Signs (CONF:1098-15963).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1098-30903).
5. **SHALL** contain exactly one [1..1] **title** (CONF:1098-9967).
6. **SHALL** contain exactly one [1..1] **text** (CONF:1098-7275).

If section/@nullFlavor is not present:

7. **SHALL** contain at least one [1..*] **entry** (CONF:1098-7276) such that it
 - a. **SHALL** contain exactly one [1..1] Vital Signs Organizer (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2014-06-09) (CONF:1098-15964).

Figure 43: Vital Signs Section (entries required) (V2) Example

```
<component>
  <section>
    <!-- ** Vital Signs section with entries required ** -->
    <templateId root="2.16.840.1.113883.10.20.22.2.4.1" extension="2014-06-09" />
    <code code="8716-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="VITAL SIGNS" />
    <title>VITAL SIGNS</title>
    <text>
      . . .
    </text>
    <entry typeCode="DRIV">
      <organizer classCode="CLUSTER" moodCode="EVN">
        <!-- ** Vital signs organizer ** -->
        <templateId root="2.16.840.1.113883.10.20.22.4.26" extension="2014-06-09"
/>
          . . .
        </organizer>
      </entry>
    </section>
  </component>
```

3 ENTRY-LEVEL TEMPLATES

This chapter describes the clinical statement entry templates used within the sections of the document. Entry templates contain constraints that are required for conformance.

Entry-level templates are always in sections.

Each entry-level template description contains the following information:

- Key template metadata (e.g., templateId, etc.)
- Description and explanatory narrative.
- Required CDA acts, participants and vocabularies.
- Optional CDA acts, participants and vocabularies.

Several entry-level templates require an effectiveTime:

The effectiveTime of an observation is the time interval over which the observation is known to be true. The low and high values should be as precise as possible, but no more precise than known. While CDA has multiple mechanisms to record this time interval (e.g., by low and high values, low and width, high and width, or center point and width), we constrain most to use only the low/high form. The low value is the earliest point for which the condition is known to have existed. The high value, when present, indicates the time at which the observation was no longer known to be true. The full description of effectiveTime and time intervals is contained in the CDA R2 normative edition.

ID in entry templates:

Entry-level templates may also describe an id element, which is an identifier for that entry. This id may be referenced within the document, or by the system receiving the document. The id assigned must be globally unique.

3.1 Age Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.31 (open)]

Table 68: Age Observation Contexts

Contained By:	Contains:
Problem Observation [V2] (optional)	

This Age Observation represents the subject's age at onset of an event or observation. The age of a relative in a Family History Observation at the time of that observation could also be inferred by comparing RelatedSubject/subject/birthTime with Observation/effectiveTime. However, a common scenario is that a patient will know the age of a relative when the relative had a certain condition or when the relative died, but will not know the actual year (e.g., "grandpa died of a heart attack at the age of 50"). Often times, neither precise dates nor ages are known (e.g., "cousin died of congenital heart disease as an infant").

Table 69: Age Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.31)					
@classCode	1..1	SHALL		81-7613	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-7614	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		81-7899	
@root	1..1	SHALL		81-10487	2.16.840.1.113883.10.20.22.4.31
code	1..1	SHALL		81-7615	
@code	1..1	SHALL		81-16776	445518008
@codeSystem	1..1	SHALL		81-26499	2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
statusCode	1..1	SHALL		81-15965	
@code	1..1	SHALL		81-15966	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	PQ	81-7617	
@unit	1..1	SHALL	CS	81-7618	2.16.840.1.113883.11.20.9.21 (AgePQ_UCUM)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:81-7613).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-7614).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7899) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.31" (CONF:81-10487).
4. **SHALL** contain exactly one [1..1] **code** (CONF:81-7615).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="445518008" Age At Onset (CONF:81-16776).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT 2.16.840.1.113883.6.96) (CONF:81-26499).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:81-15965).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:81-15966).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:81-7617).
 - a. This value **SHALL** contain exactly one [1..1] **@unit**, which **SHALL** be selected from ValueSet [AgePQ UCUM](#) 2.16.840.1.113883.11.20.9.21 **DYNAMIC** (CONF:81-7618).

Table 70: AgePQ_UCUM

Value Set: AgePQ_UCUM 2.16.840.1.113883.11.20.9.21			
A valueSet of UCUM codes for representing age value units.			
Value Set Source: http://unitsofmeasure.org/ucum.html			
Code	Code System	Code System OID	Print Name
min	UCUM	2.16.840.1.113883.6.8	Minute
h	UCUM	2.16.840.1.113883.6.8	Hour
d	UCUM	2.16.840.1.113883.6.8	Day
wk	UCUM	2.16.840.1.113883.6.8	Week
mo	UCUM	2.16.840.1.113883.6.8	Month
a	UCUM	2.16.840.1.113883.6.8	Year

Figure 44: Age Observation Example

<pre> <observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.20.22.4.31" /> <!-- Age observation --> <code code="445518008" codeSystem="2.16.840.1.113883.6.96" displayName="Age At Onset" /> <statusCode code="completed" /> <value xsi:type="PQ" value="57" unit="a" /> </observation> </pre>
--

3.2 Assessment Scale Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.69 (open)]

Table 71: Assessment Scale Observation Contexts

Contained By:	Contains:
	Assessment Scale Supporting Observation

An assessment scale is a collection of observations that together yield a summary evaluation of a particular condition. Examples include the Braden Scale (assesses pressure ulcer risk), APACHE Score (estimates mortality in critically ill patients), Mini-Mental Status Exam (assesses cognitive function), APGAR Score (assesses the health of a newborn), and Glasgow Coma Scale (assesses coma and impaired consciousness).

Table 72: Assessment Scale Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.69)					
@classCode	1..1	SHALL		81-14434	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-14435	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		81-14436	
@root	1..1	SHALL		81-14437	2.16.840.1.113883.10.20.22.4.69
id	1..*	SHALL		81-14438	
code	1..1	SHALL		81-14439	
derivationExpr	0..1	MAY		81-14637	
statusCode	1..1	SHALL		81-14444	
@code	1..1	SHALL		81-19088	2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		81-14445	
value	1..1	SHALL		81-14450	
interpretationCode	0..*	MAY		81-14459	
translation	0..*	MAY		81-14888	
author	0..*	MAY		81-14460	
entryRelationship	0..*	SHOULD		81-14451	
@typeCode	1..1	SHALL		81-16741	COMP
observation	1..1	SHALL		81-16742	Assessment Scale Supporting Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.86)
referenceRange	0..*	MAY		81-16799	
observationRange	1..1	SHALL		81-16800	
text	0..1	SHOULD		81-16801	
reference	0..1	SHOULD		81-16802	
@value	0..1	MAY		81-16803	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:81-14434).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-14435).
3. **SHALL** contain exactly one [1..1] templateId (CONF:81-14436) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.69" (CONF:81-14437).
4. **SHALL** contain at least one [1..*] id (CONF:81-14438).
5. **SHALL** contain exactly one [1..1] code (CONF:81-14439).
 - a. **SHOULD** be from LOINC (CodeSystem: 2.16.840.1.113883.6.1) or SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96) identifying the assessment scale (CONF:81-14440).

Such derivation expression can contain a text calculation of how the components total up to the summed score

6. **MAY** contain zero or one [0..1] **derivationExpr** (CONF:81-14637).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:81-14444).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:81-19088).

Represents clinically effective time of the measurement, which may be when the measurement was performed (e.g., a BP measurement), or may be when sample was taken (and measured some time afterwards)

8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:81-14445).
9. **SHALL** contain exactly one [1..1] **value** (CONF:81-14450).
10. **MAY** contain zero or more [0..*] **interpretationCode** (CONF:81-14459).
 - a. The interpretationCode, if present, **MAY** contain zero or more [0..*] **translation** (CONF:81-14888).
11. **MAY** contain zero or more [0..*] **author** (CONF:81-14460).
12. **SHOULD** contain zero or more [0..*] **entryRelationship** (CONF:81-14451) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** has component (CONF:81-16741).
 - b. **SHALL** contain exactly one [1..1] [Assessment Scale Supporting Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.86) (CONF:81-16742).

The referenceRange/observationRange/text, if present, MAY contain a description of the scale (e.g., for a Pain Scale 1 to 10: 1 to 3 = little pain, 4 to 7= moderate pain, 8 to 10 = severe pain)

13. **MAY** contain zero or more [0..*] **referenceRange** (CONF:81-16799).
 - a. The referenceRange, if present, **SHALL** contain exactly one [1..1] **observationRange** (CONF:81-16800).

The text may contain a description of the scale (e.g., for a Pain Scale 1 to 10: 1 to 3 = little pain, 4 to 7= moderate pain, 8 to 10 = severe pain)

- i. This observationRange **SHOULD** contain zero or one [0..1] **text** (CONF:81-16801).
 1. The text, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:81-16802).
 - a. The reference, if present, **MAY** contain zero or one [0..1] **@value** (CONF:81-16803).
 - i. This reference/@value **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:81-16804).

Figure 45: Assessment Scale Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.69"/>
  <id root="c6b5a04b-2bf4-49d1-8336-636a3813df0b"/>
  <code code="54614-3"
    displayName="Brief Interview for Mental Status"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"/>
  <derivationExpr>Text description of the calculation</derivationExpr>
  <statusCode code="completed"/>
  <effectiveTime value="20120214"/>
  <!-- Summed score of the component values -->
  <value xsi:type="INT" value="7"/>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.86"/>
      . . .
    </observation>
  </entryRelationship>
</observation>
```

3.2.1 Pain Assessment Scale Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.22 (open)]

Table 73: Pain Assessment Scale Observation Contexts

Contained By:	Contains:
Triage Section (required)	

This template represents pain severity on a scale of 0 to 10 where 0 is no pain and 10 is the worst pain imaginable. To record "unknown" use nullFlavor="UNK".

Table 74: Pain Assessment Scale Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.22)					
@classCode	1..1	SHALL		1106-598	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-599	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-592	
@root	1..1	SHALL		1106-595	2.16.840.1.113883.10.20.34.3.22
code	1..1	SHALL		1106-593	
@code	1..1	SHALL		1106-596	72514-3
@codeSystem	1..1	SHALL		1106-597	2.16.840.1.113883.6.1
value	1..1	SHALL	INT	1106-594	
@nullFlavor	0..1	MAY		1106-653	UNK
@value	0..1	SHOULD		1106-600	

1. Conforms to [Assessment Scale Observation](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.69).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1106-598).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1106-599).
4. **SHALL** contain exactly one [1..1] templateId (CONF:1106-592) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.34.3.22" (CONF:1106-595).
5. **SHALL** contain exactly one [1..1] code (CONF:1106-593).
 - a. This code **SHALL** contain exactly one [1..1] @code="72514-3" Pain severity - 0-10 verbal numeric rating [#] - Reported (CONF:1106-596).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CONF:1106-597).
6. **SHALL** contain exactly one [1..1] value with @xsi:type="INT" (CONF:1106-594).
Note: Form element: Pain scale (0-10)
 - a. This value **MAY** contain zero or one [0..1] @nullFlavor="UNK" Unknown (CONF:1106-653).
 - b. This value **SHOULD** contain zero or one [0..1] @value (CONF:1106-600).
 - i. **SHALL** be >= 0 and **SHALL** be <=10 (CONF:1106-654).

Figure 46: Pain Assessment Scale Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- C-CDA R2 Assessment Scale Observation -->
  <templateId root="2.16.840.1.113883.10.20.22.4.69" />
  <!-- Pain Assessment Scale Observation -->
  <templateId root="2.16.840.1.113883.10.20.34.3.22" />
  <id root="c6b5a04b-2bf4-49d1-8336-636a3813df0b" />
  <code code="72514-3"
    displayName="Pain severity - 0-10 verbal numeric rating [#]"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <statusCode code="completed" />
  <effectiveTime value="20130915" />
  <!-- Form element: Pain scale 0-10 -->
  <value xsi:type="INT" value="7" />
</observation>
```

3.2.2 Triage Level Assigned Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.23 (open)]

Table 75: Triage Level Assigned Observation Contexts

Contained By:	Contains:
Triage Section (required)	

This template represents the triage level assigned by a triage nurse upon arrival at the emergency department (ED). The triage system used is recorded in the code element and the level is recorded in the value element.

If the triage system used is not covered by the list of codes, use code/nullFlavor="OTH". If the triage system is known but the triage level is unknown, use value/nullFlavor="UNK". If the triage system is unknown, use code/nullFlavor="UNK" and value/nullFlavor="UNK".

Table 76: Triage Level Assigned Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.23)					
@classCode	1..1	SHALL		1106-620	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-621	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-617	
@root	1..1	SHALL		1106-618	2.16.840.1.113883.10.20.34.3.23
code	1..1	SHALL		1106-655	2.16.840.1.114222.4.11.7401 (Triage System (NCHS))
@nullFlavor	0..1	MAY		1106-854	
value	1..1	SHALL	INT	1106-619	
@nullFlavor	0..1	MAY		1106-657	
@value	1..1	SHOULD		1106-659	

1. Conforms to [Assessment Scale Observation](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.69).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1106-620).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1106-621).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-617) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.23" (CONF:1106-618).
5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Triage System \(NCHS\)](#) 2.16.840.1.114222.4.11.7401 **DYNAMIC** (CONF:1106-655).
 - a. This code **MAY** contain zero or one [0..1] **@nullFlavor** (CONF:1106-854).
 - i. NullFlavor **SHALL** be "UNK" Unknown or "OTH" Other (CONF:1106-855).
6. **SHALL** contain exactly one [1..1] **value** with @xsi:type="INT" (CONF:1106-619).
 - a. This value **MAY** contain zero or one [0..1] **@nullFlavor** (CONF:1106-657).
 - i. NullFlavor **SHALL** be "UNK" Unknown, "OTH" Other, or "NA" Not Applicable (CONF:1106-658).
 - b. This value **SHOULD** contain exactly one [1..1] **@value** (CONF:1106-659).

Table 77: Triage System (NCHS)

Value Set: Triage System (NCHS) 2.16.840.1.114222.4.11.7401			
These values describe different types of triage systems.			
Value Set Source: https://phinvads.cdc.gov/vads/SearchHome.action			
Code	Code System	Code System OID	Print Name
75614-8	LOINC	2.16.840.1.113883.6.1	Three level triage system
75615-5	LOINC	2.16.840.1.113883.6.1	Four level triage system
75616-3	LOINC	2.16.840.1.113883.6.1	Five level triage system
75910-0	LOINC	2.16.840.1.113883.6.1	Canadian triage and acuity scale CTAS
75636-1	LOINC	2.16.840.1.113883.6.1	Emergency severity index
...			

Figure 47: Triage Level Assigned Observation Example

<pre> <observation classCode="OBS" moodCode="EVN"> <!-- C-CDA R2 Assessment Scale Observation --> <templateId root="2.16.840.1.113883.10.20.22.4.69" /> <!-- Triage Level Assigned Observation --> <templateId root="2.16.840.1.113883.10.20.34.3.23" /> <id root="c650a89ab-7ce5-428f-8284-e595518b7355" /> <code code="75616-3" displayName="Five level triage system" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" /> <statusCode code="completed" /> <effectiveTime value="20130915" /> <!-- Form element: Triage level --> <value xsi:type="INT" value="2" /> </observation> </pre>

3.3 Assessment Scale Supporting Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.86 (open)]

Table 78: Assessment Scale Supporting Observation Contexts

Contained By:	Contains:
Assessment Scale Observation (optional)	

An Assessment Scale Supporting Observation represents the components of a scale used in an Assessment Scale Observation. The individual parts that make up the component may be a group of cognitive or functional status observations.

Table 79: Assessment Scale Supporting Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.86)					
@classCode	1..1	SHALL		81-16715	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-16716	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		81-16722	
@root	1..1	SHALL		81-16723	2.16.840.1.113883.10.20.22.4.86
id	1..*	SHALL		81-16724	
code	1..1	SHALL		81-19178	
@code	1..1	SHALL		81-19179	
statusCode	1..1	SHALL		81-16720	
@code	1..1	SHALL		81-19089	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..*	SHALL		81-16754	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:81-16715).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-16716).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-16722) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.86" (CONF:81-16723).
4. **SHALL** contain at least one [1..*] **id** (CONF:81-16724).
5. **SHALL** contain exactly one [1..1] **code** (CONF:81-19178).
 - a. This code **SHALL** contain exactly one [1..1] **@code** (CONF:81-19179).
 - i. Such that the **@code** **SHALL** be from LOINC (CodeSystem: 2.16.840.1.113883.6.1) or SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96) and represents components of the scale (CONF:81-19180).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:81-16720).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:81-19089).
7. **SHALL** contain at least one [1..*] **value** (CONF:81-16754).
 - a. If xsi:type="CD", **MAY** have a translation code to further specify the source if the instrument has an applicable code system and value set for the integer (CONF:14639) (CONF:81-16755).

Figure 48: Assessment Scale Supporting Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.86"/>
  <id root="f4dce790-8328-11db-9fe1-0800200c9a44"/>
  <code code="248240001" displayName="motor response"
    codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED"/>
  <statusCode code="completed"/>
  <value xsi:type="INT" value="3"/>
</observation>
```

3.4 Caregiver Characteristics

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.72 (open)]

Table 80: Caregiver Characteristics Contexts

Contained By:	Contains:
Social History Section (V2) (optional)	

This clinical statement represents a caregiver’s willingness to provide care and the abilities of that caregiver to provide assistance to a patient in relation to a specific need.

Table 81: Caregiver Characteristics Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.72)					
@classCode	1..1	SHALL		81-14219	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-14220	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		81-14221	
@root	1..1	SHALL		81-14222	2.16.840.1.113883.10.20.22.4.72
id	1..*	SHALL		81-14223	
code	1..1	SHALL		81-14230	
statusCode	1..1	SHALL		81-14233	
@code	1..1	SHALL		81-19090	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	81-14599	
participant	1..*	SHALL		81-14227	
@typeCode	1..1	SHALL		81-26451	IND
time	0..1	MAY		81-14830	
low	1..1	SHALL		81-14831	
high	0..1	MAY		81-14832	
participantRole	1..1	SHALL		81-14228	
@classCode	1..1	SHALL		81-14229	CAREGIVER

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:81-14219).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-14220).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-14221) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.72"** (CONF:81-14222).
4. **SHALL** contain at least one [1..*] **id** (CONF:81-14223).
5. **SHALL** contain exactly one [1..1] **code** (CONF:81-14230).
 - a. This code **MAY** be drawn from LOINC (CodeSystem: LOINC 2.16.840.1.113883.6.1) or **MAY** be bound to ASSERTION (CodeSystem: ActCode 2.16.840.1.113883.5.4 **STATIC**) (CONF:81-26513).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:81-14233).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:81-19090).
7. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:81-14599).
 - a. The code **SHALL** be selected from LOINC (codeSystem: 2.16.840.1.113883.6.1) or SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96) (CONF:81-14600).
8. **SHALL** contain at least one [1..*] **participant** (CONF:81-14227).
 - a. Such participants **SHALL** contain exactly one [1..1] **@typeCode="IND"** (CONF:81-26451).
 - b. Such participants **MAY** contain zero or one [0..1] **time** (CONF:81-14830).
 - i. The time, if present, **SHALL** contain exactly one [1..1] **low** (CONF:81-14831).
 - ii. The time, if present, **MAY** contain zero or one [0..1] **high** (CONF:81-14832).
 - c. Such participants **SHALL** contain exactly one [1..1] **participantRole** (CONF:81-14228).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode="CAREGIVER"** (CONF:81-14229).

Figure 49: Caregiver Characteristics Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.72"/>
  <id root="c6b5a04b-2bf4-49d1-8336-636a3813df0c"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" code="422615001"
    codeSystem="2.16.840.1.113883.6.96"
    displayName="caregiver difficulty providing
      physical care"/>
  <participant typeCode="IND">
    <participantRole classCode="CAREGIVER">
      <code code="MTH" codeSystem="2.16.840.1.113883.5.111"
        displayName="Mother"/>
    </participantRole>
  </participant>
</observation>
```

3.5 Cause of Injury, Poisoning, or Adverse Effect

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.27 (open)]

Table 82: Cause of Injury, Poisoning, or Adverse Effect Contexts

Contained By:	Contains:
Injury or Poisoning Observation (optional) Adverse Effect of Medical Treatment (optional)	

This template represents the cause of injury, poisoning, or adverse effect. The place and events that preceded the injury, poisoning, or adverse effect (e.g., allergy to penicillin, bee sting, pedestrian hit by car driven by drunk driver, spouse beaten with fists by spouse, heroin overdose, infected shunt, etc.) should be described and recorded. Proper names of people or places should not be recorded. For a motor vehicle crash, indicate if it occurred on the street or highway versus a driveway or parking lot.

Table 83: Cause of Injury, Poisoning, or Adverse Effect Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.27)					
@classCode	1..1	SHALL		1106-626	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-627	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-628	
@root	1..1	SHALL		1106-629	2.16.840.1.113883.10.20.34.3.27
id	1..*	SHALL		1106-630	
code	1..1	SHALL		1106-631	
@code	1..1	SHALL		1106-632	69543-7
@codeSystem	1..1	SHALL		1106-633	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1106-634	
@code	1..1	SHALL		1106-635	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1106-636	2.16.840.1.113883.6.3 (ICD10)
@nullFlavor	0..1	MAY		1106-859	OTH
originalText	0..1	MAY		1106-861	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-626).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-627).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-628).
 - a. This templateId **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.27" (CONF:1106-629).
4. **SHALL** contain at least one [1..*] **id** (CONF:1106-630).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1106-631).

- a. This code **SHALL** contain exactly one [1..1] @code="69543-7" Cause of Injury (NCHS) (CONF:1106-632).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1106-633).
 6. **SHALL** contain exactly one [1..1] statusCode (CONF:1106-634).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1106-635).
- If no code is available use nullFlavor="OTH" and enter the value as free text in code/originalText.
7. **SHALL** contain exactly one [1..1] value with @xsi:type="CD", where the code **SHOULD** be selected from CodeSystem ICD10 (2.16.840.1.113883.6.3) (CONF:1106-636).
 - a. This value **MAY** contain zero or one [0..1] @nullFlavor="OTH" (CONF:1106-859).
 - b. This value **MAY** contain zero or one [0..1] originalText (CONF:1106-861).
 - c. Value **MAY** be selected from ICD-9/10/CM (based on the current version in US realm) (CONF:1106-860).

Figure 50: Cause of Injury, Poisoning, or Adverse Effect (Free Text) Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.34.3.27"/>
  <id root="bleae324-7c21-4ef8-8618-0b4478c65721"/>
  <code code="69543-7" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    displayName="Cause of Injury"/>
  <statusCode code="completed"/>
  <!-- Form Element: Cause of Injury, Poisoning, or Adverse Effect -->
  <value xsi:type="CD" nullFlavor="OTH">
    <originalText>Husband put arsenic in patient's tea</originalText>
  </value>
</observation>
```

Figure 51: Cause of Injury, Poisoning, or Adverse Effect (Coded) Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.34.3.27"/>
  <id root="bleae324-7c21-4ef8-8618-0b4478c65721"/>
  <code code="69543-7" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    displayName="Cause of Injury"/>
  <statusCode code="completed"/>
  <!-- Form Element: Cause of Injury, Poisoning, or Adverse Effect -->
  <value xsi:type="CD"
    code="T42.2X3A"
    displayName="Poisoning by succinimides and oxazolidinediones,
      assault, initial encounter"
    codeSystemName="ICD10CM"
    codeSystem="2.16.840.1.113883.6.90"/>
</observation>
```

3.6 Characteristics of Home Environment

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.109 (open)]

Table 84: Characteristics of Home Environment Contexts

Contained By:	Contains:
Social History Section (V2) (optional)	

This template represents the patient's home environment including, but not limited to, type of residence (trailer, single family home, assisted living), living arrangement (e.g., alone, with parents), and housing status (e.g., evicted, homeless, home owner).

Table 85: Characteristics of Home Environment Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.109)					
@classCode	1..1	SHALL		1098-27890	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-27891	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-27892	
@root	1..1	SHALL		1098-27893	2.16.840.1.113883.10.20.22.4.109
id	1..*	SHALL		1098-27894	
code	1..1	SHALL		1098-31352	
@code	1..1	SHALL		1098-31353	75274-1
@codeSystem	1..1	SHALL		1098-31354	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1098-27901	
@code	1..1	SHALL		1098-27902	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1098-28823	2.16.840.1.113883.11.20.9.49 (Residence and Accommodation Type)

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-27890).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-27891).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-27892) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.109" (CONF:1098-27893).
4. **SHALL** contain at least one [1..*] id (CONF:1098-27894).
5. **SHALL** contain exactly one [1..1] code (CONF:1098-31352).
 - a. This code **SHALL** contain exactly one [1..1] @code="75274-1" Characteristics of residence (CONF:1098-31353).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1098-31354).

6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-27901).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-27902).
7. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"**, where the code **SHOULD** be selected from ValueSet Residence and Accommodation Type 2.16.840.1.113883.11.20.9.49 **DYNAMIC** (CONF:1098-28823).

Table 86: Residence and Accommodation Type

Value Set: Residence and Accommodation Type 2.16.840.1.113883.11.20.9.49 A value set of SNOMED-CT codes descending from "365508006" "Residence and accommodation circumstances - finding" reflecting type of residence, status of accommodations, living situation and environment. Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
424661000	SNOMED CT	2.16.840.1.113883.6.96	cluttered living space (finding)
160708008	SNOMED CT	2.16.840.1.113883.6.96	stairs in house (finding)
160751007	SNOMED CT	2.16.840.1.113883.6.96	eviction from dwelling (finding)
423859003	SNOMED CT	2.16.840.1.113883.6.96	crowded living space (finding)
160720000	SNOMED CT	2.16.840.1.113883.6.96	harassment by landlord (finding)
105529008	SNOMED CT	2.16.840.1.113883.6.96	lives alone (finding)
60585007	SNOMED CT	2.16.840.1.113883.6.96	slum area living (finding)
365508006	SNOMED CT	2.16.840.1.113883.6.96	unsatisfactory living conditions (finding)
422491004	SNOMED CT	2.16.840.1.113883.6.96	housing contains exposed wiring (finding)
...			

Figure 52: Characteristics of Home Environment Example

<pre> <observation classCode="OBS" moodCode="EVN"> <!-- ** Characteristics of Home Environment** --> <templateId root="2.16.840.1.113883.10.20.22.4.109" /> <id root="37f76c51-6411-4e1d-8a37-957fd49d2ceg" /> <code code="75274-1" codeSystem="2.16.840.1.113883.6.1" displayName="Characteristics of residence" /> <statusCode code="completed" /> <effectiveTime value="20130312" /> <value xsi:type="CD" code="308899009" displayName="unsatisfactory living conditions (finding)" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" /> </observation> </pre>
--

3.7 Condition Control Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.21 (open)]

Table 87: Condition Control Observation Contexts

Contained By:	Contains:
Asthma Diagnosis Observation (optional)	

This template represents the degree to which the manifestations of the condition are minimized by therapeutic interventions. Care should be taken to ensure that the identified level of control does not conflict with the SNOMED/ICD diagnosis code.

Table 88: Condition Control Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.21)					
@classCode	1..1	SHALL		1106-234	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-235	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-236	
@root	1..1	SHALL		1106-237	2.16.840.1.113883.10.20.34.3.21
id	1..*	SHALL		1106-238	
code	1..1	SHALL		1106-239	
@code	1..1	SHALL		1106-240	2.16.840.1.113883.5.4 (ActCode) = ASSERTION
statusCode	1..1	SHALL		1106-241	
@code	1..1	SHALL		1106-242	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1106-243	
@code	1..1	SHALL		1106-389	2.16.840.1.114222.4.11.7433 (Condition Control (NCHS))

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-234).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-235).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1106-236) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.34.3.21" (CONF:1106-237).
4. **SHALL** contain at least one [1..*] id (CONF:1106-238).
5. **SHALL** contain exactly one [1..1] code (CONF:1106-239).
 - a. This code **SHALL** contain exactly one [1..1] @code="ASSERTION" Assertion (CodeSystem: ActCode 2.16.840.1.113883.5.4) (CONF:1106-240).
6. **SHALL** contain exactly one [1..1] statusCode (CONF:1106-241).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1106-242).

7. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:1106-243).
 - a. This value **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [Condition Control \(NCHS\)](#) 2.16.840.1.114222.4.11.7433 **DYNAMIC** (CONF:1106-389).

Table 89: Condition Control (NCHS)

Value Set: Condition Control (NCHS) 2.16.840.1.114222.4.11.7433			
Code	Code System	Code System OID	Print Name
67106002	SNOMED CT	2.16.840.1.113883.6.96	Condition determination, moderately controlled
12650007	SNOMED CT	2.16.840.1.113883.6.96	Condition determination, fairly well controlled
39431006	SNOMED CT	2.16.840.1.113883.6.96	Condition determination, slightly controlled
28876000	SNOMED CT	2.16.840.1.113883.6.96	Condition determination, uncontrolled
1194003	SNOMED CT	2.16.840.1.113883.6.96	Condition determination, well controlled
2761002	SNOMED CT	2.16.840.1.113883.6.96	Condition determination, arrested
51231003	SNOMED CT	2.16.840.1.113883.6.96	Condition determination, cured

Figure 53: Condition Control Observation Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- Condition Control Observation -->
  <templateId root="2.16.840.1.113883.10.20.34.3.21" />
  <id root="alfe8200-4925-4679-80c7-11c7d406593d" />
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
    codeSystemName="ActCode" />
  <statusCode code="completed" />
  <!-- Form element: Asthma Control -->
  <value xsi:type="CD" code="1194003"
    displayName="Condition determination, well controlled"
    codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" />
</observation>

```

3.8 Coverage Activity (V2)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.60:2014-06-09 (open)]

Table 90: Coverage Activity (V2) Contexts

Contained By:	Contains:
Payers Section (V2) (optional)	Policy Activity (V2)

A Coverage Activity groups the policy and authorization acts within a Payers Section to order the payment sources. A Coverage Activity contains one or more Policy Activities, each of which contains zero or more Authorization Activities. The Coverage Activity id is the ID from the patient's insurance card. The sequenceNumber/@value shows the policy order of preference.

Table 91: Coverage Activity (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.60:2014-06-09)					
@classCode	1..1	SHALL		1098-8872	2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-8873	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-8897	
@root	1..1	SHALL		1098-10492	2.16.840.1.113883.10.20.22.4.60
@extension	1..1	SHALL		1098-32596	2014-06-09
id	1..*	SHALL		1098-8874	
code	1..1	SHALL		1098-8876	
@code	1..1	SHALL		1098-19160	48768-6
@codeSystem	1..1	SHALL		1098-32156	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1098-8875	
@code	1..1	SHALL		1098-19094	2.16.840.1.113883.5.14 (ActStatus) = completed
entryRelationship	1..*	SHALL		1098-8878	
@typeCode	1..1	SHALL		1098-8879	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
sequenceNumber	0..1	MAY		1098-17174	
@value	1..1	SHALL		1098-17175	
act	1..1	SHALL		1098-15528	Policy Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.61:2014-06-09)

1. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8872).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-8873).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-8897) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.60" (CONF:1098-10492).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-06-09" (CONF:1098-32596).
4. **SHALL** contain at least one [1..*] id (CONF:1098-8874).
5. **SHALL** contain exactly one [1..1] code (CONF:1098-8876).
 - a. This code **SHALL** contain exactly one [1..1] @code="48768-6" Payment sources (CONF:1098-19160).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1098-32156).
6. **SHALL** contain exactly one [1..1] statusCode (CONF:1098-8875).

- a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19094).
7. **SHALL** contain at least one [1..*] entryRelationship (CONF:1098-8878) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" has component (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8879).
 - b. **MAY** contain zero or one [0..1] sequenceNumber (CONF:1098-17174).
 - i. The sequenceNumber, if present, **SHALL** contain exactly one [1..1] @value (CONF:1098-17175).
 - c. **SHALL** contain exactly one [1..1] [Policy Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.61:2014-06-09) (CONF:1098-15528).

Figure 54: Coverage Activity (V2) Example

```
<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.60" extension="2014-06-09" />
  <id root="1fe2cdd0-7aad-11db-9fe1-0800200c9a66" />
  <code code="48768-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Payment sources" />
  <statusCode code="completed" />
  <entryRelationship typeCode="COMP">
    <act classCode="ACT" moodCode="EVN">
      <sequenceNumber value="2" />
      <templateId root="2.16.840.1.113883.10.20.22.4.61" extension="2014-06-09" />
      . . .
    </act>
  </entryRelationship>
</act>
```

3.9 Cultural and Religious Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.111 (open)]

Table 92: Cultural and Religious Observation Contexts

Contained By:	Contains:
Social History Section (V2) (optional)	

This template represents a patient's spiritual, religious, and cultural belief practices, such as a kosher diet or fasting ritual. religiousAffiliationCode in the document header captures only the patient's religious affiliation.

Table 93: Cultural and Religious Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.111)					
@classCode	1..1	SHALL		1098-27924	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-27925	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-27926	
@root	1..1	SHALL		1098-27927	2.16.840.1.113883.10.20.22.4.111
id	1..*	SHALL		1098-27928	
code	1..1	SHALL		1098-27929	
@code	1..1	SHALL		1098-27930	75281-6
@codeSystem	1..1	SHALL		1098-27931	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1098-27936	
@code	1..1	SHALL		1098-27937	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL		1098-28442	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-27924).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-27925).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-27926) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.111" (CONF:1098-27927).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-27928).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-27929).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="75281-6" Personal belief (CONF:1098-27930).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1098-27931).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-27936).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-27937).
7. **SHALL** contain exactly one [1..1] **value** (CONF:1098-28442).
 - a. If value is CD, it **SHALL** be SNOMED-CT (CONF:1098-32487).

Figure 55: Cultural and Religious Observation Example

```
<entry>
  <observation classCode="OBS" moodCode="EVN">
    <!-- **Cultural and Religious Observation **-->
    <templateId root="2.16.840.1.113883.10.20.22.4.111" />
    <id root="37f76c51-6411-4e1d-8a37-957fd49d2cef" />
    <code code="75281-6" codeSystem="2.16.840.1.113883.6.1"
          displayName="Personal belief" />
    <statusCode code="completed" />
    <effectiveTime>
      <low value="20130312" />
    </effectiveTime>
    <value xsi:type="ST">Does not accept blood transfusions, or donates, or
      stores blood for transfusion.</value>
  </observation>
</entry>
```

3.10 Discharge Status Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.28 (open)]

Table 94: Discharge Status Observation Contexts

Contained By:	Contains:
Hospital Admission Encounter (required)	

This template represents the patient's status at time of discharge. If the status is unknown use nullFlavor="UNK".

Table 95: Discharge Status Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.28)					
@classCode	1..1	SHALL		1106-685	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-686	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-687	
@root	1..1	SHALL		1106-688	2.16.840.1.113883.10.20.34.3.28
id	1..*	SHALL		1106-689	
code	1..1	SHALL		1106-690	
@code	1..1	SHALL		1106-691	75527-2
@codeSystem	1..1	SHALL		1106-692	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1106-693	
@code	1..1	SHALL		1106-694	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1106-695	2.16.840.1.114222.4.11.7440 (Hospital Discharge Status (NCHS))
@nullFlavor	0..1	MAY		1106-696	UNK

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-685).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-686).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-687) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.28" (CONF:1106-688).
4. **SHALL** contain at least one [1..*] **id** (CONF:1106-689).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1106-690).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="75527-2" Vital status at discharge (CONF:1106-691).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1106-692).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1106-693).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1106-694).
7. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHOULD** be selected from ValueSet [Hospital Discharge Status \(NCHS\)](#) 2.16.840.1.114222.4.11.7440 **DYNAMIC** (CONF:1106-695).
 - a. This value **MAY** contain zero or one [0..1] **@nullFlavor**="UNK" Unknown (CONF:1106-696).

Table 96: Hospital Discharge Status (NCHS)

Value Set: Hospital Discharge Status (NCHS) 2.16.840.1.114222.4.11.7440 This value set represents the patient's status at discharge. Value Set Source: https://phinvads.cdc.gov/vads/SearchHome.action			
Code	Code System	Code System OID	Print Name
371827001	SNOMED CT	2.16.840.1.113883.6.96	Patient discharged alive
371828006	SNOMED CT	2.16.840.1.113883.6.96	Patient deceased during stay (discharge status = dead)
...			

Figure 56: Discharge Status Observation Example

<pre><observation classCode="OBS" moodCode="EVN"> <!-- Discharge Status Observation --> <templateId root="2.16.840.1.113883.10.20.34.3.28" /> <id root="b856ca82-2046-4c17-99e3-46fb8a9fdf23" /> <code code="75527-2" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Vital status at discharge" /> <statusCode code="completed" /> <!-- Form Element: Hospital Discharge Status --> <value xsi:type="CD" code="371827001" codeSystemName="SNOMED CT" codeSystem="2.16.840.1.113883.6.96" displayName="Patient discharged alive" /> </observation></pre>

3.11 Drug Monitoring Act

[act: identifier urn:oid:2.16.840.1.113883.10.20.22.4.123 (open)]

Table 97: Drug Monitoring Act Contexts

Contained By:	Contains:
Medication Activity (V2) (optional)	US Realm Patient Name (PTN.US.FIELDDED)

This template represents the act of monitoring the patient's medication and includes a participation to record the person responsible for monitoring the medication. The prescriber of the medication is not necessarily the same person or persons monitoring the drug. The effectiveTime indicates the time when the activity is intended to take place.

For example, a cardiologist may prescribe a patient Warfarin. The patient's primary care provider may monitor the patient's INR and adjust the dosing of the Warfarin based on these lab results. Here the person designated to monitor the drug is the primary care provider.

Table 98: Drug Monitoring Act Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.123)					
@classCode	1..1	SHALL		1098-30823	2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-28656	INT
templateId	1..1	SHALL		1098-28657	
@root	1..1	SHALL		1098-28658	2.16.840.1.113883.10.20.22.4.123
id	1..*	SHALL		1098-31920	
code	1..1	SHALL		1098-28660	
@code	1..1	SHALL		1098-30818	395170001
@codeSystem	1..1	SHALL		1098-30819	2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
statusCode	1..1	SHALL		1098-31921	
@code	1..1	SHALL		1098-32358	2.16.840.1.113883.1.11.159331 (ActStatus)
effectiveTime	1..1	SHALL		1098-31922	
participant	1..*	SHALL		1098-28661	
@typeCode	1..1	SHALL		1098-28663	RESP
participantRole	1..1	SHALL		1098-28662	
@classCode	1..1	SHALL		1098-28664	ASSIGNED
id	1..*	SHALL		1098-28665	
playingEntity	1..1	SHALL		1098-28667	
@classCode	1..1	SHALL		1098-28668	PSN
name	1..1	SHALL		1098-28669	US Realm Patient Name (PTN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1

1. **SHALL** contain exactly one [1..1] @classCode="ACT" act (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1098-30823).
2. **SHALL** contain exactly one [1..1] @moodCode="INT" (CONF:1098-28656).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-28657) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.123" (CONF:1098-28658).
4. **SHALL** contain at least one [1..*] id (CONF:1098-31920).
5. **SHALL** contain exactly one [1..1] code (CONF:1098-28660).
 - a. This code **SHALL** contain exactly one [1..1] @code="395170001" medication monitoring (regime/therapy) (CONF:1098-30818).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT 2.16.840.1.113883.6.96) (CONF:1098-30819).
6. **SHALL** contain exactly one [1..1] statusCode (CONF:1098-31921).

- a. This statusCode **SHALL** contain exactly one [1..1] @code, which **SHALL** be selected from ValueSet [ActStatus](#) 2.16.840.1.113883.1.11.159331 **DYNAMIC** (CONF:1098-32358).
7. **SHALL** contain exactly one [1..1] effectiveTime (CONF:1098-31922).
8. **SHALL** contain at least one [1..*] participant (CONF:1098-28661) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="RESP" (CONF:1098-28663).
 - b. **SHALL** contain exactly one [1..1] participantRole (CONF:1098-28662).
 - i. This participantRole **SHALL** contain exactly one [1..1] @classCode="ASSIGNED" (CONF:1098-28664).
 - ii. This participantRole **SHALL** contain at least one [1..*] id (CONF:1098-28665).
 - iii. This participantRole **SHALL** contain exactly one [1..1] playingEntity (CONF:1098-28667).
 1. This playingEntity **SHALL** contain exactly one [1..1] @classCode="PSN" (CONF:1098-28668).
 2. This playingEntity **SHALL** contain exactly one [1..1] [US Realm Patient Name \(PTN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1) (CONF:1098-28669).

Table 99: ActStatus

Value Set: ActStatus 2.16.840.1.113883.1.11.159331 Contains the names (codes) for each of the states in the state-machine of the RIM Act class. Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
normal	ActStatus	2.16.840.1.113883.5.14	normal
aborted	ActStatus	2.16.840.1.113883.5.14	aborted
active	ActStatus	2.16.840.1.113883.5.14	active
cancelled	ActStatus	2.16.840.1.113883.5.14	cancelled
completed	ActStatus	2.16.840.1.113883.5.14	completed
held	ActStatus	2.16.840.1.113883.5.14	held
new	ActStatus	2.16.840.1.113883.5.14	new
suspended	ActStatus	2.16.840.1.113883.5.14	suspended
nullified	ActStatus	2.16.840.1.113883.5.14	nullified
obsolete	ActStatus	2.16.840.1.113883.5.14	obsolete

Figure 57: Drug Monitoring Act Example

```
<entryRelationship typeCode="COMP">
  <!-- **DRUG MONITORING ACT **-->
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.123" />
    <id root="2a620155-9d11-439e-92b3-5d9815ff4ee8" />
    <code code="395170001" displayName="medication monitoring (regime/therapy"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED-CT" />
    <statusCode code="completed" />
    <effectiveTime xsi:type="IVL_TS">
      <low value="20130615" />
      <high value="20130715" />
    </effectiveTime>
    <participant typeCode="RESP">
      <participantRole classCode="ASSIGNED">
        <id root="2a620155-9d11-439e-92b3-5d9815ff4ee5" />
        <playingEntity classCode="PSN">
          <name>
            <given>Listener</given>
            <family>Larry</family>
            <prefix>DR</prefix>
          </name>
        </playingEntity>
      </participantRole>
    </participant>
  </act>
</entryRelationship>
```

3.12 Drug Vehicle

[participantRole: identifier urn:oid:2.16.840.1.113883.10.20.22.4.24 (open)]

Table 100: Drug Vehicle Contexts

Contained By:	Contains:
Medication Activity (V2) (optional)	
Immunization Activity (V2) (optional)	

This template represents the vehicle (e.g., saline, dextrose) for administering a medication.

Table 101: Drug Vehicle Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
participantRole (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.24)					
@classCode	1..1	SHALL		81-7490	2.16.840.1.113883.5.110 (RoleClass) = MANU
templateId	1..1	SHALL		81-7495	
@root	1..1	SHALL		81-10493	2.16.840.1.113883.10.20.22.4.24
code	1..1	SHALL		81-19137	
@code	1..1	SHALL		81-19138	412307009
@codeSystem	1..1	SHALL		81-26502	2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
playingEntity	1..1	SHALL		81-7492	
code	1..1	SHALL		81-7493	
name	0..1	MAY		81-7494	

1. **SHALL** contain exactly one [1..1] **@classCode**="MANU" (CodeSystem: RoleClass 2.16.840.1.113883.5.110 **STATIC**) (CONF:81-7490).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7495) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.24" (CONF:81-10493).
3. **SHALL** contain exactly one [1..1] **code** (CONF:81-19137).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="412307009" Drug Vehicle (CONF:81-19138).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT 2.16.840.1.113883.6.96) (CONF:81-26502).
4. **SHALL** contain exactly one [1..1] **playingEntity** (CONF:81-7492).

This playingEntity/code is used to supply a coded term for the drug vehicle.

- a. This playingEntity **SHALL** contain exactly one [1..1] **code** (CONF:81-7493).
- b. This playingEntity **MAY** contain zero or one [0..1] **name** (CONF:81-7494).
 - i. This playingEntity/name **MAY** be used for the vehicle name in text, such as Normal Saline (CONF:81-10087).

Figure 58: Drug Vehicle Example

```
<participantRole classCode="MANU">
  <templateId root="2.16.840.1.113883.10.20.22.4.24"/>
  <code code="412307009" displayName="drug vehicle"
codeSystem="2.16.840.1.113883.6.96"/>
  <playingEntity classCode="MMAT">
    <code code="324049" displayName="Aerosol"
codeSystem="2.16.840.1.113883.6.88"
codeSystemName="RxNorm"/>
    <name>Aerosol</name>
  </playingEntity>
</participantRole>
```

3.13 Encounter Activity (V2)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2014-06-09
(open)]

Table 102: Encounter Activity (V2) Contexts

Contained By:	Contains:
Encounters Section (entries optional) (V2) (optional)	Encounter Diagnosis (V2) Indication (V2) Service Delivery Location

This clinical statement describes an interaction between a patient and clinician. Interactions may include in-person encounters, telephone conversations, and email exchanges.

Table 103: Encounter Activity (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2014-06-09)					
@classCode	1..1	SHALL		1098-8710	2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1098-8711	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-8712	
@root	1..1	SHALL		1098-26353	2.16.840.1.113883.10.20.22.4.49
@extension	1..1	SHALL		1098-32546	2014-06-09
id	1..*	SHALL		1098-8713	
code	1..1	SHALL		1098-8714	2.16.840.1.113883.3.88.12.80.32 (EncounterTypeCode)
originalText	0..1	SHOULD		1098-8719	
reference	0..1	SHOULD		1098-15970	
@value	0..1	SHOULD		1098-15971	
translation	0..1	MAY		1098-32323	
effectiveTime	1..1	SHALL		1098-8715	
sdtc:discharge DispositionCode	0..1	MAY		1098-32176	
performer	0..*	MAY		1098-8725	
assignedEntity	1..1	SHALL		1098-8726	
code	0..1	MAY		1098-8727	2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
participant	0..*	SHOULD		1098-8738	
@typeCode	1..1	SHALL		1098-8740	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = LOC
participantRole	1..1	SHALL		1098-14903	Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32)
entryRelationship	0..*	MAY		1098-8722	
@typeCode	1..1	SHALL		1098-8723	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-14899	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09)
entryRelationship	0..*	MAY		1098-15492	
act	1..1	SHALL		1098-15973	Encounter Diagnosis (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2014-06-09)

1. **SHALL** contain exactly one [1..1] **@classCode="ENC"** (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8710).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-8711).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-8712) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.49"** (CONF:1098-26353).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32546).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8713).
5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [EncounterTypeCode](#) 2.16.840.1.113883.3.88.12.80.32 **DYNAMIC** (CONF:1098-8714).
 - a. This code **SHOULD** contain zero or one [0..1] **originalText** (CONF:1098-8719).
 - i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1098-15970).
 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1098-15971).
 - a. This reference/@value **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1098-15972).

The translation may exist to map the code of EncounterTypeCode (2.16.840.1.113883.3.88.12.80.32) valueset to the code of Encounter Planned (2.16.840.1.113883.11.20.9.52) valueset.

- b. This code **MAY** contain zero or one [0..1] **translation** (CONF:1098-32323).
6. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-8715).
7. **MAY** contain zero or one [0..1] **sdct:dischargeDispositionCode** (CONF:1098-32176).
 Note: The prefix sdct: SHALL be bound to the namespace "urn:hl7-org:sdct". The use of the namespace provides a necessary extension to CDA R2 for the use of the dischargeDispositionCode element
 - a. This sdct:dischargeDispositionCode **SHALL** contain exactly [1..1] **@code**, which **SHALL** be selected from ValueSet 2.16.840.1.113883.3.88.12.80.33 NUBC UB-04 FL17-Patient Status (code system 2.16.840.1.113883.6.301.5) **DYNAMIC** or, if access to NUBC is unavailable, from CodeSystem 2.16.840.1.113883.12.112 HL7 Discharge Disposition (CONF:1098-32177).
 - b. This sdct:dischargeDispositionCode **SHALL** contain exactly [1..1] **@codeSystem**, which **SHALL** be either CodeSystem: NUBC 2.16.840.1.113883.6.301.5 **OR** CodeSystem: HL7 Discharge Disposition 2.16.840.1.113883.12.112 (CONF:1098-32377).
8. **MAY** contain zero or more [0..*] **performer** (CONF:1098-8725).
 - a. The performer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-8726).

- i. This assignedEntity **MAY** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet Healthcare Provider Taxonomy (HIPAA) 2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1098-8727).
- 9. **SHOULD** contain zero or more [0..*] **participant** (CONF:1098-8738) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8740).
 - b. **SHALL** contain exactly one [1..1] Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) (CONF:1098-14903).
- 10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-8722) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8723).
 - b. **SHALL** contain exactly one [1..1] Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-14899).
- 11. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-15492) such that it
 - a. **SHALL** contain exactly one [1..1] Encounter Diagnosis (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2014-06-09) (CONF:1098-15973).

Table 104: EncounterTypeCode

Value Set: EncounterTypeCode 2.16.840.1.113883.3.88.12.80.32 This value set includes only the codes of the Current Procedure and Terminology designated for Evaluation and Management (99200 – 99607) (subscription to AMA Required Value Set Source: http://www.amacodingonline.com/			
Code	Code System	Code System OID	Print Name
99201	CPT4	2.16.840.1.113883.6.12	Office or other outpatient visit (problem focused)
99202	CPT4	2.16.840.1.113883.6.12	Office or other outpatient visit (expanded problem (expanded)
99203	CPT4	2.16.840.1.113883.6.12	Office or other outpatient visit (detailed)
99204	CPT4	2.16.840.1.113883.6.12	Office or other outpatient visit (comprehensive, (comprehensive - moderate)
99205	CPT4	2.16.840.1.113883.6.12	Office or other outpatient visit (comprehensive, comprehensive-high)
...			

Figure 59: Encounter Activity (V2) Example

```
<encounter classCode="ENC" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.49" extension="2014-06-09" />
  <id root="2a620155-9d11-439e-92b3-5d9815ff4de8" />
  <code code="99213" displayName="Office outpatient visit 15 minutes"
codeSystemName="CPT-4" codeSystem="2.16.840.1.113883.6.12">
    <originalText>
      <reference value="#Encounter1" />
    </originalText>
    <translation code="AMB" codeSystem="2.16.840.1.113883.5.4" displayName="Ambulatory"
codeSystemName="HL7 ActEncounterCode" />
  </code>
  <effectiveTime value="201209271300+0500" />
  <performer>
    <assignedEntity>
      . . .
    </assignedEntity>
  </performer>
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <templateId root="2.16.840.1.113883.10.20.22.4.32" />
      . . .
    </participantRole>
  </participant>
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09" />
      . . .
    </observation>
  </entryRelationship>
</encounter>
```

3.13.1 Current Visit

[encounter: identifier urn:oid:2.16.840.1.113883.10.20.34.3.10 (open)]

Table 105: Current Visit Contexts

Contained By:	Contains:
Continuity of Care Section (optional)	Episode of Care Observation External Document Reference Major Reason for Visit New Patient Act Number of Visits in the Last 12 Months Patient Seen in this ED in last 72 Hours and Discharged Transport Mode to Hospital Observation

This template represents the patient's current visit to the facility. If the current visit is the result of a referral, the referral document is referenced through the External Document

Reference template. If the patient is an established patient, then a count of all visits in the last 12 months (excluding this visit) is entered in the Number of Visits in the Last 12 Months template. If the patient is a new patient, this is indicated using the New Patient Act template. The major reason for this visit is represented by the Major Reason for this Visit template. If this is a follow-up visit to the emergency department (ED) for this problem, use the Follow-Up Visit Act. The method of transport to the hospital is recorded in the Transport Mode to Hospital Observation.

Table 106: Current Visit Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.10)					
@classCode	1..1	SHALL		1106-463	2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1106-464	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-465	
@root	1..1	SHALL		1106-466	2.16.840.1.113883.10.20.34.3.10
entryRelationship	0..1	MAY		1106-467	
@typeCode	1..1	SHALL		1106-473	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
act	1..1	SHALL		1106-468	External Document Reference (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09)
entryRelationship	0..1	MAY		1106-469	
@typeCode	1..1	SHALL		1106-474	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1106-470	Number of Visits in the Last 12 Months (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.26)
entryRelationship	0..1	MAY		1106-471	
@typeCode	1..1	SHALL		1106-475	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1106-472	Major Reason for Visit (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.7)
entryRelationship	0..1	MAY		1106-484	
@typeCode	1..1	SHALL		1106-485	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1106-486	New Patient Act (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.9)
entryRelationship	0..1	MAY		1106-747	
@typeCode	1..1	SHALL		1106-748	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1106-749	Episode of Care Observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.32)
entryRelationship	0..1	MAY		1106-751	
@typeCode	1..1	SHALL		1106-752	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR

observation	1..1	SHALL		1106-753	Transport Mode to Hospital Observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.24)
entryRelationship	0..1	MAY		1106-755	
@typeCode	1..1	SHALL		1106-756	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1106-757	Patient Seen in this ED in last 72 Hours and Discharged (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.31)

1. Conforms to [Encounter Activity \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2014-06-09).
2. **SHALL** contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-463).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-464).
4. **SHALL** contain exactly one [1..1] templateId (CONF:1106-465) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.34.3.10" (CONF:1106-466).
5. **MAY** contain zero or one [0..1] entryRelationship (CONF:1106-467) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" Has reason (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1106-473).
 - b. **SHALL** contain exactly one [1..1] [External Document Reference](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09) (CONF:1106-468).
Note: Form Element: Was Patient Referred
 - c. If the document is a National Ambulatory Medical Care Survey (templateId: 2.16.840.1.113883.10.20.34.1.2) or a National Hospital Ambulatory Medical Care Survey - OPD (templateId: 2.16.840.1.113883.10.20.34.1.3) then this entry **MAY** be present (CONF:1106-743).
6. **MAY** contain zero or one [0..1] entryRelationship (CONF:1106-469) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1106-474).
 - b. **SHALL** contain exactly one [1..1] [Number of Visits in the Last 12 Months](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.26) (CONF:1106-470).
Note: Form Element: Number of Past Visits in the Last 12 Months
 - c. If the document is a National Ambulatory Medical Care Survey (templateId: 2.16.840.1.113883.10.20.34.1.2) or a National Hospital Ambulatory Medical Care Survey - OPD (templateId: 2.16.840.1.113883.10.20.34.1.3) then this entry **MAY** be present (CONF:1106-744).
7. **MAY** contain zero or one [0..1] entryRelationship (CONF:1106-471) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" Has Reason (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1106-475).

- b. **SHALL** contain exactly one [1..1] [Major Reason for Visit](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.7) (CONF:1106-472).
Note: Form Element: Major Reason for This Visit
 - c. If the document is a National Ambulatory Medical Care Survey (templateId: 2.16.840.1.113883.10.20.34.1.2) or a National Hospital Ambulatory Medical Care Survey - OPD (templateId: 2.16.840.1.113883.10.20.34.1.3) then this entry **SHALL** be present (CONF:1106-745).
- 8. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1106-484) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1106-485).
 - b. **SHALL** contain exactly one [1..1] [New Patient Act](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.9) (CONF:1106-486).
Note: Form Element: New Patient
 - c. If the document is a National Ambulatory Medical Care Survey (templateId: 2.16.840.1.113883.10.20.34.1.2) or a National Hospital Ambulatory Medical Care Survey - OPD (templateId: 2.16.840.1.113883.10.20.34.1.3) then this entry **MAY** be present (CONF:1106-746).
- 9. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1106-747) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1106-748).
 - b. **SHALL** contain exactly one [1..1] [Episode of Care Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.32) (CONF:1106-749).
Note: Form Element: Episode of Care
 - c. If the document is a National Hospital Ambulatory Medical Care Survey - ED (templateId: 2.16.840.1.113883.10.20.34.1.4) then this entryRelationship **SHALL** be present (CONF:1106-750).
- 10. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1106-751) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1106-752).
 - b. **SHALL** contain exactly one [1..1] [Transport Mode to Hospital Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.24) (CONF:1106-753).
Note: Form Element: Arrival by Ambulance
 - c. If the document is a National Hospital Ambulatory Medical Care Survey - ED (templateId: 2.16.840.1.113883.10.20.34.1.4) then this entry **SHALL** be present (CONF:1106-754).
- 11. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1106-755) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1106-756).
 - b. **SHALL** contain exactly one [1..1] [Patient Seen in this ED in last 72 Hours and Discharged](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.31) (CONF:1106-757).
Note: Form Element: Has patient been seen in this ED within the last 72 hours and discharged?

- c. If the document is a National Hospital Ambulatory Medical Care Survey - ED (templateId: 2.16.840.1.113883.10.20.34.1.4) then this entry **SHALL** be present (CONF:1106-758).

Figure 60: Current Visit Example

```
<encounter classCode="ENC" moodCode="EVN">
  <!-- C-CDA R2 Encounter Activity (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.49" extension="2014-06-09" />
  <!-- Current Visit -->
  <templateId root="2.16.840.1.113883.10.20.34.3.10" />
  <!-- This id is the same as the encompassingEncounter id -->
  <id root="57edf80c-7114-4dc3-b3f4-abf515d18c90" />
  <code code="99283"
    displayName="Emergency department visit (moderate complexity)"
    codeSystem="2.16.840.1.113883.6.12" codeSystemName="CPT4" />
  <effectiveTime>
    <!-- Form Element: Date of Visit -->
    <low value="20130815" />
  </effectiveTime>

  <!-- All the following entry relationships will not be present at once
    but they are shown here for illustration purposes -->

  <!-- Form Element: Was patient referred -->
  <entryRelationship typeCode="RSON">
    <act classCode="ACT" moodCode="EVN">
      <!-- C-CDA R2 External Document Reference -->
      <templateId root="2.16.840.1.113883.10.20.22.4.115"
        extension="2014-06-09"/>
      ...
    </act>
  </entryRelationship>
  <!-- Form Element: Number of Past Visits in the Last 12 Months -->
  <entryRelationship typeCode="REFR">
    <!-- Number of Visits in the Last 12 Months -->
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.34.3.26" />
      ...
    </observation>
  </entryRelationship>

  <!-- Form Element: Major Reason for This Visit -->
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <!-- C-CDA R2 Indication (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09" />
      <!-- Major Reason for Visit -->
      <templateId root="2.16.840.1.113883.10.20.34.3.7" />
      ...
    </observation>
  </entryRelationship>

  <!-- Form Element: New Patient -->
  <entryRelationship typeCode="COMP">
    <act classCode="ACT" moodCode="EVN">
```



```

        <!-- New Patient Act -->
        <templateId root="2.16.840.1.113883.10.20.34.3.9" />
        ...
    </act>
</entryRelationship>

<!-- Form Element: Episode of Care Observation -->
<entryRelationship typeCode="COMP">
    <!-- Episode of Care Observation -->
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.34.3.32" />
        ...
    </observation>
</entryRelationship>

<!-- Form Element: Arrival by ambulance -->
<entryRelationship typeCode="REFR">
    <!-- Transport Mode to Hospital Observation -->
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.34.3.24" />
        ...
    </observation>
</entryRelationship>

<!-- Form Element: Patient Seen in this ED in last 72 Hours and Discharged-->
<entryRelationship typeCode="REFR">
    <!-- Patient Seen in this ED in last 72 Hours and Discharged -->
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.34.3.31" />
        ...
    </observation>
</entryRelationship>
</encounter>

```

3.13.2 Hospital Admission Encounter

[encounter: identifier urn:oid:2.16.840.1.113883.10.20.34.3.18 (open)]

Table 107: Hospital Admission Encounter Contexts

Contained By:	Contains:
Hospital Admission Section (required)	Discharge Status Observation Hospital Discharge Diagnosis (V2) Listed for Admission to Hospital Act Service Delivery Location

This template represents the encounter when the patient was admitted to hospital this ED visit.

If efforts have been exhausted to collect the data, set the appropriate nullFlavor to "UNK".

Table 108: Hospital Admission Encounter Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.18)					
@classCode	1..1	SHALL		1106-540	2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1106-541	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-532	
@root	1..1	SHALL		1106-542	2.16.840.1.113883.10.20.34.3.18
code	1..1	SHALL		1106-533	
@code	1..1	SHALL		1106-543	32485007
@codeSystem	1..1	SHALL		1106-544	2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
effectiveTime	1..1	SHALL		1106-534	
low	1..1	SHALL		1106-545	
high	1..1	SHALL		1106-546	
sdtc:discharge DispositionCode	0..1	SHOULD		1106-548	2.16.840.1.114222.4.11.7436 (Disposition (NCHS))
participant	1..1	SHALL		1106-531	
@typeCode	1..1	SHALL		1106-547	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = LOC
participantRole	1..1	SHALL		1106-539	Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32
participant	1..1	SHALL		1106-536	
@typeCode	1..1	SHALL		1106-551	2.16.840.1.113883.5.90 (HL7ParticipationType) = ADM
participantRole	1..1	SHALL		1106-537	
@classCode	0..1	MAY		1106-552	2.16.840.1.113883.5.110 (RoleClass) = ASSIGNED
code	1..1	SHALL		1106-553	2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
entryRelationship	1..1	SHALL		1106-535	
@typeCode	1..1	SHALL		1106-550	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
act	1..1	SHALL		1106-549	Hospital Discharge Diagnosis (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.33:20 14-06-09
entryRelationship	1..1	SHALL	Entry Relati onshi p	1106-697	
@typeCode	1..1	SHALL		1106-698	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1106-699	Discharge Status Observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.28
entryRelationship	1..1	SHALL		1106-538	

@typeCode	1..1	SHALL		1106-554	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SAS
act	1..1	SHALL		1106-555	Listed for Admission to Hospital Act (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.15

1. Conforms to [Encounter Activity \(V2\)](#) template (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2014-06-09).
2. **SHALL** contain exactly one [1..1] @classCode="ENC" (CodeSystem: HL7ActClass
2.16.840.1.113883.5.6) (CONF:1106-540).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood
2.16.840.1.113883.5.1001) (CONF:1106-541).
4. **SHALL** contain exactly one [1..1] templateId (CONF:1106-532) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.34.3.18"
(CONF:1106-542).
5. **SHALL** contain exactly one [1..1] code (CONF:1106-533).
 - a. This code **SHALL** contain exactly one [1..1] @code="32485007" Hospital admission
(CONF:1106-543).
 - b. This code **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT
2.16.840.1.113883.6.96) (CONF:1106-544).
6. **SHALL** contain exactly one [1..1] effectiveTime (CONF:1106-534).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] low (CONF:1106-545).
Note: Form Element: Date and time patient actually left the ED or observation unit
 - b. This effectiveTime **SHALL** contain exactly one [1..1] high (CONF:1106-546).
Note: Form Element: Hospital Discharge Date
7. **SHOULD** contain zero or one [0..1] sdctc:dischargeDispositionCode, which **SHALL** be
selected from ValueSet [Disposition \(NCHS\)](#) 2.16.840.1.114222.4.11.7436 **DYNAMIC**
(CONF:1106-548).
Note: Form Element: Hospital discharge disposition
8. **SHALL** contain exactly one [1..1] participant (CONF:1106-531) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem:
HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1106-547).
 - b. **SHALL** contain exactly one [1..1] [Service Delivery Location](#) (identifier:
urn:oid:2.16.840.1.113883.10.20.22.4.32) (CONF:1106-539).
Note: Form Element: Admitted To
9. **SHALL** contain exactly one [1..1] participant (CONF:1106-536) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="ADM" Admitter (CodeSystem:
HL7ParticipationType 2.16.840.1.113883.5.90) (CONF:1106-551).
 - b. **SHALL** contain exactly one [1..1] participantRole (CONF:1106-537).
Note: Form Element: Admitting Physician
 - i. This participantRole **MAY** contain zero or one [0..1] @classCode="ASSIGNED"
(CodeSystem: RoleClass 2.16.840.1.113883.5.110) (CONF:1106-552).

- ii. This participantRole **SHALL** contain exactly one [1..1] code, which **SHALL** be selected from ValueSet [Healthcare Provider Taxonomy \(HIPAA\)](#) 2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1106-553).
- 10. **SHALL** contain exactly one [1..1] entryRelationship (CONF:1106-535) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1106-550).
 - b. **SHALL** contain exactly one [1..1] [Hospital Discharge Diagnosis \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.33:2014-06-09) (CONF:1106-549).
Note: Form Element: Principal Hospital Discharge Diagnosis
- 11. **SHALL** contain exactly one [1..1] entryRelationship (CONF:1106-697) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1106-698).
 - b. **SHALL** contain exactly one [1..1] [Discharge Status Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.28) (CONF:1106-699).
Note: Form Element: Discharge Status
- 12. **SHALL** contain exactly one [1..1] entryRelationship (CONF:1106-538) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="SAS" Starts after start (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1106-554).
 - b. **SHALL** contain exactly one [1..1] [Listed for Admission to Hospital Act](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.15) (CONF:1106-555).
Note: Form Element: Date and time bed requested for hospital admission

Figure 61: Hospital Admission Encounter Example

```

<encounter classCode="ENC" moodCode="EVN">
  <!-- C-CDA R2 Encounter Activity (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.49" extension="2014-06-09" />
  <!-- Hospital Admission Encounter -->
  <templateId root="2.16.840.1.113883.10.20.34.3.18" />
  <id root="515fe5e3-12ca-48d2-b9ca-a3acc78156a4" />
  <code code="32485007" displayName="Hospital Admission"
    codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" />
  <effectiveTime>
    <!-- Form Element: Date and time patient actually left the ED or observation unit -->
    <low value="201308160920" />
    <!-- Form Element: Hospital Discharge Date -->
    <high value="20130820" />
  </effectiveTime>
  <!-- NOTE: The sdctc:dischargeDispositionCode will fail Schematron validation
    as, in the implied C-CDA Encounter Activity (V2) template,
    sdctc:dischargeDispositionCode is SHALL bound to either
    CodeSystem: NUBC 2.16.840.1.113883.6.301.5 OR
    CodeSystem: HL7 Discharge Disposition 2.16.840.1.113883.12.112.
    However Hospital Admission Encounter is SHALL bound to the value set
    "Disposition (NCHS)" whose codes come from code system
    PHINVADS (2.16.840.1.114222.4.5.274)
    An errata will be raised against C-CDA R2 to change this
    SHALL constraint -->
  <sdctc:dischargeDispositionCode code="PHC1273" displayName="Other"
    codeSystem="2.16.840.1.114222.4.5.274"
    codeSystemName="PHIN VADS code system" />

```

```

<!-- Form Element: Admitted to -->
<participant typeCode="LOC">
  <participantRole classCode="SDLOC">
    <!-- C-CDA Service Delivery Location -->
    <templateId root="2.16.840.1.113883.10.20.22.4.32" />
    <code code="1027-2" codeSystem="2.16.840.1.113883.6.259"
      codeSystemName="HealthcareServiceLocation"
      displayName="Medical Critical Care" />
    </participantRole>
  </participant>
<!-- Form Element: Admitting Physician -->
<participant typeCode="ADM">
  <participantRole>
    <id nullFlavor="NA" />
    <code code="208M00000X" displayName="Hospitalist"
      codeSystem="2.16.840.1.113883.5.53"
      codeSystemName="Healthcare Provider Taxonomy (HIPAA)" />
    </participantRole>
  </participant>
<!-- Form Element: Principal Hospital Discharge Diagnosis -->
<entryRelationship typeCode="COMP">
  <act classCode="ACT" moodCode="EVN">
    <!-- C-CDA R2 Hospital Discharge Diagnosis -->
    <templateId root="2.16.840.1.113883.10.20.22.4.33" extension="2014-06-09" />
    ...
  </act>
</entryRelationship>
<!-- Form Element: Date and time bed requested for hospital admission -->
<entryRelationship typeCode="SAS">
  <act classCode="ACT" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.34.3.15" />
    ...
  </act>
</entryRelationship>
<!-- Form Element: Discharge Status -->
<entryRelationship typeCode="COMP">
  <observation classCode="OBS" moodCode="EVN">
    <!-- Discharge Status Observation -->
    <templateId root="2.16.840.1.113883.10.20.34.3.28" />
    ...
  </observation>
</entryRelationship>
</encounter>

```

3.13.3 Observation Unit Stay Encounter

[encounter: identifier urn:oid:2.16.840.1.113883.10.20.34.3.33 (open)]

Table 109: Observation Unit Stay Encounter Contexts

Contained By:	Contains:
Observation Unit Stay Section (required)	

This template represents the encounter when the patient stayed in the observation unit.

If this information is not available at time of abstraction, then complete the Hospital Admission Log.

Table 110: Observation Unit Stay Encounter Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.33)					
@classCode	1..1	SHALL		1106-797	2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1106-798	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-775	
@root	1..1	SHALL		1106-785	2.16.840.1.113883.10.20.34.3.33
code	1..1	SHALL		1106-776	
@code	1..1	SHALL		1106-868	75912-6
@codeSystem	1..1	SHALL		1106-869	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
effectiveTime	1..1	SHALL		1106-777	
low	1..1	SHALL		1106-788	
@nullFlavor	0..1	MAY		1106-799	UNK
@value	0..1	SHOULD		1106-800	
high	1..1	SHALL		1106-789	
@nullFlavor	0..1	MAY		1106-801	UNK
@value	0..1	SHOULD		1106-802	

1. Conforms to [Encounter Activity \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2014-06-09).
2. **SHALL** contain exactly one [1..1] @classCode="ENC" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-797).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-798).
4. **SHALL** contain exactly one [1..1] templateId (CONF:1106-775) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.34.3.33" (CONF:1106-785).
5. **SHALL** contain exactly one [1..1] code (CONF:1106-776).
 - a. This code **SHALL** contain exactly one [1..1] @code="75912-6" Observation unit stay discharge (CONF:1106-868).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1106-869).

If either the admission or discharge date and time is unknown, use @nullFlavor="UNK"

6. **SHALL** contain exactly one [1..1] effectiveTime (CONF:1106-777).

- a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1106-788).
Note: Form Element: Date and time of observation unit admission
 - i. This low **MAY** contain zero or one [0..1] @nullFlavor="UNK" (CONF:1106-799).
 - ii. This low **SHOULD** contain zero or one [0..1] @value (CONF:1106-800).
- b. This effectiveTime **SHALL** contain exactly one [1..1] **high** (CONF:1106-789).
Note: Form Element: Date and time of observation unit discharge
 - i. This high **MAY** contain zero or one [0..1] @nullFlavor="UNK" (CONF:1106-801).
 - ii. This high **SHOULD** contain zero or one [0..1] @value (CONF:1106-802).

Figure 62: Observation Unit Stay Encounter Example

```
<encounter classCode="ENC" moodCode="EVN">
  <!-- C-CDA R2 Encounter Activity (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.49" extension="2014-06-09" />
  <!-- Observation Unit Stay Encounter -->
  <templateId root="2.16.840.1.113883.10.20.34.3.33" />
  <id root="565c21dd-3b53-47e0-a904-1dc840d2b2b5" />
  <code code="75912-6" displayName="Observation Unit Stay Discharge"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <effectiveTime>
    <!-- Date and time of observation unit admission -->
    <low nullFlavor="UNK" />
    <!-- Form Element: Date and time of observation unit discharge -->
    <high value="20130820" />
  </effectiveTime>
</encounter>
```

3.14 Encounter Diagnosis (V2)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2014-06-09 (open)]

Table 111: Encounter Diagnosis (V2) Contexts

Contained By:	Contains:
Encounter Activity (V2) (optional)	Problem Observation (V2)

This template wraps relevant problems or diagnoses at the close of a visit or that need to be followed after the visit. If the encounter is associated with a Hospital Discharge, the Hospital Discharge Diagnosis must be used. This entry requires at least one Problem Observation entry.

Table 112: Encounter Diagnosis (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2014-06-09)					
@classCode	1..1	SHALL		1098-14889	2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-14890	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-14895	
@root	1..1	SHALL		1098-14896	2.16.840.1.113883.10.20.22.4.80
@extension	1..1	SHALL		1098-32542	2014-06-09
code	1..1	SHALL		1098-19182	
@code	1..1	SHALL		1098-19183	29308-4
@codeSystem	1..1	SHALL		1098-32160	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entryRelationship	1..*	SHALL		1098-14892	
@typeCode	1..1	SHALL		1098-14893	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
observation	1..1	SHALL		1098-14898	Problem Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09)

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-14889).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-14890).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-14895) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.80" (CONF:1098-14896).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32542).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1098-19182).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="29308-4" Diagnosis (CONF:1098-19183).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1098-32160).
5. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1098-14892) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-14893).
 - b. **SHALL** contain exactly one [1..1] [Problem Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09) (CONF:1098-14898).

Figure 63: Encounter Diagnosis (V2) Example

```
<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.80" extension="2014-06-09" />
  <code code="29308-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName=" DIAGNOSIS" />
  <statusCode code="active" />
  <effectiveTime>
    <low value="20903003" />
  </effectiveTime>
  <entryRelationship typeCode="SUBJ">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
      <!-- Problem Observation -->
      ...
    </observation>
  </entryRelationship>
</act>
```

3.15 Episode of Care Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.32 (open)]

Table 113: Episode of Care Observation Contexts

Contained By:	Contains:
Current Visit (optional)	

This template represents whether this is a follow-up visit to this emergency department (ED) for this problem or if it is the initial visit to this ED for this problem. If it is unknown whether or not this is a follow-up visit use nullFlavor="UNK".

Table 114: Episode of Care Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.32)					
@classCode	1..1	SHALL		1106-846	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-847	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-842	
@root	1..1	SHALL		1106-844	2.16.840.1.113883.10.20.34.3.32
id	1..*	SHALL		1106-848	
code	1..1	SHALL		1106-849	
@code	1..1	SHALL		1106-851	75613-0
@codeSystem	1..1	SHALL		1106-852	2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1106-843	
@code	1..1	SHALL		1106-845	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1106-850	2.16.840.1.114222.4.11.7439 (Episode of Care (NCHS))
@nullFlavor	0..1	MAY		1106-853	UNK

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-846).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-847).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-842) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.32" (CONF:1106-844).
4. **SHALL** contain at least one [1..*] **id** (CONF:1106-848).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1106-849).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="75613-0" ED Episode of Care (CONF:1106-851).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CONF:1106-852).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1106-843).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1106-845).
7. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHOULD** be selected from ValueSet [Episode of Care \(NCHS\)](#) 2.16.840.1.114222.4.11.7439 **DYNAMIC** (CONF:1106-850).
 - a. This value **MAY** contain zero or one [0..1] **@nullFlavor**="UNK" (CONF:1106-853).

Table 115: Episode of Care (NCHS)

Value Set: Episode of Care (NCHS) 2.16.840.1.114222.4.11.7439			
These values specify the type of visit.			
Value Set Source: https://phinvads.cdc.gov/vads/SearchHome.action			
Code	Code System	Code System OID	Print Name
315639002	SNOMED CT	2.16.840.1.113883.6.96	Initial patient assessment
185389009	SNOMED CT	2.16.840.1.113883.6.96	Follow-up visit
...			

Figure 64: Episode of Care Observation Example

<pre> <observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.20.34.3.32" /> <id root="ecbec7b7-7fc0-47b2-85b5-39778319b8fb" /> <!-- Form Element: Episode of Care --> <code code="75613-0" displayName="ED episode of care" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" /> <statusCode code="completed" /> <value xsi:type="CD" code="185389009" displayName="Follow-up Visit" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" /> </observation> </pre>

3.16 Estimated Date of Delivery

[observation: identifier urn:oid:2.16.840.1.113883.10.20.15.3.1 (closed)]

Table 116: Estimated Date of Delivery Contexts

Contained By:	Contains:
Pregnancy Observation (optional)	

This clinical statement represents the anticipated date when a woman will give birth.

Table 117: Estimated Date of Delivery Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.1)					
@classCode	1..1	SHALL		81-444	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-445	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		81-16762	
@root	1..1	SHALL		81-16763	2.16.840.1.113883.10.20.15.3.1
code	1..1	SHALL		81-19139	
@code	1..1	SHALL		81-19140	11778-8
@codeSystem	1..1	SHALL		81-26503	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		81-448	
@code	1..1	SHALL		81-19096	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	TS	81-450	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:81-444).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-445).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-16762) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.15.3.1" (CONF:81-16763).
4. **SHALL** contain exactly one [1..1] **code** (CONF:81-19139).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="11778-8" Estimated date of delivery (CONF:81-19140).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:81-26503).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:81-448).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:81-19096).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="TS" (CONF:81-450).

Figure 65: Estimated Date of Delivery Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.15.3.1"/>
  <id extension="123456789" root="2.16.840.1.113883.19"/>
  <code code="11778-8" codeSystem="2.16.840.1.113883.6.1"
    displayName="Estimated date of delivery"/>
  <statusCode code="completed"/>
  <value xsi:type="TS" value="20110919" />
</observation>

```

3.17 External Document Reference

[externalDocument: identifier
urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09 (open)]

Table 118: External Document Reference Contexts

Contained By:	Contains:
Current Visit (optional)	

Where it is necessary to reference an external clinical document, the External Document Reference template can be used to reference this external document. However, if the containing document is replacing or appending to another document in the same set, that relationship is set in the header, using ClinicalDocument/relatedDocument.

Table 119: External Document Reference Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
externalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09)					
@classCode	1..1	SHALL		1098-31931	2.16.840.1.113883.5.6 (HL7ActClass) = DOCCLIN
@moodCode	1..1	SHALL		1098-31932	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-32748	
@root	1..1	SHALL		1098-32750	2.16.840.1.113883.10.20.22.4.115
@extension	1..1	SHALL		1098-32749	2014-06-09
id	1..1	SHALL		1098-32751	
code	1..1	SHALL		1098-31933	
setId	0..1	SHOULD		1098-32752	
versionNumber	0..1	SHOULD		1098-32753	

1. **SHALL** contain exactly one [1..1] **@classCode**="DOCCLIN" Clinical Document (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1098-31931).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1098-31932).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-32748) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.115" (CONF:1098-32750).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32749).
4. **SHALL** contain exactly one [1..1] **id** (CONF:1098-32751).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-31933).
6. **SHOULD** contain zero or one [0..1] **setId** (CONF:1098-32752).
7. **SHOULD** contain zero or one [0..1] **versionNumber** (CONF:1098-32753).

3.18 Hospital Discharge Diagnosis (V2)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.33:2014-06-09 (open)]

Table 120: Hospital Discharge Diagnosis (V2) Contexts

Contained By:	Contains:
Hospital Admission Encounter (required)	Problem Observation (V2)

This template represents problems or diagnoses present at the time of discharge which occurred during the hospitalization or need to be monitored after hospitalization. It requires at least one Problem Observation entry.

Table 121: Hospital Discharge Diagnosis (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.33:2014-06-09)					
@classCode	1..1	SHALL		1098-7663	2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-7664	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-16764	
@root	1..1	SHALL		1098-16765	2.16.840.1.113883.10.20.22.4.33
@extension	1..1	SHALL		1098-32534	2014-06-09
code	1..1	SHALL		1098-19147	
@code	1..1	SHALL		1098-19148	11535-2
@codeSystem	1..1	SHALL		1098-32163	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entryRelationship	1..*	SHALL		1098-7666	
@typeCode	1..1	SHALL		1098-7667	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
observation	1..1	SHALL		1098-15536	Problem Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09)

1. **SHALL** contain exactly one [1..1] @classCode="ACT" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7663).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7664).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-16764) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.33" (CONF:1098-16765).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-06-09" (CONF:1098-32534).
4. **SHALL** contain exactly one [1..1] code (CONF:1098-19147).
 - a. This code **SHALL** contain exactly one [1..1] @code="11535-2" Hospital discharge diagnosis (CONF:1098-19148).

- b. This code **SHALL** contain exactly one [1..1] `@codeSystem="2.16.840.1.113883.6.1"` (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1098-32163).
- 5. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1098-7666) such that it
 - a. **SHALL** contain exactly one [1..1] `@typeCode="SUBJ"` Has Subject (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7667).
 - b. **SHALL** contain exactly one [1..1] [Problem Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09) (CONF:1098-15536).

Figure 66: Hospital Discharge Diagnosis (V2) Example

```
<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.33" extension="2014-06-09"/>
  <id root="5a784260-6856-4f38-9638-80c751aff2fb" />
  <code code="11535-2" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="HOSPITAL DISCHARGE DIAGNOSIS" />
  <statusCode code="active" />
  <effectiveTime>
    <low value="201209091904-0400" />
  </effectiveTime>
  <entryRelationship typeCode="SUBJ" inversionInd="false">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Problem observation template -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" />

      ...

    </observation>
  </entryRelationship>
</act>
```

3.19 Immunization Activity (V2)

[substanceAdministration: identifier
urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2014-06-09 (open)]

Table 122: Immunization Activity (V2) Contexts

Contained By:	Contains:
Immunizations Section (optional)	Author Participation Drug Vehicle Immunization Medication Information (V2) Immunization Refusal Reason Indication (V2) Instruction (V2) Medication Dispense (V2) Medication Supply Order (V2) Precondition for Substance Administration (V2) Reaction Observation (V2) Substance Administered Act

An Immunization Activity describes immunization substance administrations that have actually occurred or are intended to occur. Immunization Activities in "INT" mood are reflections of immunizations a clinician intends a patient to receive. Immunization Activities in "EVN" mood reflect immunizations actually received.

An Immunization Activity is very similar to a Medication Activity with some key differentiators. The drug code system is constrained to CVX codes. Administration timing is less complex. Patient refusal reasons should be captured. All vaccines administered should be fully documented in the patient's permanent medical record. Healthcare providers who administer vaccines covered by the National Childhood Vaccine Injury Act are required to ensure that the permanent medical record of the recipient indicates:

- 1) Date of administration
- 2) Vaccine manufacturer
- 3) Vaccine lot number
- 4) Name and title of the person who administered the vaccine and the address of the clinic or facility where the permanent record will reside
- 5) Vaccine information statement (VIS)
 - a. Date printed on the VIS
 - b. Date VIS given to patient or parent/guardian.

This information should be included in an Immunization Activity when available. (Reference: http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/D/vacc_admin.pdf)

Table 123: Immunization Activity (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2014-06-09)					
@classCode	1..1	SHALL		1098-8826	2.16.840.1.113883.5.6 (HL7ActClass) = SBADM
@moodCode	1..1	SHALL		1098-8827	2.16.840.1.113883.11.20.9.18 (MoodCodeEvnInt)
@negationInd	0..1	MAY		1098-8985	
templateId	1..1	SHALL		1098-8828	
@root	1..1	SHALL		1098-10498	2.16.840.1.113883.10.20.22.4.52
@extension	1..1	SHALL		1098-32528	2014-06-09
id	1..*	SHALL		1098-8829	
code	0..1	MAY		1098-8830	
statusCode	1..1	SHALL		1098-8833	
@code	1..1	SHALL		1098-32359	2.16.840.1.113883.1.11.159331 (ActStatus)
effectiveTime	1..1	SHALL		1098-8834	
repeatNumber	0..1	MAY		1098-8838	
routeCode	0..1	MAY		1098-8839	2.16.840.1.113883.3.88.12.3221.8.7 (Medication Route FDA)
approachSiteCode	0..1	MAY	SET <CD>	1098-8840	2.16.840.1.113883.3.88.12.3221.8.9 (Body Site)
doseQuantity	0..1	SHOULD		1098-8841	
@unit	0..1	SHOULD		1098-8842	2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive)
administrationUnitCode	0..1	MAY		1098-8846	2.16.840.1.113883.1.11.14570 (AdministrableDrugForm)
consumable	1..1	SHALL		1098-8847	
manufacturedProduct	1..1	SHALL		1098-15546	Immunization Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09)
performer	0..1	SHOULD		1098-8849	
author	0..*	SHOULD		1098-31151	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
participant	0..*	MAY		1098-8850	
@typeCode	1..1	SHALL		1098-8851	2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM
participantRole	1..1	SHALL		1098-15547	Drug Vehicle (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.24)
entryRelationship	0..*	MAY		1098-8853	
@typeCode	1..1	SHALL		1098-8854	2.16.840.1.113883.5.1002

					(HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-15537	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09)
entryRelationship	0..1	MAY		1098-8856	
@typeCode	1..1	SHALL		1098-8857	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1098-8858	true
act	1..1	SHALL		1098-31392	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09)
entryRelationship	0..1	MAY		1098-8860	
@typeCode	1..1	SHALL		1098-8861	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
supply	1..1	SHALL		1098-15539	Medication Supply Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09)
entryRelationship	0..1	MAY		1098-8863	
@typeCode	1..1	SHALL		1098-8864	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
supply	1..1	SHALL		1098-15540	Medication Dispense (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09)
entryRelationship	0..1	MAY		1098-8866	
@typeCode	1..1	SHALL		1098-8867	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = CAUS
observation	1..1	SHALL		1098-15541	Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09)
entryRelationship	0..1	MAY		1098-8988	
@typeCode	1..1	SHALL		1098-8989	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-15542	Immunization Refusal Reason (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.53)
entryRelationship	0..*	SHOULD		1098-31510	
@typeCode	1..1	SHALL		1098-31511	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
@inversionInd	1..1	SHALL		1098-31512	true
sequenceNumber	0..1	MAY		1098-31513	
act	1..1	SHALL		1098-31514	Substance Administered Act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.118)
precondition	0..*	MAY		1098-8869	
@typeCode	1..1	SHALL		1098-8870	2.16.840.1.113883.5.1002

					(HL7ActRelationshipType) = PRCN
criterion	1..1	SHALL		1098-15548	Precondition for Substance Administration (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09

1. **SHALL** contain exactly one [1..1] **@classCode**="SBADM" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8826).
2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [MoodCodeEvnInt](#) 2.16.840.1.113883.11.20.9.18 **STATIC** 2014-09-01 (CONF:1098-8827).
3. **MAY** contain zero or one [0..1] **@negationInd** (CONF:1098-8985).
Note: Use negationInd="true" to indicate that the immunization was not given.
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-8828) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.52" (CONF:1098-10498).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32528).
5. **SHALL** contain at least one [1..*] **id** (CONF:1098-8829).
6. **MAY** contain zero or one [0..1] **code** (CONF:1098-8830).
Note: SubstanceAdministration.code is an optional field. Per HL7 Pharmacy Committee, "this is intended to further specify the nature of the substance administration act. To date the committee has made no use of this attribute". Because the type of substance administration is generally implicit in the routeCode, in the consumable participant, etc., the field is generally not used and there is no defined value set.
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-8833).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [ActStatus](#) 2.16.840.1.113883.1.11.159331 **DYNAMIC** (CONF:1098-32359).
8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-8834).
In "INT" (intent) mood, the repeatNumber defines the number of allowed administrations. For example, a repeatNumber of "3" means that the substance can be administered up to 3 times. In "EVN" (event) mood, the repeatNumber is the number of occurrences. For example, a repeatNumber of "3" in a substance administration event means that the current administration is the 3rd in a series.
9. **MAY** contain zero or one [0..1] **repeatNumber** (CONF:1098-8838).
10. **MAY** contain zero or one [0..1] **routeCode**, which **SHALL** be selected from ValueSet [Medication Route FDA](#) 2.16.840.1.113883.3.88.12.3221.8.7 **DYNAMIC** (CONF:1098-8839).
11. **MAY** contain zero or one [0..1] **approachSiteCode**, where the code **SHALL** be selected from ValueSet [Body Site](#) 2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-8840).
12. **SHOULD** contain zero or one [0..1] **doseQuantity** (CONF:1098-8841).
 - a. The doseQuantity, if present, **SHOULD** contain zero or one [0..1] **@unit**, which **SHALL** be selected from ValueSet [UnitsOfMeasureCaseSensitive](#) 2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-8842).

13. **MAY** contain zero or one [0..1] **administrationUnitCode**, which **SHALL** be selected from ValueSet [AdministrableDrugForm](#) 2.16.840.1.113883.1.11.14570 **DYNAMIC** (CONF:1098-8846).
14. **SHALL** contain exactly one [1..1] **consumable** (CONF:1098-8847).
 - a. This consumable **SHALL** contain exactly one [1..1] [Immunization Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) (CONF:1098-15546).
15. **SHOULD** contain zero or one [0..1] **performer** (CONF:1098-8849).
16. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31151).
17. **MAY** contain zero or more [0..*] **participant** (CONF:1098-8850) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="CSM" (CodeSystem: HL7ParticipationType 2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-8851).
 - b. **SHALL** contain exactly one [1..1] [Drug Vehicle](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.24) (CONF:1098-15547).
18. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-8853) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8854).
 - b. **SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-15537).
19. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-8856) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8857).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd**="true" True (CONF:1098-8858).
 - c. **SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-31392).
20. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-8860) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8861).
 - b. **SHALL** contain exactly one [1..1] [Medication Supply Order \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09) (CONF:1098-15539).
21. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-8863) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8864).
 - b. **SHALL** contain exactly one [1..1] [Medication Dispense \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09) (CONF:1098-15540).

22. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-8866) such that it
- SHALL** contain exactly one [1..1] **@typeCode="CAUS"** (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8867).
 - SHALL** contain exactly one [1..1] [Reaction Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09) (CONF:1098-15541).
23. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-8988) such that it
- SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8989).
 - SHALL** contain exactly one [1..1] [Immunization Refusal Reason](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.53) (CONF:1098-15542).

The following entryRelationship is used to indicate a given immunization's order in a series. The nested Substance Administered Act identifies an administration in the series. The entryRelationship/sequenceNumber shows the order of this particular administration in that series.

24. **SHOULD** contain zero or more [0..*] **entryRelationship** (CONF:1098-31510) such that it
- SHALL** contain exactly one [1..1] **@typeCode="COMP"** Component (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-31511).
 - SHALL** contain exactly one [1..1] **@inversionInd="true"** (CONF:1098-31512).
 - MAY** contain zero or one [0..1] **sequenceNumber** (CONF:1098-31513).
 - SHALL** contain exactly one [1..1] [Substance Administered Act](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.118) (CONF:1098-31514).
25. **MAY** contain zero or more [0..*] **precondition** (CONF:1098-8869) such that it
- SHALL** contain exactly one [1..1] **@typeCode="PRCN"** (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8870).
 - SHALL** contain exactly one [1..1] [Precondition for Substance Administration \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09) (CONF:1098-15548).

Table 124: MoodCodeEvnInt

Value Set: MoodCodeEvnInt 2.16.840.1.113883.11.20.9.18			
Contains moodCode EVN and INT			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
EVN	ActMood	2.16.840.1.113883.5.1001	Event
INT	ActMood	2.16.840.1.113883.5.1001	Intent

Table 125: Medication Route FDA

Value Set: Medication Route FDA 2.16.840.1.113883.3.88.12.3221.8.7			
Route of Administration value set is based upon FDA Drug Registration and Listing Database (FDA Orange Book) which are used in FDA Structured Product Labeling (SPL).			
Value Set Source: http://ushik.ahrq.gov/ViewItemDetails?system=mdr&itemKey=84244000			
Code	Code System	Code System OID	Print Name
C38192	FDA RouteOfAdministration	2.16.840.1.113883.3.26.1.1	AURICULAR (OTIC)
C38193	FDA RouteOfAdministration	2.16.840.1.113883.3.26.1.1	BUCCAL
C38194	FDA RouteOfAdministration	2.16.840.1.113883.3.26.1.1	CONJUNCTIVAL
C38675	FDA RouteOfAdministration	2.16.840.1.113883.3.26.1.1	CUTANEOUS
C38197	FDA RouteOfAdministration	2.16.840.1.113883.3.26.1.1	DENTAL
C38633	FDA RouteOfAdministration	2.16.840.1.113883.3.26.1.1	ELECTRO-OSMOSIS
C38205	FDA RouteOfAdministration	2.16.840.1.113883.3.26.1.1	ENDOCERVICAL
C38206	FDA RouteOfAdministration	2.16.840.1.113883.3.26.1.1	ENDOSINUSIAL
C38208	FDA RouteOfAdministration	2.16.840.1.113883.3.26.1.1	ENDOTRACHEAL
C38209	FDA RouteOfAdministration	2.16.840.1.113883.3.26.1.1	ENTERAL
C38210	FDA RouteOfAdministration	2.16.840.1.113883.3.26.1.1	EPIDURAL
C38211	FDA RouteOfAdministration	2.16.840.1.113883.3.26.1.1	EXTRA-AMNIOTIC
C38212	FDA RouteOfAdministration	2.16.840.1.113883.3.26.1.1	EXTRACORPOREAL
C38200	FDA RouteOfAdministration	2.16.840.1.113883.3.26.1.1	HEMODIALYSIS
C38215	FDA RouteOfAdministration	2.16.840.1.113883.3.26.1.1	INFILTRATION
...			

Table 126: Body Site

Value Set: Body Site 2.16.840.1.113883.3.88.12.3221.8.9 Contains values descending from the SNOMED CT® Anatomical Structure (91723000) hierarchy or Acquired body structure (body structure) (280115004) or Anatomical site notations for tumor staging (body structure) (258331007) or Body structure, altered from its original anatomical structure (morphologic abnormality) (118956008) or Physical anatomical entity (body structure) (91722005) This indicates the anatomical site. Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
362783006	SNOMED CT	2.16.840.1.113883.6.96	entire medial surface of lower extremity (body structure)
302539009	SNOMED CT	2.16.840.1.113883.6.96	entire hand (body structure)
287679003	SNOMED CT	2.16.840.1.113883.6.96	left hip region structure (body structure)
3341006	SNOMED CT	2.16.840.1.113883.6.96	right lung structure (body structure)
87878005	SNOMED CT	2.16.840.1.113883.6.96	left ventricular structure (body structure)
49848007	SNOMED CT	2.16.840.1.113883.6.96	structure of myocardium of left ventricle (body structure)
38033009	SNOMED CT	2.16.840.1.113883.6.96	amputation stump (body structure)
305005006	SNOMED CT	2.16.840.1.113883.6.96	6/7 interchondral joint (body structure)
28726007	SNOMED CT	2.16.840.1.113883.6.96	corneal structure (body structure)
75324005	SNOMED CT	2.16.840.1.113883.6.96	70 to 79 percent of body surface (body structure)
305007003	SNOMED CT	2.16.840.1.113883.6.96	8/9 interchondral joint (body structure)
19738007	SNOMED CT	2.16.840.1.113883.6.96	80 to 89 percent of body surface (body structure)
19904008	SNOMED CT	2.16.840.1.113883.6.96	9 nm filaments (cell structure)
91035006	SNOMED CT	2.16.840.1.113883.6.96	90 percent of body surface or more (body structure)
51878007	SNOMED CT	2.16.840.1.113883.6.96	A band (cell structure)
...			

Table 127: UnitsOfMeasureCaseSensitive

Value Set: UnitsOfMeasureCaseSensitive 2.16.840.1.113883.1.11.12839			
The UCUM code system provides a set of structural units from which working codes are built. There is an unlimited number of possible valid UCUM codes.			
Value Set Source: http://unitsofmeasure.org/ucum.html			
Code	Code System	Code System OID	Print Name
min	UCUM	2.16.840.1.113883.6.8	minute
hour	UCUM	2.16.840.1.113883.6.8	hr
%	UCUM	2.16.840.1.113883.6.8	percent
cm	UCUM	2.16.840.1.113883.6.8	centimeter
g	UCUM	2.16.840.1.113883.6.8	gram
g/(12.h)	UCUM	2.16.840.1.113883.6.8	gram per 12 hour
g/L	UCUM	2.16.840.1.113883.6.8	gram per liter
mol	UCUM	2.16.840.1.113883.6.8	mole
[IU]	UCUM	2.16.840.1.113883.6.8	international unit
Hz	UCUM	2.16.840.1.113883.6.8	Hertz
N	UCUM	2.16.840.1.113883.6.8	Newton
Pa	UCUM	2.16.840.1.113883.6.8	Pascal
J	UCUM	2.16.840.1.113883.6.8	Joule
W	UCUM	2.16.840.1.113883.6.8	Watt
A	UCUM	2.16.840.1.113883.6.8	Amp?re
...			

Table 128: AdministrableDrugForm

Value Set: AdministrableDrugForm 2.16.840.1.113883.1.11.14570			
Indicates the form in which the drug product should be administered.			
Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
PUFF	orderableDrugForm	2.16.840.1.113883.5.85	Puff
SCOOP	orderableDrugForm	2.16.840.1.113883.5.85	Scoops
APPFUL	orderableDrugForm	2.16.840.1.113883.5.85	Applicatorful
DROP	orderableDrugForm	2.16.840.1.113883.5.85	Drops
SPRY	orderableDrugForm	2.16.840.1.113883.5.85	Sprays
...			

Figure 67: Immunization Activity (V2) Example

```
<substanceAdministration classCode="SBADM" moodCode="EVN">
  <!-- ** Immunization activity ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.52" extension="2014-06-09" />
  <id root="e6f1ba43-c0ed-4b9b-9f12-f435d8ad8f92" />
  <statusCode code="completed" />
  <effectiveTime value="19981215" />
  <routeCode code="C28161" codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="National Cancer Institute (NCI) Thesaurus" displayName="Intramuscular
injection" />
  <doseQuantity value="50" unit="ug" />
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- ** Immunization medication information ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.54" extension="2014-06-09" />
      <manufacturedMaterial>
        <code code="33" codeSystem="2.16.840.1.113883.6.59"
displayName="Pneumococcal polysaccharide vaccine" codeSystemName="CVX">
          <translation code="854981" displayName="Pneumovax 23 (Pneumococcal vaccine
polyvalent) Injectable Solution" codeSystemName="RxNORM"
codeSystem="2.16.840.1.113883.6.88" />
        </code>
        <lotNumberText>1</lotNumberText>
      </manufacturedMaterial>
      <manufacturerOrganization>
        <name>Health LS - Immuno Inc.</name>
      </manufacturerOrganization>
    </manufacturedProduct>
  </consumable>
  <performer>
    <assignedEntity>
      <id root="2.16.840.1.113883.19.5.9999.456" extension="2981824" />
      <addr>
        <streetAddressLine>1007 Health Drive</streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
      <telecom use="WP" value="tel: +(555)-555-1030" />
      <assignedPerson>
        <name>
          <given>Harold</given>
          <family>Hippocrates</family>
        </name>
      </assignedPerson>
      <representedOrganization>
        <id root="2.16.840.1.113883.19.5.9999.1394" />
        <name>Good Health Clinic</name>
        <telecom use="WP" value="tel: +(555)-555-1030" />
        <addr>
          <streetAddressLine>1007 Health Drive</streetAddressLine>
          <city>Portland</city>
          <state>OR</state>
          <postalCode>99123</postalCode>
          <country>US</country>
        </addr>
      </representedOrganization>
    </assignedEntity>
  </performer>
</substanceAdministration>
```

```

        </addr>
    </representedOrganization>
</assignedEntity>
</performer>
</substanceAdministration>

```

3.20 Immunization Medication Information (V2)

[manufacturedProduct: identifier
urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 (open)]

Table 129: Immunization Medication Information (V2) Contexts

Contained By:	Contains:
Immunization Activity (V2) (required) Medication Supply Order (V2) (optional) Medication Dispense (V2) (optional) Planned Immunization Activity (required)	

The Immunization Medication Information represents product information about the immunization substance. The vaccine manufacturer and vaccine lot number are typically recorded in the medical record and should be included if known.

Table 130: Immunization Medication Information (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
manufacturedProduct (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09)					
@classCode	1..1	SHALL		1098-9002	2.16.840.1.113883.5.110 (RoleClass) = MANU
templateId	1..1	SHALL		1098-9004	
@root	1..1	SHALL		1098-10499	2.16.840.1.113883.10.20.22.4.54
@extension	1..1	SHALL		1098-32602	2014-06-09
id	0..*	MAY		1098-9005	
manufacturedMaterial	1..1	SHALL		1098-9006	
code	1..1	SHALL		1098-9007	2.16.840.1.113762.1.4.1010.6 (CVX Vaccines Administered - Vaccine Set)
translation	0..*	MAY		1098-31543	2.16.840.1.113762.1.4.1010.8 (Vaccine Clinical Drug)
translation	0..*	MAY		1098-31881	2.16.840.1.113762.1.4.1010.10 (Specific Vaccine Clinical Drug)
lotNumberText	1..1	SHALL		1098-9014	
manufacturerOrganization	0..1	SHOULD		1098-9012	

1. **SHALL** contain exactly one [1..1] **@classCode="MANU"** (CodeSystem: RoleClass 2.16.840.1.113883.5.110 **STATIC**) (CONF:1098-9002).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-9004) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.54"** (CONF:1098-10499).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32602).
3. **MAY** contain zero or more [0..*] **id** (CONF:1098-9005).
4. **SHALL** contain exactly one [1..1] **manufacturedMaterial** (CONF:1098-9006).
 - a. This **manufacturedMaterial** **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [CVX Vaccines Administered - Vaccine Set](#) 2.16.840.1.113762.1.4.1010.6 **DYNAMIC** (CONF:1098-9007).
 - i. This **code** **MAY** contain zero or more [0..*] **translation**, which **MAY** be selected from ValueSet [Vaccine Clinical Drug](#) 2.16.840.1.113762.1.4.1010.8 **DYNAMIC** (CONF:1098-31543).
 - ii. This **code** **MAY** contain zero or more [0..*] **translation**, which **MAY** be selected from ValueSet [Specific Vaccine Clinical Drug](#) 2.16.840.1.113762.1.4.1010.10 **DYNAMIC** (CONF:1098-31881).
 - b. This **manufacturedMaterial** **SHALL** contain exactly one [1..1] **lotNumberText** (CONF:1098-9014).
5. **SHOULD** contain zero or one [0..1] **manufacturerOrganization** (CONF:1098-9012).

Table 131: CVX Vaccines Administered - Vaccine Set

Value Set: CVX Vaccines Administered - Vaccine Set 2.16.840.1.113762.1.4.1010.6 CVX vaccine concepts that represent actual vaccines types. This does not include the identifiers for CVX codes that do not represent vaccines. Value set intensionally defined from CVX (OID: 2.16.840.1.113883.12.292) FilterOnProperty(nonvaccine,FALSE). Value Set Source: https://vsac.nlm.nih.gov/			
Code	Code System	Code System OID	Print Name
19	CDC Vaccine Code (CVX)	2.16.840.1.113883.12.292	BCG
26	CDC Vaccine Code (CVX)	2.16.840.1.113883.12.292	Cholera
24	CDC Vaccine Code (CVX)	2.16.840.1.113883.12.292	Anthrax
27	CDC Vaccine Code (CVX)	2.16.840.1.113883.12.292	Botulinum antitoxin
...			

Table 132: Vaccine Clinical Drug

Value Set: Vaccine Clinical Drug 2.16.840.1.113762.1.4.1010.8 Administrable vaccine medication formulations represented using either a "generic" or "brand-specific" concept. Value set intensionally defined from RXNORM (OID: 2.16.840.1.113883.6.88), comprised of those codes whose ingredients map to NDC codes that the CDC associates with CVX codes. Value Set Source: https://vsac.nlm.nih.gov/			
Code	Code System	Code System OID	Print Name
898572	RxNorm	2.16.840.1.113883.6.88	0.17 ML Rho(D) Immune Globulin 0.3 MG/ML Prefilled Syringe [HyperRHO]
807276	RxNorm	2.16.840.1.113883.6.88	0.5 ML diphtheria toxoid vaccine, inactivated 4 UNT/ML / tetanus toxoid vaccine, inactivated 10 UNT/ML Prefilled Syringe [Decavac]
798482	RxNorm	2.16.840.1.113883.6.88	0.5 ML Hepatitis A Vaccine (Inactivated) Strain HM175 1440 UNT/ML Prefilled Syringe [Havrix]
836636	RxNorm	2.16.840.1.113883.6.88	0.5 ML Hepatitis A Vaccine, Inactivated 50 UNT/ML Prefilled Syringe [Vaqta]
...			

Table 133: Specific Vaccine Clinical Drug

Value Set: Specific Vaccine Clinical Drug 2.16.840.1.113762.1.4.1010.10 This value set contains extensionally identified RxNorm vaccine codes. It should be used to supplement the Vaccine Clinical Drug Value Set (Value Set OID 2.16.840.1.113762.1.4.1010.8). Intensional rules for the latter value set are being refined, but at this time lack complete sensitivity, and as a result can miss including relevant codes. This Specific Vaccine Clinical Drug Value Set is used to manually provide for these other RxNorm codes. (At the time of Consolidated CDA R2 publication, the value set has no members) Value Set Source: https://vsac.nlm.nih.gov/			
Code	Code System	Code System OID	Print Name
NA	RxNorm	2.16.840.1.113883.6.88	At the time of Consolidated CDA R2 publication, the value set has no members
...			

Figure 68: Immunization Medication Information (V2) Example

```
<manufacturedProduct classCode="MANU">
  <!-- ** Immunization medication information ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.54" extension="2014-06-09" />
  <manufacturedMaterial>
    <code code="33" codeSystem="2.16.840.1.113883.6.59" displayName="Pneumococcal
polysaccharide vaccine" codeSystemName="CVX">
      <translation code="854981" displayName="Pneumovax 23 (Pneumococcal vaccine
polyvalent) Injectable Solution" codeSystemName="RxNORM"
codeSystem="2.16.840.1.113883.6.88" />
    </code>
    <lotNumberText>1</lotNumberText>
  </manufacturedMaterial>
  <manufacturerOrganization>
    <name>Health LS - Immuno Inc.</name>
  </manufacturerOrganization>
</manufacturedProduct>
```

3.21 Immunization Refusal Reason

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.53 (open)]

Table 134: Immunization Refusal Reason Contexts

Contained By:	Contains:
Immunization Activity (V2) (optional)	

The Immunization Refusal Reason documents the rationale for the patient declining an immunization.

Table 135: Immunization Refusal Reason Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.53)					
@classCode	1..1	SHALL		81-8991	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-8992	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		81-8993	
@root	1..1	SHALL		81-10500	2.16.840.1.113883.10.20.22.4.53
id	1..*	SHALL		81-8994	
code	1..1	SHALL		81-8995	2.16.840.1.113883.1.11.19717 (No Immunization Reason Value Set)
statusCode	1..1	SHALL		81-8996	
@code	1..1	SHALL		81-19104	2.16.840.1.113883.5.14 (ActStatus) = completed

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:81-8991).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-8992).
3. **SHALL** contain exactly one [1..1] templateId (CONF:81-8993) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.53" (CONF:81-10500).
4. **SHALL** contain at least one [1..*] id (CONF:81-8994).
5. **SHALL** contain exactly one [1..1] code, which **SHALL** be selected from ValueSet [No Immunization Reason Value Set](#) 2.16.840.1.113883.1.11.19717 **DYNAMIC** (CONF:81-8995).
6. **SHALL** contain exactly one [1..1] statusCode (CONF:81-8996).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:81-19104).

Table 136: No Immunization Reason Value Set

Value Set: No Immunization Reason Value Set 2.16.840.1.113883.1.11.19717			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
IMMUNE	ActReason	2.16.840.1.113883.5.8	Immunity
MEDPREC	ActReason	2.16.840.1.113883.5.8	Medical precaution
OSTOCK	ActReason	2.16.840.1.113883.5.8	Out of stock
PATOBJ	ActReason	2.16.840.1.113883.5.8	Patient objection
PHILISOP	ActReason	2.16.840.1.113883.5.8	Philosophical objection
RELIG	ActReason	2.16.840.1.113883.5.8	Religious objection
VACEFF	ActReason	2.16.840.1.113883.5.8	Vaccine efficacy concerns
VACSAF	ActReason	2.16.840.1.113883.5.8	Vaccine safety concerns

Figure 69: Immunization Refusal Reason Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.53"/>
  <id root="2a620155-9d11-439e-92b3-5d9815ff4dd8"/>
  <code displayName="Patient Objection" code="PATOBJ"
    codeSystemName="HL7 ActNoImmunizationReason" codeSystem="2.16.840.1.113883.5.8"/>
  <statusCode code="completed"/>
</observation>

```

3.22 Indication (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
(open)]

Table 137: Indication (V2) Contexts

Contained By:	Contains:
Medication Activity (V2) (optional) Procedure Activity Act (V2) (optional) Procedure Activity Procedure (V2) (optional) Procedure Activity Observation (V2) (optional) Immunization Activity (V2) (optional) Encounter Activity (V2) (optional) Planned Act (V2) (optional) Planned Procedure (V2) (optional) Planned Observation (V2) (optional) Planned Medication Activity (V2) (optional) Planned Immunization Activity (optional)	

This template represents the rationale for an action such as an encounter, a medication administration, or a procedure. The id element can be used to reference a problem recorded elsewhere in the document, or can be used with a code and value to record the problem. Indications for treatment are not laboratory results; rather the problem associated with the laboratory result should be cited (e.g., hypokalemia instead of a laboratory result of Potassium 2.0 mEq/L). Use the Drug Monitoring Act [templateId 2.16.840.1.113883.10.20.22.4.123] to indicate if a particular drug needs special monitoring (e.g., anticoagulant therapy). Use Precondition for Substance Administration (V2) [templateId 2.16.840.1.113883.10.20.22.4.25.2] to represent that a medication is to be administered only when the associated criteria are met.

Table 138: Indication (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09)					
@classCode	1..1	SHALL		1098-7480	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-7481	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-7482	
@root	1..1	SHALL		1098-10502	2.16.840.1.113883.10.20.22.4.19
@extension	1..1	SHALL		1098-32570	2014-06-09
id	1..*	SHALL		1098-7483	
code	1..1	SHALL		1098-31229	2.16.840.1.113883.3.88.12.3221.7.2 (Problem Type)
statusCode	1..1	SHALL		1098-7487	
@code	1..1	SHALL		1098-19105	2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	0..1	SHOULD		1098-7488	
value	0..1	MAY	CD	1098-7489	2.16.840.1.113883.3.88.12.3221.7.4 (Problem)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7480).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7481).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7482) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.19" (CONF:1098-10502).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32570).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7483).
 Note: If the id element is used to reference a problem recorded else where in the document then this id must equal another entry/id in the same document instance. Application Software must be responsible for resolving the identifier back to its original object and then rendering the information in the correct place in the containing section's narrative text. Its purpose is to obviate the need to repeat the complete XML representation of the referred to entry when relating one entry to another.
5. **SHALL** contain exactly one [1..1] **code**, which **MAY** be selected from ValueSet [Problem Type](#) 2.16.840.1.113883.3.88.12.3221.7.2 **STATIC** 2014-09-02 (CONF:1098-31229).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7487).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19105).
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-7488).
8. **MAY** contain zero or one [0..1] **value** with **@xsi:type**="CD", where the code **SHOULD** be selected from ValueSet [Problem](#) 2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:1098-7489).

Table 139: Problem

Value Set: Problem 2.16.840.1.113883.3.88.12.3221.7.4			
A value set of SNOMED-CT codes limited to terms descending from the Clinical Findings (404684003) or Situation with Explicit Context (243796009) hierarchies.			
Specific URL Pending			
Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
46635009	SNOMED CT	2.16.840.1.113883.6.96	diabetes mellitus type 1
234422006	SNOMED CT	2.16.840.1.113883.6.96	acute intermittent porphyria
31712002	SNOMED CT	2.16.840.1.113883.6.96	primary biliary cirrhosis
302002000	SNOMED CT	2.16.840.1.113883.6.96	difficulty moving
15188001	SNOMED CT	2.16.840.1.113883.6.96	hearing loss
129851009	SNOMED CT	2.16.840.1.113883.6.96	alteration in bowel elimination
247472004	SNOMED CT	2.16.840.1.113883.6.96	hives
39579001	SNOMED CT	2.16.840.1.113883.6.96	anaphylaxis
274945004	SNOMED CT	2.16.840.1.113883.6.96	AA amyloidosis (disorder)
129851009	SNOMED CT	2.16.840.1.113883.6.96	alteration in comfort: pain
43894001	SNOMED CT	2.16.840.1.113883.6.96	Abdominal actinomycosis (disorder)
233985008	SNOMED CT	2.16.840.1.113883.6.96	Abdominal aortic aneurysm (disorder)
253679008	SNOMED CT	2.16.840.1.113883.6.96	Abdominal aortic coarctation (disorder)
116289008	SNOMED CT	2.16.840.1.113883.6.96	Abdominal bloating (finding)
9991008	SNOMED CT	2.16.840.1.113883.6.96	Abdominal colic (finding)
...			

Table 140: Problem Type

Value Set: Problem Type 2.16.840.1.113883.3.88.12.3221.7.2			
This value set indicates the level of medical judgment used to determine the existence of a problem.			
Value Set Source: http://www.loinc.org/			
Code	Code System	Code System OID	Print Name
75326-9	LOINC	2.16.840.1.113883.6.1	Problem HL7.CCDAR2
75325-1	LOINC	2.16.840.1.113883.6.1	Symptom HL7.CCDAR2
75324-4	LOINC	2.16.840.1.113883.6.1	Functional performance HL7.CCDAR2
75323-6	LOINC	2.16.840.1.113883.6.1	Functional performance HL7.CCDAR2
75323-6	LOINC	2.16.840.1.113883.6.1	Condition HL7.CCDAR2
29308-4	LOINC	2.16.840.1.113883.6.1	Diagnosis
75322-8	LOINC	2.16.840.1.113883.6.1	Complaint HL7.CCDAR2
75321-0	LOINC	2.16.840.1.113883.6.1	Clinical finding HL7.CCDAR2
75319-4	LOINC	2.16.840.1.113883.6.1	Cognitive function family member HL7.CCDAR2
75319-4	LOINC	2.16.840.1.113883.6.1	Cognitive function family member HL7.CCDAR2
75317-8	LOINC	2.16.840.1.113883.6.1	Symptom family member HL7.CCDAR2
75316-0	LOINC	2.16.840.1.113883.6.1	Functional performance family member HL7.CCDAR2
75315-2	LOINC	2.16.840.1.113883.6.1	Condition family member HL7.CCDAR2
75314-5	LOINC	2.16.840.1.113883.6.1	Diagnosis family member HL7.CCDAR2
75313-7	LOINC	2.16.840.1.113883.6.1	Complaint family member HL7.CCDAR2
...			

Figure 70: Indication (V2) Example

```

<entry typeCode="DRIV">
  <substanceAdministration classCode="SBADM" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09" />
    <!-- ** MEDICATION ACTIVITY -->
    <id root="cdbd33f0-6cde-11db-9fe1-0800200c9a66" />
    <text>
      <reference value="#Med1" /> 0.09 MG/ACTUAT inhalant solution, 2 puffs QID PRN
wheezing
    </text>
    ...
    <!-- Indication snippet inside a Medication Activity -->
    <entryRelationship typeCode="RSON">
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09"
/>
        <!-- Note that this id equals the problem observation/id -->
        <id root="db734647-fc99-424c-a864-7e3cda82e703" />
        <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
        <statusCode code="completed" />
        <value xsi:type="CD" code="32398004" displayName="Bronchitis"
codeSystem="2.16.840.1.113883.6.96" />
      </observation>
    </entryRelationship>
    ...
  </substanceAdministration>
</entry>
  <!-- Points to a problem on the problem list -->
  <!-- Problem observation template
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  Note that this id equals the Indication observation/id
  <id root="db734647-fc99-424c-a864-7e3cda82e703"/> -->

```

3.22.1 Major Reason for Visit

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.7 (open)]

Table 141: Major Reason for Visit Contexts

Contained By:	Contains:
Current Visit (optional)	

This template represents the major reason for this visit.

Table 142: Major Reason for Visit Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.7)					
@classCode	1..1	SHALL		1106-405	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-406	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-407	
@root	1..1	SHALL		1106-408	2.16.840.1.113883.10.20.34.3.7
code	1..1	SHALL		1106-409	
@code	1..1	SHALL		1106-410	ASSERTION
@codeSystem	1..1	SHALL		1106-411	2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
value	1..1	SHALL	CD	1106-412	2.16.840.1.114222.4.11.7404 (Major Reason for Visit (NCHS))

1. Conforms to [Indication \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-405).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-406).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-407) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.7" (CONF:1106-408).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1106-409).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" (CONF:1106-410).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: ActCode 2.16.840.1.113883.5.4) (CONF:1106-411).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHALL** be selected from ValueSet [Major Reason for Visit \(NCHS\)](#) 2.16.840.1.114222.4.11.7404 **DYNAMIC** (CONF:1106-412).

Table 143: Major Reason for Visit (NCHS)

Value Set: Major Reason for Visit (NCHS) 2.16.840.1.114222.4.11.7404			
These codes describe the major reason for the visit.			
Code	Code System	Code System OID	Print Name
PHC1268	PHIN VADS code system	2.16.840.1.114222.4.5.274	Chronic problem, flare-up
PHC1267	PHIN VADS code system	2.16.840.1.114222.4.5.274	Chronic problem, routine
PHC1265	PHIN VADS code system	2.16.840.1.114222.4.5.274	New problem (<3 mos. onset)
PHC1269	PHIN VADS code system	2.16.840.1.114222.4.5.274	Pre/Post surgery
PHC1266	PHIN VADS code system	2.16.840.1.114222.4.5.274	Preventive care (e.g., routine prenatal, well-baby, screening, insurance, general exams)

Figure 71: Major Reason for Visit Example

<pre> <observation classCode="OBS" moodCode="EVN"> <!-- C-CDA R2 Indication (V2) --> <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09" /> <!-- Major Reason for Visit --> <templateId root="2.16.840.1.113883.10.20.34.3.7" /> <id root="e88883d7-39b7-4550-b2b4-e34a4bddd78d" /> <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" /> <statusCode code="completed" /> <value xsi:type="CD" code="PHC1268" codeSystem="2.16.840.1.114222.4.5.274" codeSystemName="PHIN VS (CDC Local Coding System)" displayName="Chronic problem, flare-up" /> </observation> </pre>

3.23 Instruction (V2)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09 (open)]

Table 144: Instruction (V2) Contexts

Contained By:	Contains:
Medication Activity (V2) (optional) Procedure Activity Act (V2) (optional) Procedure Activity Procedure (V2) (optional) Procedure Activity Observation (V2) (optional) Immunization Activity (V2) (optional) Planned Act (V2) (optional) Planned Procedure (V2) (optional) Planned Observation (V2) (optional) Planned Medication Activity (V2) (optional) Medication Supply Order (V2) (optional) Planned Immunization Activity (optional)	

The Instruction template can be used in several ways, such as to record patient instructions within a Medication Activity or to record fill instructions within a supply order. The template's moodCode can only be INT. If an instruction was already be given, the Procedure Activity Act template (instead of this template) should be used to represent the already occurred instruction. The act/code defines the type of instruction. Though not defined in this template, a Vaccine Information Statement (VIS) document could be referenced through act/reference/externalDocument, and patient awareness of the instructions can be represented with the generic participant and the participant/awarenessCode.

Table 145: Instruction (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09)					
@classCode	1..1	SHALL		1098-7391	2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-7392	2.16.840.1.113883.5.1001 (ActMood) = INT
templateId	1..1	SHALL		1098-7393	
@root	1..1	SHALL		1098-10503	2.16.840.1.113883.10.20.22.4.20
@extension	1..1	SHALL		1098-32598	2014-06-09
code	1..1	SHALL		1098-16884	2.16.840.1.113883.11.20.9.34 (Patient Education)
statusCode	1..1	SHALL		1098-7396	
@code	1..1	SHALL		1098-19106	2.16.840.1.113883.5.14 (ActStatus) = completed

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7391).
2. **SHALL** contain exactly one [1..1] **@moodCode**="INT" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7392).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7393) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.20" (CONF:1098-10503).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32598).
4. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Patient Education](#) 2.16.840.1.113883.11.20.9.34 **DYNAMIC** (CONF:1098-16884).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7396).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19106).

Table 146: Patient Education

Value Set: Patient Education 2.16.840.1.113883.11.20.9.34 Limited to terms descending from the Education (409073007) hierarchy. Specific URL Pending Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
311401005	SNOMED CT	2.16.840.1.113883.6.96	Patient Education
171044003	SNOMED CT	2.16.840.1.113883.6.96	Immunization Education
243072006	SNOMED CT	2.16.840.1.113883.6.96	Cancer Education
...			

Figure 72: Instruction (V2) Example

<pre> <act classCode="ACT" moodCode="INT"> <templateId root="2.16.840.1.113883.10.20.22.4.20" extension="2014-06-09" /> <code code="171044003" codeSystem="2.16.840.1.113883.6.96" displayName="immunization education" /> <text> <reference value="#immunSect" /> Possible flu-like symptoms for three days. </text> <statusCode code="completed" /> </act> </pre>

3.24 Listed for Admission to Hospital Act

[act: identifier urn:oid:2.16.840.1.113883.10.20.34.3.15 (open)]

Table 147: Listed for Admission to Hospital Act Contexts

Contained By:	Contains:
Hospital Admission Encounter (required)	

This template represents the time that a bed was requested for the patient for hospital admission.

Table 148: Listed for Admission to Hospital Act Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.15)					
@classCode	1..1	SHALL		1106-700	2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1106-701	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-560	
@root	1..1	SHALL		1106-564	2.16.840.1.113883.10.20.34.3.15
id	1..*	SHALL		1106-565	
code	1..1	SHALL		1106-561	
@code	1..1	SHALL		1106-566	183767005
@codeSystem	1..1	SHALL		1106-567	2.16.840.1.113883.6.96
statusCode	1..1	SHALL		1106-563	
@code	1..1	SHALL		1106-569	2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1106-562	
low	1..1	SHALL		1106-568	

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-700).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-701).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-560) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.15" (CONF:1106-564).
4. **SHALL** contain at least one [1..*] **id** (CONF:1106-565).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1106-561).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="183767005" Listed for admission to hospital (CONF:1106-566).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" SNOMED (CONF:1106-567).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1106-563).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1106-569).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1106-562).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1106-568).
Note: Form Element: Date and time bed was requested for hospital admission

Figure 73: Listed for Admission to Hospital Act Example

```
<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.34.3.15"/>
  <id root="b5833096-e341-4e6c-b493-020a55267ba7"/>
  <code code="183767005"
    displayName="Listed for admission to hospital"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="201308160700"/>
  </effectiveTime>
</act>
```

3.25 Medication Activity (V2)

[substanceAdministration: identifier
urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09 (open)]

Table 149: Medication Activity (V2) Contexts

Contained By:	Contains:
Medications Section (entries optional) (V2) (optional) Reaction Observation (V2) (optional) Procedure Activity Act (V2) (optional) Procedure Activity Procedure (V2) (optional) Procedure Activity Observation (V2) (optional) Medications Section (optional)	Author Participation Drug Monitoring Act Drug Vehicle Indication (V2) Instruction (V2) Medication Dispense (V2) Medication Information (V2) Medication Supply Order (V2) Precondition for Substance Administration (V2) Reaction Observation (V2) Substance Administered Act

A Medication Activity describes substance administrations that have actually occurred (e.g., pills ingested or injections given) or are intended to occur (e.g., "take 2 tablets twice a day for the next 10 days"). Medication activities in "INT" mood are reflections of what a clinician intends a patient to be taking. For example, a clinician may intend that a patient to be administered Lisinopril 20 mg PO for blood pressure control. If what was actually administered was Lisinopril 10 mg., then the Medication activities in the "EVN" mood would reflect actual use.

A moodCode of INT is allowed, but it is recommended that the Planned Medication Activity (V2) template be used for moodCodes other than EVN if the document type contains a section that includes Planned Medication Activity (V2) (for example a Care Plan document with Plan of Treatment, Intervention, or Goal sections).

At a minimum, a Medication Activity shall include an effectiveTime indicating the duration of the administration (or single-administration timestamp). Ambulatory medication lists generally

provide a summary of use for a given medication over time - a medication activity in event mood with the duration reflecting when the medication started and stopped. Ongoing medications will not have a stop date (or will have a stop date with a suitable NULL value). Ambulatory medication lists will generally also have a frequency (e.g., a medication is being taken twice a day). Inpatient medications generally record each administration as a separate act.

The dose (doseQuantity) represents how many of the consumables are to be administered at each administration event. As a result, the dose is always relative to the consumable and the interval of administration. Thus, a patient consuming a single "metoprolol 25mg tablet" per administration will have a doseQuantity of "1", whereas a patient consuming "metoprolol" will have a dose of "25 mg".

Table 150: Medication Activity (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09)					
@classCode	1..1	SHALL		1098-7496	2.16.840.1.113883.5.6 (HL7ActClass) = SBADM
@moodCode	1..1	SHALL		1098-7497	2.16.840.1.113883.11.20.9.18 (MoodCodeEvnInt)
templateId	1..1	SHALL		1098-7499	
@root	1..1	SHALL		1098-10504	2.16.840.1.113883.10.20.22.4.16
@extension	1..1	SHALL		1098-32498	2014-06-09
id	1..*	SHALL		1098-7500	
code	0..1	MAY		1098-7506	
statusCode	1..1	SHALL		1098-7507	
@code	1..1	SHALL		1098-32360	2.16.840.1.113883.1.11.159331 (ActStatus)
effectiveTime	1..1	SHALL	IVL_T S	1098-7508	
@value	0..1	SHOULD		1098-32775	
low	0..1	SHOULD		1098-32776	
high	0..1	MAY		1098-32777	
effectiveTime	0..1	SHOULD		1098-7513	
@operator	1..1	SHALL		1098-9106	A
repeatNumber	0..1	MAY		1098-7555	
routeCode	0..1	SHOULD		1098-7514	2.16.840.1.113883.3.88.12.3221.8.7 (Medication Route FDA)
approachSiteCode	0..1	MAY	SET< CD>	1098-7515	2.16.840.1.113883.3.88.12.3221.8.9 (Body Site)
doseQuantity	1..1	SHALL		1098-7516	
@unit	0..1	SHOULD		1098-7526	2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive)
rateQuantity	0..1	MAY		1098-7517	
@unit	1..1	SHALL		1098-7525	2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive)
maxDoseQuantity	0..1	MAY	RTO< PQ, PQ>	1098-7518	
administrationUnitCode	0..1	MAY		1098-7519	2.16.840.1.113883.1.11.14570 (AdministrableDrugForm)
consumable	1..1	SHALL		1098-7520	
manufacturedProduct	1..1	SHALL		1098-16085	Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09)
performer	0..1	MAY		1098-7522	

author	0..*	SHOULD		1098-31150	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
participant	0..*	MAY		1098-7523	
@typeCode	1..1	SHALL		1098-7524	2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM
participantRole	1..1	SHALL		1098-16086	Drug Vehicle (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.24)
entryRelationship	0..*	MAY		1098-7536	
@typeCode	1..1	SHALL		1098-7537	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-16087	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09)
entryRelationship	0..1	MAY		1098-7539	
@typeCode	1..1	SHALL		1098-7540	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1098-7542	true
act	1..1	SHALL		1098-31387	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09)
entryRelationship	0..1	MAY		1098-7543	
@typeCode	1..1	SHALL		1098-7547	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
supply	1..1	SHALL		1098-16089	Medication Supply Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09)
entryRelationship	0..*	MAY		1098-7549	
@typeCode	1..1	SHALL		1098-7553	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
supply	1..1	SHALL		1098-16090	Medication Dispense (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09)
entryRelationship	0..1	MAY		1098-7552	
@typeCode	1..1	SHALL		1098-7544	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = CAUS
observation	1..1	SHALL		1098-16091	Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09)
entryRelationship	0..1	MAY		1098-30820	
@typeCode	1..1	SHALL		1098-30821	COMP
act	1..1	SHALL		1098-30822	Drug Monitoring Act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.123)
entryRelationship	0..*	MAY		1098-31515	

@typeCode	1..1	SHALL		1098-31516	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
@inversionInd	1..1	SHALL		1098-31517	true
sequenceNumber	0..1	MAY		1098-31518	
act	1..1	SHALL		1098-31519	Substance Administered Act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.118)
precondition	0..*	MAY		1098-31520	
@typeCode	1..1	SHALL		1098-31882	PRCN
criterion	1..1	SHALL		1098-31883	Precondition for Substance Administration (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09)

1. **SHALL** contain exactly one [1..1] @classCode="SBADM" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7496).
2. **SHALL** contain exactly one [1..1] @moodCode, which **SHALL** be selected from ValueSet [MoodCodeEvnInt](#) 2.16.840.1.113883.11.20.9.18 **STATIC** 2011-04-03 (CONF:1098-7497).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-7499) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.16" (CONF:1098-10504).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-06-09" (CONF:1098-32498).
4. **SHALL** contain at least one [1..*] id (CONF:1098-7500).
5. **MAY** contain zero or one [0..1] code (CONF:1098-7506).
Note: SubstanceAdministration.code is an optional field. Per HL7 Pharmacy Committee, "this is intended to further specify the nature of the substance administration act. To date the committee has made no use of this attribute". Because the type of substance administration is generally implicit in the routeCode, in the consumable participant, etc., the field is generally not used, and there is no defined value set.
6. **SHALL** contain exactly one [1..1] statusCode (CONF:1098-7507).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code, which **SHALL** be selected from ValueSet [ActStatus](#) 2.16.840.1.113883.1.11.159331 **DYNAMIC** (CONF:1098-32360).

The substance administration effectiveTime field can repeat, in order to represent varying levels of complex dosing. effectiveTime can be used to represent the duration of administration (e.g., "10 days"), the frequency of administration (e.g., "every 8 hours"), and more. Here, we require that there SHALL be an effectiveTime documentation of the duration (or single-administration timestamp), and that there SHOULD be an effectiveTime documentation of the frequency. Other timing nuances, supported by the base CDA R2 standard, may also be included.

7. **SHALL** contain exactly one [1..1] effectiveTime (CONF:1098-7508) such that it
Note: his effectiveTime represents either the medication duration (i.e., the time the medication was started and stopped) or the single-administration timestamp.
 - a. **SHOULD** contain zero or one [0..1] @value (CONF:1098-32775).
Note: indicates a single-administration timestamp

- b. **SHOULD** contain zero or one [0..1] **low** (CONF:1098-32776).
Note: indicates when medication started
 - c. **MAY** contain zero or one [0..1] **high** (CONF:1098-32777).
Note: indicates when medication stopped
 - d. This effectiveTime **SHALL** contain either a low or a @value but not both (CONF:1098-32890).
8. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-7513) such that it
Note: This effectiveTime represents the medication frequency (e.g., administration times per day).
- a. **SHALL** contain exactly one [1..1] **@operator="A"** (CONF:1098-9106).
 - b. **SHALL** contain exactly one [1..1] **@xsi:type="PIVL_TS" or "EIVL_TS"** (CONF:1098-28499).

In "INT" (intent) mood, the repeatNumber defines the number of allowed administrations. For example, a repeatNumber of "3" means that the substance can be administered up to 3 times. In "EVN" (event) mood, the repeatNumber is the number of occurrences. For example, a repeatNumber of "3" in a substance administration event means that the current administration is the 3rd in a series.

9. **MAY** contain zero or one [0..1] **repeatNumber** (CONF:1098-7555).
10. **SHOULD** contain zero or one [0..1] **routeCode**, which **SHALL** be selected from ValueSet [Medication Route FDA](#) 2.16.840.1.113883.3.88.12.3221.8.7 **DYNAMIC** (CONF:1098-7514).
11. **MAY** contain zero or one [0..1] **approachSiteCode**, where the code **SHALL** be selected from ValueSet [Body Site](#) 2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-7515).
12. **SHALL** contain exactly one [1..1] **doseQuantity** (CONF:1098-7516).
- a. This doseQuantity **SHOULD** contain zero or one [0..1] **@unit**, which **SHALL** be selected from ValueSet [UnitsOfMeasureCaseSensitive](#) 2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-7526).
 - b. Pre-coordinated consumable: If the consumable code is a pre-coordinated unit dose (e.g., "metoprolol 25mg tablet") then doseQuantity is a unitless number that indicates the number of products given per administration (e.g., "2", meaning 2 x "metoprolol 25mg tablet" per administration) (CONF:1098-16878).
 - c. Not pre-coordinated consumable: If the consumable code is not pre-coordinated (e.g., is simply "metoprolol"), then doseQuantity must represent a physical quantity with @unit, e.g., "25" and "mg", specifying the amount of product given per administration (CONF:1098-16879).
13. **MAY** contain zero or one [0..1] **rateQuantity** (CONF:1098-7517).
- a. The rateQuantity, if present, **SHALL** contain exactly one [1..1] **@unit**, which **SHALL** be selected from ValueSet [UnitsOfMeasureCaseSensitive](#) 2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-7525).
14. **MAY** contain zero or one [0..1] **maxDoseQuantity** (CONF:1098-7518).
15. **MAY** contain zero or one [0..1] **administrationUnitCode**, which **SHALL** be selected from ValueSet [AdministrableDrugForm](#) 2.16.840.1.113883.1.11.14570 **DYNAMIC** (CONF:1098-7519).

16. **SHALL** contain exactly one [1..1] **consumable** (CONF:1098-7520).
 - a. This consumable **SHALL** contain exactly one [1..1] [Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) (CONF:1098-16085).
17. **MAY** contain zero or one [0..1] **performer** (CONF:1098-7522).
18. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31150).
19. **MAY** contain zero or more [0..*] **participant** (CONF:1098-7523) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="CSM"** (CodeSystem: HL7ParticipationType 2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-7524).
 - b. **SHALL** contain exactly one [1..1] [Drug Vehicle](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.24) (CONF:1098-16086).
20. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7536) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7537).
 - b. **SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-16087).
21. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-7539) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7540).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1098-7542).
 - c. **SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-31387).
22. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-7543) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7547).
 - b. **SHALL** contain exactly one [1..1] [Medication Supply Order \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09) (CONF:1098-16089).
23. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7549) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7553).
 - b. **SHALL** contain exactly one [1..1] [Medication Dispense \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09) (CONF:1098-16090).
24. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-7552) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="CAUS"** (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7544).

- b. **SHALL** contain exactly one [1..1] [Reaction Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09) (CONF:1098-16091).
25. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-30820) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has component (CONF:1098-30821).
 - b. **SHALL** contain exactly one [1..1] [Drug Monitoring Act](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.123) (CONF:1098-30822).

The following entryRelationship is used to indicate a given medication's order in a series. The nested Substance Administered Act identifies an administration in the series. The entryRelationship/sequenceNumber shows the order of this particular administration in that series.

26. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31515) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Component (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-31516).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** (CONF:1098-31517).
 - c. **MAY** contain zero or one [0..1] **sequenceNumber** (CONF:1098-31518).
 - d. **SHALL** contain exactly one [1..1] [Substance Administered Act](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.118) (CONF:1098-31519).
27. **MAY** contain zero or more [0..*] **precondition** (CONF:1098-31520).
- a. The precondition, if present, **SHALL** contain exactly one [1..1] **@typeCode="PRCN"** (CONF:1098-31882).
 - b. The precondition, if present, **SHALL** contain exactly one [1..1] [Precondition for Substance Administration \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09) (CONF:1098-31883).
28. Medication Activity **SHOULD** include doseQuantity **OR** rateQuantity (CONF:1098-30800).

Figure 74: Medication Activity (V2) Example

```
<substanceAdministration classCode="SBADM" moodCode="EVN">
  <!-- ** Medication Activity (V2) ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.16"
    extension="2014-06-09"/>
  <id root="6c844c75-aa34-411c-b7bd-5e4a9f206e29"/>
  <statusCode code="active"/>
  <effectiveTime xsi:type="IVL_TS">
    <low value="20120318"/>
  </effectiveTime>
  <effectiveTime xsi:type="PIVL_TS" institutionSpecified="true" operator="A">
    <period value="12" unit="h"/>
  </effectiveTime>
  <routeCode code="C38288"
    codeSystem="2.16.840.1.113883.3.26.1.1"
    codeSystemName="NCI Thesaurus"
    displayName="ORAL"/>
  <doseQuantity value="1"/>
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- ** Medication information ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.23"
        extension="2014-06-09"/>
      <id root="2a620155-9d11-439e-92b3-5d9815ff4ee8"/>
      <manufacturedMaterial>
        <code code="197380"
          displayName="Atenolol 25 MG Oral Tablet"
          codeSystem="2.16.840.1.113883.6.88" codeSystemName="RxNorm"/>
      </manufacturedMaterial>
    </manufacturedProduct>
  </consumable>
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Indication ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.19"
        extension="2014-06-09"/>
      <id root="e63166c7-6482-4a44-83a1-37ccdbde725b"/>
      <code code="75321-0"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        displayName="Clinical finding"/>
      <statusCode code="completed"/>
      <value xsi:type="CD"
        code="38341003"
        displayName="Hypertension"
        codeSystem="2.16.840.1.113883.6.96"/>
    </observation>
  </entryRelationship>
</substanceAdministration>
```

Figure 75: No Known Medications Example

```
<substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="true">
  <!-- ** Medication activity ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09" />
  <id root="072f00fc-4f9d-4516-8d6f-ed00ed523fe0" />
  <statusCode code="active" />
  <effectiveTime xsi:type="IVL_TS">
    <low value="20110103" />
  </effectiveTime>
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- ** Medication information ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.23" extension="2014-06-09" />
      <manufacturedMaterial>
        <code nullFlavor="OTH" codeSystem="2.16.840.1.113883.6.88">
          <translation code="410942007" displayName="drug or medication"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" />
        </code>
      </manufacturedMaterial>
    </manufacturedProduct>
  </consumable>
</substanceAdministration>
```

3.26 Medication Dispense (V2)

[supply: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09
(open)]

Table 151: Medication Dispense (V2) Contexts

Contained By:	Contains:
Medication Activity (V2) (optional) Immunization Activity (V2) (optional)	Immunization Medication Information (V2) Medication Information (V2) Medication Supply Order (V2) US Realm Address (AD.US.FIELDDED)

This template records the act of supplying medications (i.e., dispensing).

Table 152: Medication Dispense (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09)					
@classCode	1..1	SHALL		1098-7451	2.16.840.1.113883.5.6 (HL7ActClass) = SPLY
@moodCode	1..1	SHALL		1098-7452	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-7453	
@root	1..1	SHALL		1098-10505	2.16.840.1.113883.10.20.22.4.18
@extension	1..1	SHALL		1098-32580	2014-06-09
id	1..*	SHALL		1098-7454	
statusCode	1..1	SHALL		1098-7455	
@code	1..1	SHALL		1098-32361	2.16.840.1.113883.3.88.12.80.64 (Medication Fill Status)
effectiveTime	0..1	SHOULD		1098-7456	
repeatNumber	0..1	SHOULD		1098-7457	
quantity	0..1	SHOULD		1098-7458	
product	0..1	MAY		1098-7459	
manufacturedProduct	1..1	SHALL		1098-15607	Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09)
product	0..1	MAY		1098-9331	
manufacturedProduct	1..1	SHALL		1098-31696	Immunization Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09)
performer	0..1	MAY		1098-7461	
assignedEntity	1..1	SHALL		1098-7467	
addr	0..1	SHOULD		1098-7468	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
entryRelationship	0..1	MAY		1098-7473	
@typeCode	1..1	SHALL		1098-7474	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
supply	1..1	SHALL		1098-15606	Medication Supply Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09)

1. **SHALL** contain exactly one [1..1] @classCode="SPLY" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7451).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7452).

3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7453) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.18" (CONF:1098-10505).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32580).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7454).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7455).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [Medication Fill Status](#) 2.16.840.1.113883.3.88.12.80.64 **STATIC** 2014-04-23 (CONF:1098-32361).
6. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-7456).

In "INT" (intent) mood, the **repeatNumber** defines the number of allowed administrations. For example, a **repeatNumber** of "3" means that the substance can be administered up to 3 times. In "EVN" (event) mood, the **repeatNumber** is the number of occurrences. For example, a **repeatNumber** of "3" in a substance administration event means that the current administration is the 3rd in a series.

7. **SHOULD** contain zero or one [0..1] **repeatNumber** (CONF:1098-7457).
8. **SHOULD** contain zero or one [0..1] **quantity** (CONF:1098-7458).
9. **MAY** contain zero or one [0..1] **product** (CONF:1098-7459) such that it
 - a. **SHALL** contain exactly one [1..1] [Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) (CONF:1098-15607).
10. **MAY** contain zero or one [0..1] **product** (CONF:1098-9331) such that it
 - a. **SHALL** contain exactly one [1..1] [Immunization Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) (CONF:1098-31696).
11. **MAY** contain zero or one [0..1] **performer** (CONF:1098-7461).
 - a. The performer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-7467).
 - i. This **assignedEntity** **SHOULD** contain zero or one [0..1] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-7468).
 1. The content of **addr** **SHALL** be a conformant US Realm Address (AD.US.FIELDDED) (2.16.840.1.113883.10.20.22.5.2) (CONF:1098-10565).
12. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-7473) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7474).
 - b. **SHALL** contain exactly one [1..1] [Medication Supply Order \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09) (CONF:1098-15606).
13. A supply act **SHALL** contain one product/Medication Information **OR** one product/Immunization Medication Information template (CONF:1098-9333).

Table 153: Medication Fill Status

Value Set: Medication Fill Status 2.16.840.1.113883.3.88.12.80.64			
Value Set Source: https://phinvads.cdc.gov/			
Code	Code System	Code System OID	Print Name
aborted	ActStatus	2.16.840.1.113883.5.14	Aborted
completed	ActStatus	2.16.840.1.113883.5.14	Completed

Figure 76: Medication Dispense (V2) Example

<pre> <supply classCode="SPLY" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.20.22.4.18" extension="2014-06-09" /> <id root="1.2.3.4.56789.1" extension="cb734647-fc99-424c-a864-7e3cda82e704" /> <statusCode code="completed" /> <effectiveTime value="201208151450-0800" /> <repeatNumber value="1" /> <quantity value="75" /> <product> <manufacturedProduct classCode="MANU"> <templateId root="2.16.840.1.113883.10.20.22.4.23" extension="2014-06-09" /> . . . </manufacturedProduct> </product> <performer> <assignedEntity> . . . </assignedEntity> </performer> </supply> </pre>
--

3.27 Medication Information (V2)

[manufacturedProduct: identifier
urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 (open)]

Table 154: Medication Information (V2) Contexts

Contained By:	Contains:
Medication Activity (V2) (required) Planned Medication Activity (V2) (required) Medication Supply Order (V2) (optional) Medication Dispense (V2) (optional)	

A medication should be recorded as a pre-coordinated ingredient + strength + dose form (e.g., “metoprolol 25mg tablet”, “amoxicillin 400mg/5mL suspension”) where possible. This includes RxNorm codes whose Term Type is SCD (semantic clinical drug), SBD (semantic brand drug), GPCK (generic pack), BPCK (brand pack).

The dose (doseQuantity) represents how many of the consumables are to be administered at each administration event. As a result, the dose is always relative to the consumable. Thus, a

patient consuming a single "metoprolol 25mg tablet" per administration will have a doseQuantity of "1", whereas a patient consuming "metoprolol" will have a dose of "25 mg".

Table 155: Medication Information (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
manufacturedProduct (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09)					
@classCode	1..1	SHALL		1098-7408	2.16.840.1.113883.5.110 (RoleClass) = MANU
templateId	1..1	SHALL		1098-7409	
@root	1..1	SHALL		1098-10506	2.16.840.1.113883.10.20.22.4.23
@extension	1..1	SHALL		1098-32579	2014-06-09
id	0..*	MAY		1098-7410	
manufacturedMaterial	1..1	SHALL		1098-7411	
code	1..1	SHALL		1098-7412	2.16.840.1.113762.1.4.1010.4 (Medication Clinical Drug)
translation	0..*	MAY		1098-31884	2.16.840.1.113762.1.4.1010.2 (Clinical Substance)
manufacturerOrganization	0..1	MAY		1098-7416	

1. **SHALL** contain exactly one [1..1] **@classCode**="MANU" (CodeSystem: RoleClass 2.16.840.1.113883.5.110 **STATIC**) (CONF:1098-7408).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7409) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.23" (CONF:1098-10506).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32579).
3. **MAY** contain zero or more [0..*] **id** (CONF:1098-7410).
4. **SHALL** contain exactly one [1..1] **manufacturedMaterial** (CONF:1098-7411).
 Note: A medication should be recorded as a pre-coordinated ingredient + strength + dose form (e.g., "metoprolol 25mg tablet", "amoxicillin 400mg/5mL suspension") where possible. This includes RxNorm codes whose Term Type is SCD (semantic clinical drug), SBD (semantic brand drug), GPCK (generic pack), BPCK (brand pack).
 - a. This **manufacturedMaterial** **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [Medication Clinical Drug](#) 2.16.840.1.113762.1.4.1010.4 **DYNAMIC** (CONF:1098-7412).
 - i. This **code** **MAY** contain zero or more [0..*] **translation**, which **MAY** be selected from ValueSet [Clinical Substance](#) 2.16.840.1.113762.1.4.1010.2 **DYNAMIC** (CONF:1098-31884).
5. **MAY** contain zero or one [0..1] **manufacturerOrganization** (CONF:1098-7416).

Table 156: Medication Clinical Drug

<p>Value Set: Medication Clinical Drug 2.16.840.1.113762.1.4.1010.4</p> <p>All prescribable medication formulations represented using either a "generic" or "brand-specific" concept. This includes RxNorm codes whose Term Type is SCD (semantic clinical drug), SBD (semantic brand drug), GPCK (generic pack), BPCK (brand pack), SCDG (semantic clinical drug group), SBDG (semantic brand drug group), SCDF (semantic clinical drug form), or SBDF (semantic brand drug form).</p> <p>Value set intensionally defined as a GROUPING made up of: Value Set: Medication Clinical General Drug (2.16.840.1.113883.3.88.12.80.17) (RxNorm Generic Drugs); Value Set: Medication Clinical Brand-specific Drug (2.16.840.1.113762.1.4.1010.5) (RxNorm Branded Drugs).</p> <p>Value Set Source: https://vsac.nlm.nih.gov/</p>			
Code	Code System	Code System OID	Print Name
978727	RxNorm	2.16.840.1.113883.6.88	0.2 ML Dalteparin Sodium 12500 UNT/ML Prefilled Syringe [Fragmin]
827318	RxNorm	2.16.840.1.113883.6.88	Acetaminophen 250 MG / Aspirin 250 MG / Caffeine 65 MG Oral Capsule
199274	RxNorm	2.16.840.1.113883.6.88	Aspirin 300 MG Oral Capsule
362867	RxNorm	2.16.840.1.113883.6.88	Cefotetan Injectable Solution [Cefotan]
...			

Table 157: Clinical Substance

<p>Value Set: Clinical Substance 2.16.840.1.113762.1.4.1010.2</p> <p>All substances that may need to be represented in the context of health care related activities. This value set is quite broad in coverage and includes concepts that may never be needed in a health care activity event, particularly the included SNOMED CT concepts. The code system-specific value sets in this grouping value set are intended to provide broad coverage of all kinds of agents, but the expectation for use is that the chosen concept identifier for a substance should be appropriately specific and drawn from the appropriate code system as noted: prescribable medications should use RXNORM concepts, more specific drugs and chemicals should be represented using UNII concepts, and any substances not found in either of those two code systems, should use the appropriate SNOMED CT concept. This overarching grouping value set is intended to support identification of prescribable medications, foods, general substances and environmental entities.</p> <p>Value set intensionally defined as a GROUPING made up of: Value Set: Medication Clinical Drug (2.16.840.1.113762.1.4.1010.4) (RxNorm generic and brand codes); Value Set: Unique Ingredient Identifier - Complete Set (2.16.840.1.113883.3.88.12.80.20) (UNII codes); Value Set: Substance Other Than Clinical Drug (2.16.840.1.113762.1.4.1010.9) (SNOMED CT codes).</p> <p>Value Set Source: https://vsac.nlm.nih.gov/</p>			
Code	Code System	Code System OID	Print Name
369436	RxNorm	2.16.840.1.113883.6.88	6-Aminocaproic Acid Oral Tablet [Amicar]
1116447	RxNorm	2.16.840.1.113883.6.88	Acepromazine Oral Tablet
9042592173	Unique Ingredient Identifier (UNII)	2.16.840.1.113883.4.9	ATROMEPINE
7673326042	Unique Ingredient Identifier (UNII)	2.16.840.1.113883.4.9	IRINOTECAN
413480003	SNOMED CT	2.16.840.1.113883.6.96	Almond product (substance)
256915001	SNOMED CT	2.16.840.1.113883.6.96	Aluminum hydroxide absorbed plasma (substance)
...			

Figure 77: Medication Information (V2) Example

<pre> <manufacturedProduct classCode="MANU"> <!-- ** Medication information ** --> <templateId root="2.16.840.1.113883.10.20.22.4.23" extension="2014-06-09" /> <id root="2a620155-9d11-439e-92b3-5d9815ff4ee8" /> <manufacturedMaterial> <code code="573621" displayName="Proventil 0.09 MG/ACTUAT inhalant solution" codeSystem="2.16.840.1.113883.6.88" codeSystemName="RxNorm" /> </manufacturedMaterial> <manufacturerOrganization> <name>Medication Factory Inc.</name> </manufacturerOrganization> </manufacturedProduct> </pre>

3.28 Medication Supply Order (V2)

[supply: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
(open)]

Table 158: Medication Supply Order (V2) Contexts

Contained By:	Contains:
Medication Activity (V2) (optional)	Immunization Medication Information (V2)
Immunization Activity (V2) (optional)	Instruction (V2)
Medication Dispense (V2) (optional)	Medication Information (V2)

This template records the intent to supply a patient with medications.

Table 159: Medication Supply Order (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09)					
@classCode	1..1	SHALL		1098-7427	2.16.840.1.113883.5.6 (HL7ActClass) = SPLY
@moodCode	1..1	SHALL		1098-7428	2.16.840.1.113883.5.1001 (ActMood) = INT
templateId	1..1	SHALL		1098-7429	
@root	1..1	SHALL		1098-10507	2.16.840.1.113883.10.20.22.4.17
@extension	1..1	SHALL		1098-32578	2014-06-09
id	1..*	SHALL		1098-7430	
statusCode	1..1	SHALL		1098-7432	
@code	1..1	SHALL		1098-32362	2.16.840.1.113883.1.11.159331 (ActStatus)
effectiveTime	0..1	SHOULD	IVL_TS	1098-15143	
high	1..1	SHALL		1098-15144	
repeatNumber	0..1	SHOULD		1098-7434	
quantity	0..1	SHOULD		1098-7436	
product	0..1	MAY		1098-7439	
manufacturedProduct	1..1	SHALL		1098-16093	Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09)
product	0..1	MAY		1098-9334	
manufacturedProduct	1..1	SHALL		1098-31695	Immunization Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09)
author	0..1	MAY		1098-7438	
entryRelationship	0..1	MAY		1098-7442	
@typeCode	1..1	SHALL		1098-7444	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1098-7445	true
act	1..1	SHALL		1098-31391	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09)

1. **SHALL** contain exactly one [1..1] @classCode="SPLY" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7427).
2. **SHALL** contain exactly one [1..1] @moodCode="INT" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7428).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-7429) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.17" (CONF:1098-10507).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32578).
- 4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7430).
- 5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7432).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [ActStatus](#) 2.16.840.1.113883.1.11.159331 **DYNAMIC** (CONF:1098-32362).
- 6. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-15143) such that it
 - a. **SHALL** contain exactly one [1..1] **high** (CONF:1098-15144).

In "INT" (intent) mood, the **repeatNumber** defines the number of allowed administrations. For example, a **repeatNumber** of "3" means that the substance can be administered up to 3 times. In "EVN" (event) mood, the **repeatNumber** is the number of occurrences. For example, a **repeatNumber** of "3" in a substance administration event means that the current administration is the 3rd in a series.

- 7. **SHOULD** contain zero or one [0..1] **repeatNumber** (CONF:1098-7434).
- 8. **SHOULD** contain zero or one [0..1] **quantity** (CONF:1098-7436).
- 9. **MAY** contain zero or one [0..1] **product** (CONF:1098-7439) such that it
 - a. **SHALL** contain exactly one [1..1] [Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) (CONF:1098-16093).
- 10. **MAY** contain zero or one [0..1] **product** (CONF:1098-9334) such that it
 - a. **SHALL** contain exactly one [1..1] [Immunization Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) (CONF:1098-31695).
 - i. A supply act **SHALL** contain one product/Medication Information **OR** one product/Immunization Medication Information template (CONF:1098-16870).
- 11. **MAY** contain zero or one [0..1] **author** (CONF:1098-7438).
- 12. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-7442).
 - a. The **entryRelationship**, if present, **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7444).
 - b. The **entryRelationship**, if present, **SHALL** contain exactly one [1..1] **@inversionInd**="true" True (CONF:1098-7445).
 - c. The **entryRelationship**, if present, **SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-31391).

Figure 78: Medication Supply Order (V2) Example

```
<supply classCode="SPLY" moodCode="INT">
  <templateId root="2.16.840.1.113883.10.20.22.4.17" extension="2014-06-09" />
  <id root="aba2fc75-1a43-435f-8309-d24e4be5f1cd" />
  <statusCode code="completed" />
  <effectiveTime xsi:type="IVL_TS">
    <low value="20070103" />
    <high nullFlavor="UNK" />
  </effectiveTime>
  <repeatNumber value="1" />
  <quantity value="75" />
  <product>
    <manufacturedProduct classCode="MANU">
      <templateId root="2.16.840.1.113883.10.20.22.4.23" extension="2014-06-09" />

      . . .

    </manufacturedProduct>
  </product>
  <author>

  . . .

</author>
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <act classCode="ACT" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.20" extension="2014-06-09" />

      . . .

    </act>
  </entryRelationship>
</supply>
```

3.29 New Patient Act

[act: identifier urn:oid:2.16.840.1.113883.10.20.34.3.9 (open)]

Table 160: New Patient Act Contexts

Contained By:	Contains:
Current Visit (optional)	

This template represents the fact that this patient is a new patient at this practice.

Table 161: New Patient Act Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.9)					
@classCode	1..1	SHALL		1106-476	2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1106-477	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-478	
@root	1..1	SHALL		1106-479	2.16.840.1.113883.10.20.34.3.9
id	1..*	SHALL		1106-480	
code	1..1	SHALL		1106-481	
@code	1..1	SHALL		1106-482	108220007
@codeSystem	1..1	SHALL		1106-483	2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
statusCode	1..1	SHALL		1106-741	2.16.840.1.113883.5.14 (ActStatus) = completed

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-476).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-477).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-478) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.9" (CONF:1106-479).
4. **SHALL** contain at least one [1..*] **id** (CONF:1106-480).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1106-481).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="108220007" Evaluation and/or management - new patient (CONF:1106-482).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT 2.16.840.1.113883.6.96) (CONF:1106-483).
6. **SHALL** contain exactly one [1..1] **statusCode**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1106-741).

Figure 79: New Patient Act Example

```

<act classCode="ACT" moodCode="EVN">
  <!-- New Patient Act -->
  <templateId root="2.16.840.1.113883.10.20.34.3.9"/>
  <id root="32cab171-dcbe-4447-9b5f-c43cc94e0ee4"/>
  <code code="108220007"
    displayName="Evaluation and/or management - new patient"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"/>
  <statusCode code="completed"/>
</act>

```

3.30 Number of Visits in the Last 12 Months

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.26 (open)]

Table 162: Number of Visits in the Last 12 Months Contexts

Contained By:	Contains:
Current Visit (optional)	

This template represents the number of visits in the last 12 months, excluding the current visit.

Table 163: Number of Visits in the Last 12 Months Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.26)					
@classCode	1..1	SHALL		1106-521	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-522	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-523	
@root	1..1	SHALL		1106-524	2.16.840.1.113883.10.20.34.3.26
id	1..*	SHALL		1106-525	
code	1..1	SHALL		1106-526	
@code	0..1	MAY		1106-527	75612-2
@codeSystem	0..1	MAY		1106-528	2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1106-529	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	INT	1106-530	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-521).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-522).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-523) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.26" (CONF:1106-524).
4. **SHALL** contain at least one [1..*] **id** (CONF:1106-525).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1106-526).
 - a. This code **MAY** contain zero or one [0..1] **@code**="75612-2" Number of visits to this healthcare entity in the last 12MO (CONF:1106-527).
 - b. This code **MAY** contain zero or one [0..1] **@codeSystem**="2.16.840.1.113883.6.1" (CONF:1106-528).
6. **SHALL** contain exactly one [1..1] **statusCode**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1106-529).
7. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="INT" (CONF:1106-530).
Note: Form Element: Number of Visits in the Last 12 Months

Figure 80: Number of Visits in the Last 12 Months Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- Number of Visits in the Last 12 Months -->
  <templateId root="2.16.840.1.113883.10.20.34.3.26" />
  <id root="cd691b5e-2464-4fb4-936d-0d9d67ebb8fd" />
  <code code="75612-2"
    displayName="Number of visits to this healthcare entity in the last 12MO"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <statusCode code="completed" />
  <!-- Form Element: Number of Past Visits in the Last 12 Months -->
  <value xsi:type="INT" value="4" />
</observation>
```

3.31 On Oxygen on Arrival Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.29 (open)]

Table 164: On Oxygen on Arrival Observation Contexts

Contained By:	Contains:
Triage Section (required)	

This template represents whether or not the patient was on oxygen on arrival. If it is unknown whether the patient was on oxygen on arrival use nullFlavor="UNK".

Table 165: On Oxygen on Arrival Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.29)					
@classCode	1..1	SHALL		1106-704	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-705	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-706	
@root	1..1	SHALL		1106-707	2.16.840.1.113883.10.20.34.3.29
id	1..*	SHALL		1106-708	
code	1..1	SHALL		1106-709	
@code	1..1	SHALL		1106-713	75610-6
@codeSystem	0..1	MAY		1106-714	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1106-710	
@code	1..1	SHALL		1106-711	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	BL	1106-712	
@nullFlavor	0..1	MAY		1106-715	UNK
@value	0..1	SHOULD		1106-856	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-704).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-705).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-706) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.34.3.29"** (CONF:1106-707).
4. **SHALL** contain at least one [1..*] **id** (CONF:1106-708).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1106-709).
 - a. This code **SHALL** contain exactly one [1..1] **@code="75610-6"** Oxygen therapy at arrival (CONF:1106-713).
 - b. This code **MAY** contain zero or one [0..1] **@codeSystem="2.16.840.1.113883.6.1"** (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1106-714).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1106-710).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1106-711).
7. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="BL"** (CONF:1106-712).
 - a. This value **MAY** contain zero or one [0..1] **@nullFlavor="UNK"** (CONF:1106-715).
 - b. This value **SHOULD** contain zero or one [0..1] **@value** (CONF:1106-856).

Figure 81: On Oxygen on Arrival Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.34.3.29" />
  <id root="deald8b-7b43-4166-839a-84149d061d6a" />
  <code code="75610-6" displayName="Oxygen therapy at arrival"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <statusCode code="completed" />
  <!-- Form element: On oxygen on arrival -->
  <value xsi:type="BL" value="true" />
</observation>
```

3.32 Patient Residence Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.25 (open)]

Table 166: Patient Residence Observation Contexts

Contained By:	Contains:
Patient Information Section (optional)	

This template represents the patient residence type. If the type of residence is other use nullFlavor="OTH". If the type of residence is unknown use nullFlavor="UNK".

Table 167: Patient Residence Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.25)					
@classCode	1..1	SHALL		1106-606	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-607	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-601	
@root	1..1	SHALL		1106-603	2.16.840.1.113883.10.20.34.3.25
id	1..*	SHALL		1106-679	
code	1..1	SHALL		1106-602	
@code	1..1	SHALL		1106-604	75617-1
@codeSystem	1..1	SHALL		1106-605	2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1106-680	
@code	0..1	MAY		1106-681	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1106-608	2.16.840.1.114222.4.11.7402 (Patient Residence (NCHS))
@nullFlavor	0..1	MAY		1106-675	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1106-606).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1106-607).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-601) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.25" (CONF:1106-603).
4. **SHALL** contain at least one [1..*] **id** (CONF:1106-679).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1106-602).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="75617-1" Residence (CONF:1106-604).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CONF:1106-605).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1106-680).
 - a. This statusCode **MAY** contain zero or one [0..1] **@code**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1106-681).
7. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHOULD** be selected from ValueSet [Patient Residence \(NCHS\)](#) 2.16.840.1.114222.4.11.7402 **DYNAMIC** (CONF:1106-608).
 - a. This value **MAY** contain zero or one [0..1] **@nullFlavor** (CONF:1106-675).

Table 168: Patient Residence (NCHS)

Value Set: Patient Residence (NCHS) 2.16.840.1.114222.4.11.7402			
These codes describe the patient's residence type.			
Value Set Source: http://www.phinvads.com			
Code	Code System	Code System OID	Print Name
394778007	SNOMED CT	2.16.840.1.113883.6.96	Client's or patient's home
42665001	SNOMED CT	2.16.840.1.113883.6.96	Nursing home
32911000	SNOMED CT	2.16.840.1.113883.6.96	Homeless
...			

Figure 82: Patient Residence Example

<pre> <observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.20.34.3.25" /> <id root="5501b49a-32ea-4c78-9c31-3dbe782871b6" /> <code code="75617-1" displayName="Residence" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" /> <statusCode code="completed" /> <!-- Form element: Patient Residence --> <value xsi:type="CD" code="264362003" displayName="Private home" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" /> </observation> </pre>

3.33 Patient Seen in this ED in last 72 Hours and Discharged

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.31 (open)]

Table 169: Patient Seen in this ED in last 72 Hours and Discharged Contexts

Contained By:	Contains:
Current Visit (optional)	

This template represents whether or not the patient has been seen in this ED within the last 72 hours and discharged. If this fact is unknown use nullFlavor="UNK".

Table 170: Patient Seen in this ED in last 72 Hours and Discharged Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.31)					
@classCode	1..1	SHALL		1106-722	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-723	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-718	
@root	1..1	SHALL		1106-720	2.16.840.1.113883.10.20.34.3.31
id	1..*	SHALL		1106-724	
code	1..1	SHALL		1106-725	
@code	0..1	MAY		1106-727	75611-4
@codeSystem	0..1	MAY		1106-728	2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1106-719	
@code	1..1	SHALL		1106-721	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	BL	1106-726	
@nullFlavor	0..1	MAY		1106-729	UNK
@value	0..1	SHOULD		1106-862	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-722).
 2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-723).
 3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-718) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.31" (CONF:1106-720).
 4. **SHALL** contain at least one [1..*] **id** (CONF:1106-724).
 5. **SHALL** contain exactly one [1..1] **code** (CONF:1106-725).
 - a. This code **MAY** contain zero or one [0..1] **@code**="75611-4" Patient seen in this ED in last 72H and discharged (CONF:1106-727).
 - b. This code **MAY** contain zero or one [0..1] **@codeSystem**="2.16.840.1.113883.6.1" (CONF:1106-728).
 6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1106-719).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1106-721).
- Use @value="true" for "yes", @value="false" for "no" and @nullFlavor="UNK" for "unknown".
7. **SHALL** contain exactly one [1..1] **value** with @xsi:type="BL" (CONF:1106-726).
 - a. This value **MAY** contain zero or one [0..1] **@nullFlavor**="UNK" (CONF:1106-729).
 - b. This value **SHOULD** contain zero or one [0..1] **@value** (CONF:1106-862).

Figure 83: Patient Seen in this ED in last 72 Hours and Discharged Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.34.3.31" />
  <id root="6bb81e98-8a19-43b9-bc50-9997e0766ba3" />
  <code code="75611-4"
    displayName="Patient seen in this ED in last 72H and discharged"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <statusCode code="completed" />
  <!-- Form element: Has patient been seen in this ED within the last 72 hours and
discharged -->
  <value xsi:type="BL" value="true" />
</observation>
```

3.34 Planned Act (V2)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09 (open)]

Table 171: Planned Act (V2) Contexts

Contained By:	Contains:
	Author Participation Indication (V2) Instruction (V2) Priority Preference

This template represents planned acts that are not classified as an observation or a procedure according to the HL7 RIM. Examples of these acts are a dressing change, the teaching or feeding of a patient or the providing of comfort measures.

The priority of the activity to the patient and provider is communicated through Priority Preference. The effectiveTime indicates the time when the activity is intended to take place.

Table 172: Planned Act (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09)					
@classCode	1..1	SHALL		1098-8538	2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-8539	2.16.840.1.113883.11.20.9.23 (Planned moodCode (Act/Encounter/Procedure))
templateId	1..1	SHALL		1098-30430	
@root	1..1	SHALL		1098-30431	2.16.840.1.113883.10.20.22.4.39
@extension	1..1	SHALL		1098-32552	2014-06-09
id	1..*	SHALL		1098-8546	
code	1..1	SHALL		1098-31687	
statusCode	1..1	SHALL		1098-30432	
@code	1..1	SHALL		1098-32019	2.16.840.1.113883.5.14 (ActStatus) = active
effectiveTime	0..1	SHOULD		1098-30433	
performer	0..*	MAY		1098-30435	
author	0..1	SHOULD		1098-32020	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	0..*	MAY		1098-31067	
@typeCode	1..1	SHALL		1098-31068	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1098-31069	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143)
entryRelationship	0..*	MAY		1098-32021	
@typeCode	1..1	SHALL		1098-32022	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-32023	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09)
entryRelationship	0..*	MAY		1098-32024	
@typeCode	1..1	SHALL		1098-32025	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
act	1..1	SHALL		1098-32026	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09)

1. **SHALL** contain exactly one [1..1] @classCode="ACT" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8538).
2. **SHALL** contain exactly one [1..1] @moodCode, which **SHALL** be selected from ValueSet [Planned moodCode \(Act/Encounter/Procedure\)](#) 2.16.840.1.113883.11.20.9.23 **STATIC** 2011-09-30 (CONF:1098-8539).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-30430) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.39" (CONF:1098-30431).

- b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32552).
- 4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8546).
- 5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-31687).
 - a. This code in a Planned Act **SHOULD** be selected from LOINC (CodeSystem: 2.16.840.1.113883.6.1) **OR** SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96) (CONF:1098-32030).
- 6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-30432).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="active"** Active (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1098-32019).

The effectiveTime in a planned act represents the time that the act should occur.

- 7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-30433).

The clinician who is expected to carry out the act could be identified using act/performer.

- 8. **MAY** contain zero or more [0..*] **performer** (CONF:1098-30435).

The author in a planned act represents the clinician who is requesting or planning the act.

- 9. **SHOULD** contain zero or one [0..1] **Author Participation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32020).

The following entryRelationship represents the priority that a patient or a provider places on the activity.

- 10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31067) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-31068).
 - b. **SHALL** contain exactly one [1..1] **Priority Preference** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-31069).

The following entryRelationship represents the indication for the act.

- 11. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32021) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-32022).
 - b. **SHALL** contain exactly one [1..1] **Indication (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-32023).

The following entryRelationship captures any instructions associated with the planned act.

- 12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32024) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has subject (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-32025).
 - b. **SHALL** contain exactly one [1..1] **Instruction (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-32026).

Table 173: Planned moodCode (Act/Encounter/Procedure)

Value Set: Planned moodCode (Act/Encounter/Procedure) 2.16.840.1.113883.11.20.9.23			
This value set is used to restrict the moodCode on an act, an encounter or a procedure to future moods			
Value Set Source: http://hl7.org/implement/standards/fhir/v3/ActMood/			
Code	Code System	Code System OID	Print Name
INT	ActMood	2.16.840.1.113883.5.1001	Intent
ARQ	ActMood	2.16.840.1.113883.5.1001	Appointment Request
PRMS	ActMood	2.16.840.1.113883.5.1001	Promise
PRP	ActMood	2.16.840.1.113883.5.1001	Proposal
RQO	ActMood	2.16.840.1.113883.5.1001	Request
APT	ActMood	2.16.840.1.113883.5.1001	Appointment

Figure 84: Planned Act (V2) Example

```

<act classCode="ACT" moodCode="INT">
  <templateId root="2.16.840.1.113883.10.20.22.4.39" extension="2014-06-09" />
  <id root="7658963e-54da-496f-bf18-dea1dddaa3b0" />
  <code code="423171007" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"
displayName="Elevate head of bed" />
  <statusCode code="active" />
  <effectiveTime value="20130902" />
  <author typeCode="AUT">
    <!-- Author Participation -->
  </author>
  <entryRelationship typeCode="RSON">
    <!-- Patient Priority Preference -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="RSON">
    <!-- Provider Priority Preference -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="RSON">
    <!-- Indication (V2) -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="SUBJ">
    <!-- Instruction (V2) -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="COMP">
    <!-- Planned Coverage -->
    ...
  </entryRelationship>
</act>

```

3.34.1 Ordered Service Act

[act: identifier urn:oid:2.16.840.1.113883.10.20.34.3.19 (open)]

Table 174: Ordered Service Act Contexts

Contained By:	Contains:
Services and Procedures Section (optional)	

This template represents service activities ordered, but not yet provided. Examples of service acts include non-medication treatments, such as physical therapy or home health care, other tests and procedures (except excision of tissue), as well as health education or counseling. To represent the ordered service act, the moodCode value is constrained to "RQO".

Table 175: Ordered Service Act Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.19)					
@classCode	1..1	SHALL		1106-221	2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1106-222	2.16.840.1.113883.5.1001 (ActMood) = RQO
templateId	1..1	SHALL		1106-223	
@root	1..1	SHALL		1106-224	2.16.840.1.113883.10.20.34.3.19
code	1..1	SHALL		1106-225	
@code	0..1	SHOULD		1106-362	
translation	0..*	MAY		1106-363	
@code	1..1	SHALL		1106-378	2.16.840.1.113883.6.12 (CPT4)

1. Conforms to [Planned Act \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-221).
3. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-222).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-223) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.19" (CONF:1106-224).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1106-225).
 - a. This code **SHOULD** contain zero or one [0..1] **@code** (CONF:1106-362).
Note: Inclusion of both SNOMED CT/LOINC and a local code is permitted. When both codes are available, include the local code within the translation element. When only a local code is available, include the local code within the translation element and use @nullFlavor="OTH" in the code element.

- i. This @code **SHOULD** be selected from LOINC (CodeSystem: 2.16.840.1.113883.6.1) or SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96) (CONF:1106-767).
- b. This code **MAY** contain zero or more [0..*] **translation** (CONF:1106-363).
 - i. The translation, if present, **SHALL** contain exactly one [1..1] @code (CodeSystem: CPT4 2.16.840.1.113883.6.12) (CONF:1106-378).

Figure 85: Ordered Service Act Example

```
<act classCode="ACT" moodCode="RQO">
  <!-- C-CDA R2 Planned Act (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.39" extension="2014-06-09" />
  <!-- Ordered Service Act -->
  <templateId root="2.16.840.1.113883.10.20.34.3.19" />
  <id root="8daa4618-03c6-4339-89b4-3862e96298b2" />
  <code code="266724001" displayName="Weight-reducing diet education"
    codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" />
  <statusCode code="active" />
</act>
```

3.35 Planned Coverage

[act: identifier urn:oid:2.16.840.1.113883.10.20.22.4.129 (open)]

Table 176: Planned Coverage Contexts

Contained By:	Contains:
Planned Procedure (V2) (optional) Planned Observation (V2) (optional) Payment Sources Section (optional)	Author Participation

This template represents the insurance coverage intended to cover an act or procedure.

Table 177: Planned Coverage Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.129)					
@classCode	1..1	SHALL		1098-31945	2.16.840.1.113883.5.4 (ActCode) = ACT
@moodCode	1..1	SHALL		1098-31946	2.16.840.1.113883.5.1001 (ActMood) = INT
templateId	1..1	SHALL		1098-31947	
@root	1..1	SHALL		1098-31948	2.16.840.1.113883.10.20.22.4.129
id	1..*	SHALL		1098-31950	
code	1..1	SHALL		1098-31951	
@code	1..1	SHALL		1098-31952	48768-6
@codeSystem	1..1	SHALL		1098-31953	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1098-31954	
@code	1..1	SHALL		1098-31955	2.16.840.1.113883.5.4 (ActCode) = active
author	0..*	MAY		1098-32178	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	1..1	SHALL		1098-31967	
@typeCode	1..1	SHALL		1098-31968	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
act	1..1	SHALL		1098-31969	
@classCode	1..1	SHALL		1098-31970	2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-31971	2.16.840.1.113883.5.1001 (ActMood) = INT
id	1..*	SHALL		1098-31972	
code	1..1	SHALL		1098-31973	2.16.840.1.114222.4.11.3591 (Source of Payment Typology (PHDSC))
statusCode	1..1	SHALL		1098-31974	
@code	1..1	SHALL		1098-31975	2.16.840.1.113883.5.14 (ActStatus) = active

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" act (CodeSystem: ActCode 2.16.840.1.113883.5.4) (CONF:1098-31945).
2. **SHALL** contain exactly one [1..1] **@moodCode**="INT" Intent (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1098-31946).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-31947) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.129" (CONF:1098-31948).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-31950).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-31951).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="48768-6" Payment Sources (CONF:1098-31952).

- b. This code **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC
2.16.840.1.113883.6.1) (CONF:1098-31953).
 - 6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-31954).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="active" Active
(CodeSystem: ActCode 2.16.840.1.113883.5.4) (CONF:1098-31955).
 - 7. **MAY** contain zero or more [0..*] Author Participation (identifier:
urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32178).
 - 8. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1098-31967) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" has component (CodeSystem:
HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-31968).
 - b. **SHALL** contain exactly one [1..1] **act** (CONF:1098-31969).
 - i. This act **SHALL** contain exactly one [1..1] @classCode="ACT" ACT
(CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1098-31970).
 - ii. This act **SHALL** contain exactly one [1..1] @moodCode="INT" intent
(CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1098-31971).
- These act/identifiers are unique identifiers for the policy or program providing the coverage.
- iii. This act **SHALL** contain at least one [1..*] **id** (CONF:1098-31972).
 - iv. This act **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from
ValueSet Source of Payment Typology (PHDSC)
2.16.840.1.114222.4.11.3591 **DYNAMIC** (CONF:1098-31973).
 - v. This act **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-31974).
 - 1. This statusCode **SHALL** contain exactly one [1..1] @code="active"
Active (CodeSystem: ActStatus 2.16.840.1.113883.5.14)
(CONF:1098-31975).

Table 178: Source of Payment Typology (PHDSC)

Value Set: Source of Payment Typology (PHDSC) 2.16.840.1.114222.4.11.3591			
A value set of Public Health Data Standards Consortium Source of Payment Typology Version 3.0 Codes			
Value Set Source: http://www.phdsc.org/standards/payer-typology.asp			
Code	Code System	Code System OID	Print Name
1	Source of Payment Typology (PHDSC)	2.16.840.1.113883.3.221.5	Medicare
2	Source of Payment Typology (PHDSC)	2.16.840.1.113883.3.221.5	Medicaid
311	Source of Payment Typology (PHDSC)	2.16.840.1.113883.3.221.5	Tricare (CHAMPUS)
33	Source of Payment Typology (PHDSC)	2.16.840.1.113883.3.221.5	Indian Health Service or Tribe
62	Source of Payment Typology (PHDSC)	2.16.840.1.113883.3.221.5	BC Indemnity
61	Source of Payment Typology (PHDSC)	2.16.840.1.113883.3.221.5	BC Managed Care
611	Source of Payment Typology (PHDSC)	2.16.840.1.113883.3.221.5	BC Managed Care - HMO
619	Source of Payment Typology (PHDSC)	2.16.840.1.113883.3.221.5	BC Managed Care - Other
613	Source of Payment Typology (PHDSC)	2.16.840.1.113883.3.221.5	BC Managed Care - POS
612	Source of Payment Typology (PHDSC)	2.16.840.1.113883.3.221.5	BC Managed Care - PPO
35	Source of Payment Typology (PHDSC)	2.16.840.1.113883.3.221.5	Black Lung
6	Source of Payment Typology (PHDSC)	2.16.840.1.113883.3.221.5	BLUE CROSS/BLUE SHIELD
821	Source of Payment Typology (PHDSC)	2.16.840.1.113883.3.221.5	Charity
3223	Source of Payment Typology (PHDSC)	2.16.840.1.113883.3.221.5	Children of Women Vietnam Veterans (CWVV)
3221	Source of Payment Typology (PHDSC)	2.16.840.1.113883.3.221.5	Civilian Health and Medical Program for the VA (CHAMPVA)
...			

Figure 86: Planned Coverage Example

```
<act classCode="ACT" moodCode="INT">
  <templateId root="2.16.840.1.113883.10.20.22.4.129" />
  <id root="03f5e10b-7e79-4610-9626-d2984ff10cc1" />
  <code code="48768-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Payment Sources" />
  <statusCode code="active" />
  <entryRelationship typeCode="COMP">
    <act classCode="ACT" moodCode="INT">
      <!-- These act/identifiers are unique identifiers
for the policy or program providing the coverage. -->
      <id root="4c9a3be1-5f09-46dd-88e7-14c8ec612e4c" />
      <code code="111" displayName="Medicare HMO"
          codeSystemName="Source of Payment Typology (PHDSC)"
          codeSystem="2.16.840.1.113883.3.221.5" />
      <statusCode code="active" />
    </act>
  </entryRelationship>
</act>
```

3.36 Planned Immunization Activity

[substanceAdministration: identifier urn:oid:2.16.840.1.113883.10.20.22.4.120 (open)]

Table 179: Planned Immunization Activity Contexts

Contained By:	Contains:
Immunizations Section (optional)	Author Participation Immunization Medication Information (V2) Indication (V2) Instruction (V2) Precondition for Substance Administration (V2) Priority Preference

This template represents planned immunizations. Planned Immunization Activity is very similar to Planned Medication Activity with some key differences, for example, the drug code system is constrained to CVX codes.

The priority of the immunization activity to the patient and provider is communicated through Priority Preference. The effectiveTime indicates the time when the immunization activity is intended to take place and authorTime indicates when the documentation of the plan occurred.

Table 180: Planned Immunization Activity Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
substanceAdministration (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.120)					
@classCode	1..1	SHALL		1098-32091	SBADM
@moodCode	1..1	SHALL		1098-32097	2.16.840.1.113883.11.20.9.24 (Planned moodCode (SubstanceAdministration/Supply))
templateId	1..1	SHALL		1098-32098	
@root	1..1	SHALL		1098-32099	2.16.840.1.113883.10.20.22.4.120
id	1..*	SHALL		1098-32100	
statusCode	1..1	SHALL		1098-32101	
@code	1..1	SHALL		1098-32102	2.16.840.1.113883.5.14 (ActStatus) = active
effectiveTime	1..1	SHALL		1098-32103	
repeatNumber	0..1	MAY		1098-32126	
routeCode	0..1	MAY		1098-32127	2.16.840.1.113883.3.88.12.3221.8.7 (Medication Route FDA)
approachSiteCode	0..*	MAY		1098-32128	2.16.840.1.113883.3.88.12.3221.8.9 (Body Site)
doseQuantity	0..1	MAY		1098-32129	
@unit	0..1	SHOULD		1098-32130	2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive)
consumable	1..1	SHALL		1098-32131	
manufacturedProduct	1..1	SHALL		1098-32132	Immunization Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.2.4.54:2014-06-09)
performer	0..*	MAY		1098-32104	
author	0..*	MAY		1098-32105	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	0..*	MAY		1098-32108	
@typeCode	1..1	SHALL		1098-32109	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1098-32110	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143)
entryRelationship	0..*	MAY		1098-32114	
@typeCode	1..1	SHALL		1098-32115	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-32116	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.2.4.19:2014-06-09)
entryRelationship	0..*	MAY		1098-32117	

@typeCode	1..1	SHALL		1098-32118	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
act	1..1	SHALL		1098-32119	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.2.4.20:2014-06-09)
precondition	0..*	MAY		1098-32123	
@typeCode	1..1	SHALL		1098-32124	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = PRCN
criterion	1..1	SHALL		1098-32125	Precondition for Substance Administration (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.2.4.25:2014-06-09)

1. **SHALL** contain exactly one [1..1] @classCode="SBADM" (CONF:1098-32091).
2. **SHALL** contain exactly one [1..1] @moodCode, which **SHALL** be selected from ValueSet [Planned moodCode \(SubstanceAdministration/Supply\)](#) 2.16.840.1.113883.11.20.9.24 **STATIC** 2014-09-01 (CONF:1098-32097).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-32098) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.120" (CONF:1098-32099).
4. **SHALL** contain at least one [1..*] id (CONF:1098-32100).
5. **SHALL** contain exactly one [1..1] statusCode (CONF:1098-32101).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="active" Active (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1098-32102).

The effectiveTime in a planned immunization activity represents the time that the immunization activity should occur.

6. **SHALL** contain exactly one [1..1] effectiveTime (CONF:1098-32103).

In a Planned Immunization Activity, repeatNumber defines the number of allowed administrations. For example, a repeatNumber of "3" means that the substance can be administered up to 3 times.

7. **MAY** contain zero or one [0..1] repeatNumber (CONF:1098-32126).
8. **MAY** contain zero or one [0..1] routeCode, which **SHALL** be selected from ValueSet [Medication Route FDA](#) 2.16.840.1.113883.3.88.12.3221.8.7 **DYNAMIC** (CONF:1098-32127).
9. **MAY** contain zero or more [0..*] approachSiteCode, which **SHALL** be selected from ValueSet [Body Site](#) 2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-32128).
10. **MAY** contain zero or one [0..1] doseQuantity (CONF:1098-32129).
 - a. The doseQuantity, if present, **SHOULD** contain zero or one [0..1] @unit, which **SHALL** be selected from ValueSet [UnitsOfMeasureCaseSensitive](#) 2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-32130).
11. **SHALL** contain exactly one [1..1] consumable (CONF:1098-32131).
 - a. This consumable **SHALL** contain exactly one [1..1] [Immunization Medication Information \(V2\)](#) (identifier:

urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) (CONF:1098-32132).

The clinician who is expected to perform the planned immunization activity could be identified using substanceAdministration/performer.

12. **MAY** contain zero or more [0..*] **performer** (CONF:1098-32104).

The author in a planned immunization activity represents the clinician who is requesting or planning the immunization activity.

13. **MAY** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32105).

The following entryRelationship represents the priority that a patient or a provider places on the immunization activity.

14. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32108) such that it
- SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-32109).
 - SHALL** contain exactly one [1..1] [Priority Preference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-32110).

The following entryRelationship represents the indication for the immunization activity.

15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32114) such that it
- SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-32115).
 - SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-32116).

The following entryRelationship captures any instructions associated with the planned immunization activity.

16. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32117) such that it
- SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has Subject (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-32118).
 - SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-32119).

17. **MAY** contain zero or more [0..*] **precondition** (CONF:1098-32123) such that it
- SHALL** contain exactly one [1..1] **@typeCode="PRCN"** Precondition (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-32124).
 - SHALL** contain exactly one [1..1] [Precondition for Substance Administration \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09) (CONF:1098-32125).

Table 181: Planned moodCode (SubstanceAdministration/Supply)

Value Set: Planned moodCode (SubstanceAdministration/Supply) 2.16.840.1.113883.11.20.9.24 This value set is used to restrict the moodCode on a substance administration or a supply to future moods. Value Set Source: http://hl7.org/implement/standards/fhir/v3/ActMood/			
Code	Code System	Code System OID	Print Name
INT	ActMood	2.16.840.1.113883.5.1001	Intent
PRMS	ActMood	2.16.840.1.113883.5.1001	Promise
PRP	ActMood	2.16.840.1.113883.5.1001	Proposal
RQO	ActMood	2.16.840.1.113883.5.1001	Request

Figure 87: Planned Immunization Activity

```
<substanceAdministration classCode="SBADM" moodCode="INT">
  <!-- Planned Immunization Activity -->
  <templateId root="2.16.840.1.113883.10.20.22.4.120" />
  <id root="81505d5e-2305-42b3-9273-f579d622000d" />
  <statusCode code="active" />
  <effectiveTime xsi:type="IVL_TS" value="20131115" />
  <repeatNumber value="1" />
  <routeCode code="IM" codeSystem="2.16.840.1.113883.5.112"
codeSystemName="RouteOfAdministration" displayName="Intramuscular injection" />
  <consumable>
    <!-- Immunization Medication Information (V2) -->
  </consumable>
  <performer>
    ...
  </performer>
  <author>
    <!-- Author Participation -->
  </author>
  <entryRelationship typeCode="REFR">
    <!-- Patient Priority Preference -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="REFR">
    <!-- Provider Priority Preference -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="RSON">
    <!-- Indication (V2) -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="SUBJ">
    <!-- Instruction (V2) -->
    ...
  </entryRelationship>
  <precondition typeCode="PRCN">
    <!-- Precondition for Substance Administration (V2) -->
    ...
  </precondition>
</substanceAdministration>
```

3.37 Planned Medication Activity (V2)

[substanceAdministration: identifier
urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09 (open)]

Table 182: Planned Medication Activity (V2) Contexts

Contained By:	Contains:
Medications Section (optional)	Author Participation Indication (V2) Instruction (V2) Medication Information (V2) Precondition for Substance Administration (V2) Priority Preference

This template represents planned medication activities. The priority of the medication activity to the patient and provider is communicated through Priority Preference. The effectiveTime indicates the time when the medication activity is intended to take place. The authorTime indicates when the documentation of the plan occurred.

Table 183: Planned Medication Activity (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09)					
@classCode	1..1	SHALL		1098-8572	2.16.840.1.113883.5.6 (HL7ActClass) = SBADM
@moodCode	1..1	SHALL		1098-8573	2.16.840.1.113883.11.20.9.24 (Planned moodCode (SubstanceAdministration/Supply))
templateId	1..1	SHALL		1098-30465	
@root	1..1	SHALL		1098-30466	2.16.840.1.113883.10.20.22.4.42
@extension	1..1	SHALL		1098-32557	2014-06-09
id	1..*	SHALL		1098-8575	
statusCode	1..1	SHALL		1098-32087	
@code	1..1	SHALL		1098-32088	2.16.840.1.113883.5.14 (ActStatus) = active
effectiveTime	1..1	SHALL		1098-30468	
repeatNumber	0..1	MAY		1098-32066	
routeCode	0..1	MAY		1098-32067	2.16.840.1.113883.3.88.12.3221.8.7 (Medication Route FDA)
approachSiteCode	0..*	MAY		1098-32078	2.16.840.1.113883.3.88.12.3221.8.9 (Body Site)
doseQuantity	0..1	MAY		1098-32068	
@unit	0..1	SHOULD		1098-32133	2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive)
rateQuantity	0..1	MAY		1098-32079	
@unit	0..1	SHOULD		1098-32134	2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive)
maxDoseQuantity	0..1	MAY		1098-32080	
administrationUnitCode	0..1	MAY		1098-32081	2.16.840.1.113883.1.11.14570 (AdministrableDrugForm)
consumable	1..1	SHALL		1098-32082	
manufacturedProduct	1..1	SHALL		1098-32083	Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09)
performer	0..*	MAY		1098-30470	
author	0..1	SHOULD		1098-32046	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	0..*	MAY		1098-31104	
@typeCode	1..1	SHALL		1098-31105	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1098-31106	Priority Preference (identifier:

					urn:oid:2.16.840.1.113883.10.20.22.4.143
entryRelationship	0..*	MAY		1098-32069	
@typeCode	1..1	SHALL		1098-32070	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-32071	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09)
entryRelationship	0..*	MAY		1098-32072	
@typeCode	1..1	SHALL		1098-32073	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
act	1..1	SHALL		1098-32074	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09)
precondition	0..*	MAY		1098-32084	
@typeCode	1..1	SHALL		1098-32085	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = PRCN
criterion	1..1	SHALL		1098-32086	Precondition for Substance Administration (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09)

1. **SHALL** contain exactly one [1..1] **@classCode="SBADM"** (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8572).
2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [Planned moodCode \(SubstanceAdministration/Supply\)](#) 2.16.840.1.113883.11.20.9.24 **STATIC** 2011-09-30 (CONF:1098-8573).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-30465) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.42"** (CONF:1098-30466).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32557).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8575).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-32087).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="active"** Active (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1098-32088).

The effectiveTime in a planned medication activity represents the time that the medication activity should occur.

6. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-30468).

In a Planned Medication Activity, repeatNumber defines the number of allowed administrations. For example, a repeatNumber of "3" means that the substance can be administered up to 3 times.

7. **MAY** contain zero or one [0..1] **repeatNumber** (CONF:1098-32066).
8. **MAY** contain zero or one [0..1] **routeCode**, which **SHALL** be selected from ValueSet [Medication Route FDA](#) 2.16.840.1.113883.3.88.12.3221.8.7 **DYNAMIC** (CONF:1098-32067).

9. **MAY** contain zero or more [0..*] **approachSiteCode**, which **SHALL** be selected from ValueSet [Body Site](#) 2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-32078).
10. **MAY** contain zero or one [0..1] **doseQuantity** (CONF:1098-32068).
 - a. The doseQuantity, if present, **SHOULD** contain zero or one [0..1] @unit, which **SHALL** be selected from ValueSet [UnitsOfMeasureCaseSensitive](#) 2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-32133).
11. **MAY** contain zero or one [0..1] **rateQuantity** (CONF:1098-32079).
 - a. The rateQuantity, if present, **SHOULD** contain zero or one [0..1] @unit, which **SHALL** be selected from ValueSet [UnitsOfMeasureCaseSensitive](#) 2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-32134).
12. **MAY** contain zero or one [0..1] **maxDoseQuantity** (CONF:1098-32080).
13. **MAY** contain zero or one [0..1] **administrationUnitCode**, which **SHALL** be selected from ValueSet [AdministrableDrugForm](#) 2.16.840.1.113883.1.11.14570 **DYNAMIC** (CONF:1098-32081).
14. **SHALL** contain exactly one [1..1] **consumable** (CONF:1098-32082).
 - a. This consumable **SHALL** contain exactly one [1..1] [Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) (CONF:1098-32083).

The clinician who is expected to perform the medication activity could be identified using substanceAdministration/performer.

15. **MAY** contain zero or more [0..*] **performer** (CONF:1098-30470).

The author in a planned medication activity represents the clinician who is requesting or planning the medication activity.

16. **SHOULD** contain zero or one [0..1] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32046).

The following entryRelationship represents the priority that a patient or a provider places on the planned medication activity.

17. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31104) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-31105).
 - b. **SHALL** contain exactly one [1..1] [Priority Preference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-31106).

The following entryRelationship represents the indication for the planned medication activity.

18. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32069) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" Has Reason (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-32070).
 - b. **SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-32071).

The following entryRelationship captures any instructions associated with the planned medication activity.

19. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32072) such that it

- a. **SHALL** contain exactly one [1..1] @typeCode="SUBJ" Has Subject (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-32073).
 - b. **SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-32074).
20. **MAY** contain zero or more [0..*] **precondition** (CONF:1098-32084).
- a. The precondition, if present, **SHALL** contain exactly one [1..1] @typeCode="PRCN" Precondition (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-32085).
 - b. The precondition, if present, **SHALL** contain exactly one [1..1] [Precondition for Substance Administration \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09) (CONF:1098-32086).

Figure 88: Planned Medication Activity (V2) Example

```

<substanceAdministration moodCode="INT" classCode="SBADM">
  <templateId root="2.16.840.1.113883.10.20.22.4.42" extension="2014-06-09" />
  <!-- Planned Medication Activity (V2)-->
  <id root="cddb33f0-6cde-11db-9fel-0800200c9a66" />
  <text>Heparin 0.25 ml Prefilled Syringe</text>
  <statusCode code="active" />
  <!-- The effectiveTime in a planned medication activity
       represents the time that the medication activity should occur. -->
  <effectiveTime value="20130905" />
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- Medication Information (V2) -->
      ...
    </manufacturedProduct>
  </consumable>
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Patient Priority Preference-->
      ...
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Provider Priority Preference-->
      ...
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="RSON">
    <!-- Indication (V2) -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="SUBJ">
    <!-- Instruction (V2) -->
    ...
  </entryRelationship>
</substanceAdministration>

```

3.38 Planned Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09
(open)]

Table 184: Planned Observation (V2) Contexts

Contained By:	Contains:
	Author Participation Indication (V2) Instruction (V2) Planned Coverage Priority Preference

This template represents planned observations that result in new information about the patient which cannot be classified as a procedure according to the HL7 RIM, i.e., procedures alter the patient's body. Examples of these observations are laboratory tests, diagnostic imaging tests, EEGs, and EKGs.

The importance of the planned observation to the patient and provider is communicated through Priority Preference. The effectiveTime indicates the time when the observation is intended to take place and authorTime indicates when the documentation of the plan occurred.

The Planned Observation template may also indicate the potential insurance coverage for the observation.

Table 185: Planned Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09)					
@classCode	1..1	SHALL		1098-8581	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-8582	2.16.840.1.113883.11.20.9.25 (Planned moodCode (Observation))
templateId	1..1	SHALL		1098-30451	
@root	1..1	SHALL		1098-30452	2.16.840.1.113883.10.20.22.4.44
@extension	1..1	SHALL		1098-32555	2014-06-09
id	1..*	SHALL		1098-8584	
code	1..1	SHALL		1098-31030	2.16.840.1.113883.6.1 (LOINC)
statusCode	1..1	SHALL		1098-30453	
@code	1..1	SHALL		1098-32032	2.16.840.1.113883.5.14 (ActStatus) = active
effectiveTime	0..1	SHOULD		1098-30454	
value	0..1	MAY		1098-31031	
methodCode	0..1	MAY		1098-32043	
targetSiteCode	0..*	SHOULD		1098-32044	2.16.840.1.113883.3.88.12.3221.8.9 (Body Site)
performer	0..*	MAY		1098-30456	
author	0..*	SHOULD		1098-32033	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	0..*	MAY		1098-31073	
@typeCode	1..1	SHALL		1098-31074	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1098-31075	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143)
entryRelationship	0..*	MAY		1098-32034	
@typeCode	1..1	SHALL		1098-32035	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-32036	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09)
entryRelationship	0..*	MAY		1098-32037	
@typeCode	1..1	SHALL		1098-32038	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
act	1..1	SHALL		1098-32039	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09)
entryRelationship	0..*	MAY		1098-32040	
@typeCode	1..1	SHALL		1098-32041	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
act	1..1	SHALL		1098-32042	Planned Coverage (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.129)

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8581).
2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [Planned moodCode \(Observation\)](#) 2.16.840.1.113883.11.20.9.25 **STATIC** 2011-09-30 (CONF:1098-8582).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-30451) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.44"** (CONF:1098-30452).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32555).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8584).
5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from CodeSystem LOINC (2.16.840.1.113883.6.1) (CONF:1098-31030).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-30453).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code="active"** Active (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1098-32032).

The **effectiveTime** in a planned observation represents the time that the observation should occur.

7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-30454).
8. **MAY** contain zero or one [0..1] **value** (CONF:1098-31031).

In a planned observation the provider may suggest that an observation should be performed using a particular method.

9. **MAY** contain zero or one [0..1] **methodCode** (CONF:1098-32043).

The **targetSiteCode** is used to identify the part of the body of concern for the planned observation.

10. **SHOULD** contain zero or more [0..*] **targetSiteCode**, which **SHALL** be selected from ValueSet [Body Site](#) 2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-32044).

The clinician who is expected to perform the observation could be identified using **procedure/performer**.

11. **MAY** contain zero or more [0..*] **performer** (CONF:1098-30456).

The author in a planned observation represents the clinician who is requesting or planning the observation.

12. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32033).

The following **entryRelationship** represents the priority that a patient or a provider places on the observation.

13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31073) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-31074).
 - b. **SHALL** contain exactly one [1..1] [Priority Preference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-31075).

The following entryRelationship represents the indication for the observation.

14. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32034) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-32035).
 - b. **SHALL** contain exactly one [1..1] **Indication (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-32036).

The following entryRelationship captures any instructions associated with the planned observation.

15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32037) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has subject (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-32038).
 - b. **SHALL** contain exactly one [1..1] **Instruction (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-32039).

The following entryRelationship represents the insurance coverage the patient may have for the observation.

16. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32040) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has Component (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-32041).
 - b. **SHALL** contain exactly one [1..1] **Planned Coverage** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.129) (CONF:1098-32042).

Table 186: Planned moodCode (Observation)

Value Set: Planned moodCode (Observation) 2.16.840.1.113883.11.20.9.25			
This value set is used to restrict the moodCode to future moods.			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
INT	ActMood	2.16.840.1.113883.5.1001	Intent
PRMS	ActMood	2.16.840.1.113883.5.1001	Promise
PRP	ActMood	2.16.840.1.113883.5.1001	Proposal
RQO	ActMood	2.16.840.1.113883.5.1001	Request
...			

Figure 89: Planned Observation (V2) Example

```
<observation classCode="OBS" moodCode="INT">
  <templateId root="2.16.840.1.113883.10.20.22.4.44"
    extension="2014-06-09" />
  <id root="b52bee94-c34b-4e2c-8c15-5ad9d6def205" />
  <code code="71850-2"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Oxygen saturation [Pure mass fraction] in Capillary blood by
      Oximetry" />
  <statusCode code="active" />
  <effectiveTime value="20130903" />
  <author typeCode="AUT">
    <!-- Author Participation -->
  </author>
  <entryRelationship typeCode="REFR">
    <!-- Priority Preference -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="RSON">
    <!-- Indication (V2) -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="SUBJ">
    <!-- Instruction (V2) -->
    ...
  </entryRelationship>
  <entryRelationship typeCode="COMP">
    <!-- Planned Coverage -->
    ...
  </entryRelationship>
</observation>
```

3.38.1 Ordered Service Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.2 (open)]

Table 187: Ordered Service Observation Contexts

Contained By:	Contains:
Services and Procedures Section (optional)	

This template represents service observations ordered, but not yet provided. Examples of service observations include examinations, blood tests, and imaging. To represent the ordered service observation, the moodCode value is constrained to "RQO".

Table 188: Ordered Service Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.2)					
@classCode	1..1	SHALL		1106-381	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-382	2.16.840.1.113883.5.1001 (ActMood) = RQO
templateId	1..1	SHALL		1106-383	
@root	1..1	SHALL		1106-384	2.16.840.1.113883.10.20.34.3.2
code	1..1	SHALL		1106-385	
@code	0..1	SHOULD		1106-386	
translation	0..*	MAY		1106-387	
@code	1..1	SHALL		1106-388	

1. Conforms to [Planned Observation \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-381).
3. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-382).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-383) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.2" (CONF:1106-384).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1106-385).
 - a. This code **SHOULD** contain zero or one [0..1] **@code** (CONF:1106-386).
Note: Inclusion of both SNOMED CT/LOINC and a local code is permitted. When both codes are available, include the local code within the translation element. When only a local code is available, include the local code within the translation element and use **@nullFlavor**="OTH" in the code element.
 - i. This **@code** **SHOULD** be selected from LOINC (CodeSystem: 2.16.840.1.113883.6.1) or SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96) (CONF:1106-769).
 - b. This code **MAY** contain zero or more [0..*] **translation** (CONF:1106-387).
 - i. The translation, if present, **SHALL** contain exactly one [1..1] **@code** (CONF:1106-388).

Figure 90: Ordered Service Observation Example

```
<observation classCode="OBS" moodCode="RQO">
  <!-- C-CDA R2 Planned Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.44" extension="2014-06-09" />
  <!-- Ordered Service Observation -->
  <templateId root="2.16.840.1.113883.10.20.34.3.2" />
  <id root="60b4ec95-1faa-49f4-a59e-02ccdcfb33f1" />
  <code code="473381003"
    displayName="Transthoracic echocardiography for congenital heart disease"
    codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <translation code="93303"
      displayName="COMPLETE TTHRC ECHO CONGENITAL CARDIAC ANOMALY"
      codeSystemName="CPT-4" codeSystem="2.16.840.1.113883.6.12" />
    </code>
  <statusCode code="active" />
</observation>
```

3.39 Planned Procedure (V2)

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09
(open)]

Table 189: Planned Procedure (V2) Contexts

Contained By:	Contains:
	Author Participation Indication (V2) Instruction (V2) Planned Coverage Priority Preference

This template represents planned alterations of the patient's physical condition. Examples of such procedures are tracheostomy, knee replacement, and craniectomy. The priority of the procedure to the patient and provider is communicated through Priority Preference. The effectiveTime indicates the time when the procedure is intended to take place and authorTime indicates when the documentation of the plan occurred. The Planned Procedure Template may also indicate the potential insurance coverage for the procedure.

Table 190: Planned Procedure (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09)					
@classCode	1..1	SHALL		1098-8568	2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		1098-8569	2.16.840.1.113883.11.20.9.23 (Planned moodCode (Act/Encounter/Procedure))
templateId	1..1	SHALL		1098-30444	
@root	1..1	SHALL		1098-30445	2.16.840.1.113883.10.20.22.4.41
@extension	1..1	SHALL		1098-32554	2014-06-09
id	1..*	SHALL		1098-8571	
code	1..1	SHALL		1098-31976	
statusCode	1..1	SHALL		1098-30446	
@code	1..1	SHALL		1098-31978	2.16.840.1.113883.5.14 (ActStatus) = active
effectiveTime	0..1	SHOULD		1098-30447	
methodCode	0..*	MAY		1098-31980	
targetSiteCode	0..*	MAY		1098-31981	2.16.840.1.113883.3.88.12.3221.8.9 (Body Site)
performer	0..*	MAY		1098-30449	
author	0..1	SHOULD		1098-31979	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	0..*	MAY		1098-31079	
@typeCode	1..1	SHALL		1098-31080	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1098-31081	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143)
entryRelationship	0..*	MAY		1098-31982	
@typeCode	1..1	SHALL		1098-31983	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-31984	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19: 2014-06-09)
entryRelationship	0..*	MAY		1098-31985	
@typeCode	1..1	SHALL		1098-31986	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1098-31987	true
act	1..1	SHALL		1098-31989	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20: 2014-06-09)
entryRelationship	0..*	MAY		1098-31990	
@typeCode	1..1	SHALL		1098-31991	COMP
act	1..1	SHALL		1098-31992	Planned Coverage (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.129)

1. **SHALL** contain exactly one [1..1] **@classCode**="PROC" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8568).
2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [Planned moodCode \(Act/Encounter/Procedure\)](#) 2.16.840.1.113883.11.20.9.23 **STATIC** 2011-09-30 (CONF:1098-8569).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-30444) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.41" (CONF:1098-30445).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32554).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8571).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-31976).
 - a. The procedure/code in a planned procedure **SHOULD** be selected from LOINC (codeSystem 2.16.840.1.113883.6.1) **OR** SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96), and **MAY** be selected from CPT-4 (CodeSystem: 2.16.840.1.113883.6.12) **OR** ICD10 PCS (CodeSystem: 2.16.840.1.113883.6.4) (CONF:1098-31977).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-30446).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="active" Active (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1098-31978).

The effectiveTime in a planned procedure represents the time that the procedure should occur.

7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-30447).

In a planned procedure the provider may suggest that a procedure should be performed using a particular method.

MethodCode **SHALL NOT** conflict with the method inherent in Procedure / code.

8. **MAY** contain zero or more [0..*] **methodCode** (CONF:1098-31980).

The targetSiteCode is used to identify the part of the body of concern for the planned procedure.

9. **MAY** contain zero or more [0..*] **targetSiteCode**, which **SHALL** be selected from ValueSet [Body Site](#) 2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-31981).

The clinician who is expected to perform the procedure could be identified using procedure/performer.

10. **MAY** contain zero or more [0..*] **performer** (CONF:1098-30449).

The author in a planned procedure represents the clinician who is requesting or planning the procedure.

11. **SHOULD** contain zero or one [0..1] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31979).

The following entryRelationship represents the priority that a patient or a provider places on the procedure.

12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31079) such that it

- a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-31080).
- b. **SHALL** contain exactly one [1..1] [Priority Preference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-31081).

The following entryRelationship represents the indication for the procedure.

- 13. **MAY** contain zero or more [0..*] entryRelationship (CONF:1098-31982) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" Has Reason (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-31983).
 - b. **SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-31984).

The following entryRelationship captures any instructions associated with the planned procedure.

- 14. **MAY** contain zero or more [0..*] entryRelationship (CONF:1098-31985) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="SUBJ" Has Subject (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-31986).
 - b. **SHALL** contain exactly one [1..1] @inversionInd="true" True (CONF:1098-31987).
 - c. **SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-31989).

The following entryRelationship represents the insurance coverage the patient may have for the procedure.

- 15. **MAY** contain zero or more [0..*] entryRelationship (CONF:1098-31990) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" Has component (CONF:1098-31991).
 - b. **SHALL** contain exactly one [1..1] [Planned Coverage](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.129) (CONF:1098-31992).

Figure 91: Planned Procedure (V2) Example

```
<entry>
  <procedure moodCode="RQO" classCode="PROC">
    <templateId root="2.16.840.1.113883.10.20.22.4.41" extension="2014-06-09" />
    <!-- **Planned Procedure (V2) template ** -->
    <id root="9a6d1bac-17d3-4195-89c4-1121bc809b5a" />
    <code code="73761001" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED
CT" displayName="Colonoscopy" />
    <statusCode code="active" />
    <effectiveTime value="20130613" />
    <!-- Author Participation -->
    <author typeCode="AUT">
      ...
    </author>
    <entryRelationship typeCode="REFR">
      <observation classCode="OBS" moodCode="EVN">
        <!-- Patient Priority Preference-->
        <templateId root="2.16.840.1.113883.10.20.22.4.142" />
        ...
      </observation>
    </entryRelationship>
    <entryRelationship typeCode="REFR">
      <observation classCode="OBS" moodCode="EVN">
        <!-- Provider Priority Preference-->
        <templateId root="2.16.840.1.113883.10.20.22.4.143" />
        ...
      </observation>
    </entryRelationship>
    <entryRelationship typeCode="RSON">
      <observation classCode="OBS" moodCode="EVN">
        <!-- Indication-->
        <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09"
/>
        ...
      </observation>
    </entryRelationship>
    <entryRelationship typeCode="SUBJ">
      <act classCode="ACT" moodCode="INT">
        <!-- Instruction-->
        <templateId root="2.16.840.1.113883.10.20.22.4.20" extension="2014-06-09"
/>
        ...
      </act>
    </entryRelationship>
    <entryRelationship typeCode="COMP">
      <observation classCode="ACT" moodCode="INT">
        <!-- Planned Coverage -->
        <templateId root="2.16.840.1.113883.10.20.22.4.129" />
        ...
      </observation>
    </entryRelationship>
  </procedure>
</entry>
```

3.39.1 Ordered Service Procedure

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.34.3.11 (open)]

Table 191: Ordered Service Procedure Contexts

Contained By:	Contains:
Services and Procedures Section (optional)	

This template represents procedure services ordered, but not yet provided. Examples of procedure services include excisions of tissue. To represent the ordered procedure service, the moodCode value is constrained to "RQO".

Table 192: Ordered Service Procedure Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.11)					
@classCode	1..1	SHALL		1106-138	2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		1106-139	2.16.840.1.113883.5.1001 (ActMood) = RQO
templateId	1..1	SHALL		1106-140	
@root	1..1	SHALL		1106-141	2.16.840.1.113883.10.20.34.3.11
code	1..1	SHALL		1106-142	
@code	0..1	SHOULD	CS	1106-143	
translation	0..*	MAY		1106-379	
@code	1..1	SHALL		1106-380	

1. Conforms to [Planned Procedure \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="PROC" Procedure (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-138).
3. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-139).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-140) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.11" (CONF:1106-141).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1106-142).
 - a. This code **SHOULD** contain zero or one [0..1] **@code** (CONF:1106-143).
Note: Inclusion of both SNOMED CT/LOINC and a local code is permitted. When both codes are available, include the local code within the translation element. When only a local code is available, include the local code within the translation element and use @nullFlavor="OTH" in the code element.
 - i. This **@code** **SHOULD** be selected from LOINC (CodeSystem: 2.16.840.1.113883.6.1) or SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96) (CONF:1106-768).
 - b. This code **MAY** contain zero or more [0..*] **translation** (CONF:1106-379).

- i. The translation, if present, **SHALL** contain exactly one [1..1] @code (CONF:1106-380).

Figure 92: Ordered Service Procedure Example

```
<procedure classCode="PROC" moodCode="RQO">
  <!-- Conforms to C-CDA Planned Procedure (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.41" extension="2014-06-09" />
  <!-- Ordered Service Procedure -->
  <templateId root="2.16.840.1.113883.10.20.34.3.11" />
  <id root="93078631-5703-4c18-b4aa-f14042ca6e36" />
  <code code="112703008" displayName="Superficial biopsy of muscle"
    codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <translation code="20200" displayName="BIOPSY MUSCLE SUPERFICIAL"
      codeSystemName="CPT-4" codeSystem="2.16.840.1.113883.6.12" />
  </code>
  <statusCode code="active" />
</procedure>
```

3.40 Policy Activity (V2)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.61:2014-06-09 (open)]

Table 193: Policy Activity (V2) Contexts

Contained By:	Contains:
Coverage Activity (V2) (required)	US Realm Address (AD.US.FIELDDED)

A policy activity represents the policy or program providing the coverage. The person for whom payment is being provided (i.e., the patient) is the covered party. The subscriber of the policy or program is represented as a participant that is the holder of the coverage. The payer is represented as the performer of the policy activity.

Table 194: Policy Activity (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.61:2014-06-09)					
@classCode	1..1	SHALL		1098-8898	2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-8899	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-8900	
@root	1..1	SHALL		1098-10516	2.16.840.1.113883.10.20.22.4.61
@extension	1..1	SHALL		1098-32595	2014-06-09
id	1..*	SHALL		1098-8901	
code	1..1	SHALL		1098-8903	2.16.840.1.114222.4.11.3591 (Source of Payment Typology (PHDSC))
statusCode	1..1	SHALL		1098-8902	
@code	1..1	SHALL		1098-19109	2.16.840.1.113883.5.14 (ActStatus) = completed
performer	1..1	SHALL		1098-8906	
@typeCode	1..1	SHALL		1098-8907	2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF
templateId	1..1	SHALL		1098-16808	
@root	1..1	SHALL		1098-16809	2.16.840.1.113883.10.20.22.4.87
assignedEntity	1..1	SHALL		1098-8908	
id	1..*	SHALL		1098-8909	
code	0..1	SHOULD		1098-8914	
@code	1..1	SHALL		1098-15992	2.16.840.1.113883.1.11.10416 (HL7FinanciallyResponsiblePartyType)
addr	0..1	MAY		1098-8910	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	0..*	MAY		1098-8911	
represented Organization	0..1	SHOULD		1098-8912	
name	0..1	SHOULD		1098-8913	
performer	0..1	SHOULD		1098-8961	2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF
templateId	1..1	SHALL		1098-16810	
@root	1..1	SHALL		1098-16811	2.16.840.1.113883.10.20.22.4.88
time	0..1	SHOULD		1098-8963	
assignedEntity	1..1	SHALL		1098-8962	
code	1..1	SHALL		1098-8968	
@code	1..1	SHALL		1098-16096	GUAR
@codeSystem	1..1	SHALL		1098-32165	2.16.840.1.113883.5.110
addr	0..1	SHOULD		1098-8964	US Realm Address (AD.US.FIELDDED) (identifier:

					urn:oid:2.16.840.1.113883.10.20.22.5.2
telecom	0..*	SHOULD		1098-8965	
participant	1..1	SHALL		1098-8916	
@typeCode	1..1	SHALL		1098-8917	2.16.840.1.113883.5.90 (HL7ParticipationType) = COV
templateId	1..1	SHALL		1098-16812	
@root	1..1	SHALL		1098-16814	2.16.840.1.113883.10.20.22.4.89
time	0..1	SHOULD		1098-8918	
low	0..1	SHOULD		1098-8919	
high	0..1	SHOULD		1098-8920	
participantRole	1..1	SHALL		1098-8921	
id	1..*	SHALL		1098-8922	
code	1..1	SHALL		1098-8923	
@code	0..1	SHOULD		1098-16078	2.16.840.1.113883.1.11.18877 (Coverage Role Type)
addr	0..1	SHOULD		1098-8956	
playingEntity	0..1	SHOULD		1098-8932	
name	1..*	SHALL		1098-8930	
sdtc:birthTime	1..1	SHALL		1098-31344	
participant	0..1	SHOULD		1098-8934	
@typeCode	1..1	SHALL		1098-8935	2.16.840.1.113883.5.90 (HL7ParticipationType) = HLD
templateId	1..1	SHALL		1098-16813	
@root	1..1	SHALL		1098-16815	2.16.840.1.113883.10.20.22.4.90
time	0..1	MAY		1098-8938	
participantRole	1..1	SHALL		1098-8936	
id	1..*	SHALL		1098-8937	
addr	0..1	SHOULD		1098-8925	
entryRelationship	1..*	SHALL		1098-8939	
@typeCode	1..1	SHALL		1098-8940	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR

1. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8898).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-8899).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-8900) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.61" (CONF:1098-10516).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-06-09" (CONF:1098-32595).

This id is a unique identifier for the policy or program providing the coverage

4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8901).
5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Source of Payment Typology \(PHDSC\)](#) 2.16.840.1.114222.4.11.3591 **DYNAMIC** (CONF:1098-8903).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-8902).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19109).

This performer represents the Payer.

7. **SHALL** contain exactly one [1..1] **performer** (CONF:1098-8906) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRF" Performer (CodeSystem: HL7ParticipationType 2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-8907).
 - b. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-16808).
 - i. This **templateId** **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.87" Payer Performer (CONF:1098-16809).
 - c. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-8908).
 - i. This **assignedEntity** **SHALL** contain at least one [1..*] **id** (CONF:1098-8909).
 - ii. This **assignedEntity** **SHOULD** contain zero or one [0..1] **code** (CONF:1098-8914).
 1. The code, if present, **SHALL** contain exactly one [1..1] **@code**, which **SHOULD** be selected from ValueSet [HL7FinanciallyResponsiblePartyType](#) 2.16.840.1.113883.1.11.10416 **DYNAMIC** (CONF:1098-15992).
 - iii. This **assignedEntity** **MAY** contain zero or one [0..1] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-8910).
 - iv. This **assignedEntity** **MAY** contain zero or more [0..*] **telecom** (CONF:1098-8911).
 - v. This **assignedEntity** **SHOULD** contain zero or one [0..1] **representedOrganization** (CONF:1098-8912).
 1. The **representedOrganization**, if present, **SHOULD** contain zero or one [0..1] **name** (CONF:1098-8913).

This performer represents the Guarantor.

8. **SHOULD** contain zero or one [0..1] **performer**="PRF" Performer (CodeSystem: HL7ParticipationType 2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-8961) such that it
 - a. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-16810).
 - i. This **templateId** **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.88" Guarantor Performer (CONF:1098-16811).
 - b. **SHOULD** contain zero or one [0..1] **time** (CONF:1098-8963).
 - c. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-8962).

- i. This assignedEntity **SHALL** contain exactly one [1..1] **code** (CONF:1098-8968).
 - 1. This code **SHALL** contain exactly one [1..1] **@code**="GUAR" Guarantor (CONF:1098-16096).
 - 2. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.110" (CONF:1098-32165).
 - ii. This assignedEntity **SHOULD** contain zero or one [0..1] **US Realm Address (AD.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-8964).
 - iii. This assignedEntity **SHOULD** contain zero or more [0..*] **telecom** (CONF:1098-8965).
 - iv. **SHOULD** include assignedEntity/assignedPerson/name AND/OR assignedEntity/representedOrganization/name (CONF:1098-8967).
9. **SHALL** contain exactly one [1..1] **participant** (CONF:1098-8916) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="COV" Coverage target (CodeSystem: HL7ParticipationType 2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-8917).
 - b. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-16812).
 - i. This templateId **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.89" Covered Party Participant (CONF:1098-16814).
 - c. **SHOULD** contain zero or one [0..1] **time** (CONF:1098-8918).
 - i. The time, if present, **SHOULD** contain zero or one [0..1] **low** (CONF:1098-8919).
 - ii. The time, if present, **SHOULD** contain zero or one [0..1] **high** (CONF:1098-8920).
 - d. **SHALL** contain exactly one [1..1] **participantRole** (CONF:1098-8921).
 - i. This participantRole **SHALL** contain at least one [1..*] **id** (CONF:1098-8922).
 - 1. This id is a unique identifier for the covered party member. Implementers **SHOULD** use the same GUID for each instance of a member identifier from the same health plan (CONF:1098-8984).
 - ii. This participantRole **SHALL** contain exactly one [1..1] **code** (CONF:1098-8923).
 - 1. This code **SHOULD** contain zero or one [0..1] **@code**, which **SHOULD** be selected from ValueSet **Coverage Role Type** 2.16.840.1.113883.1.11.18877 **DYNAMIC** (CONF:1098-16078).
 - iii. This participantRole **SHOULD** contain zero or one [0..1] **addr** (CONF:1098-8956).
 - 1. The content of addr **SHALL** be a conformant US Realm Address (AD.US.FIELDDED) (2.16.840.1.113883.10.20.22.5.2) (CONF:1098-10484).
 - iv. This participantRole **SHOULD** contain zero or one [0..1] **playingEntity** (CONF:1098-8932).

If the covered party's name is recorded differently in the health plan and in the registration/pharmacy benefit summary (due to marriage or for other reasons), use the name as it is recorded in the health plan.

1. The playingEntity, if present, **SHALL** contain at least one [1..*] **name** (CONF:1098-8930).

If the covered party's date of birth is recorded differently in the health plan and in the registration/pharmacy benefit summary, use the date of birth as it is recorded in the health plan.

2. The playingEntity, if present, **SHALL** contain exactly one [1..1] **sdct:birthTime** (CONF:1098-31344).
 - a. The prefix sdct: **SHALL** be bound to the namespace "urn:hl7-org:sdct". The use of the namespace provides a necessary extension to CDA R2 for the use of the birthTime element (CONF:1098-31345).

When the Subscriber is the patient, the participant element describing the subscriber **SHALL NOT** be present. This information will be recorded instead in the data elements used to record member information.

10. **SHOULD** contain zero or one [0..1] **participant** (CONF:1098-8934) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="HLD"** Holder (CodeSystem: HL7ParticipationType 2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-8935).
 - b. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-16813).
 - i. This templateId **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.90"** Policy Holder Participant (CONF:1098-16815).
 - c. **MAY** contain zero or one [0..1] **time** (CONF:1098-8938).
 - d. **SHALL** contain exactly one [1..1] **participantRole** (CONF:1098-8936).
 - i. This participantRole **SHALL** contain at least one [1..*] **id** (CONF:1098-8937).
 1. This id is a unique identifier for the subscriber of the coverage (CONF:1098-10120).
 - ii. This participantRole **SHOULD** contain zero or one [0..1] **addr** (CONF:1098-8925).
 1. The content of addr **SHALL** be a conformant US Realm Address (AD.US.FIELDDED) (2.16.840.1.113883.10.20.22.5.2) (CONF:1098-10483).
 - e. When the Subscriber is the patient, the participant element describing the subscriber **SHALL NOT** be present. This information will be recorded instead in the data elements used to record member information (CONF:1098-17139).
11. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1098-8939) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8940).
 - b. The target of a policy activity with act/entryRelationship/@typeCode="REFR" **SHALL** be an authorization activity (templateId 2.16.840.1.113883.10.20.1.19) **OR**

an act, with act@classCode="ACT"] and act[@moodCode="DEF"], representing a description of the coverage plan (CONF:1098-8942).

- c. A description of the coverage plan **SHALL** contain one or more act/id, to represent the plan identifier, and an act/text with the name of the plan (CONF:1098-8943).

Table 195: HL7FinanciallyResponsiblePartyType

Value Set: HL7FinanciallyResponsiblePartyType 2.16.840.1.113883.1.11.10416 RoleClass 2.16.840.1.113883.5.110 http://www.hl7.org/memonly/downloads/v3edition.cfm#V32008 Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
GUAR	RoleClass	2.16.840.1.113883.5.110	Guarantor
EMP	RoleClass	2.16.840.1.113883.5.110	Employee
INVSBJ	RoleClass	2.16.840.1.113883.5.110	Investigation Subject

Table 196: Coverage Role Type

Value Set: Coverage Role Type 2.16.840.1.113883.1.11.18877 A value set of HL7 role Codes for role recognized through the issuance of insurance coverage to an identified covered party who has this relationship with the policy holder such as the policy holder themselves (self), spouse, child, etc. Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/inrastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
FAMDEP	RoleCode	2.16.840.1.113883.5.111	Family dependent
FSTUD	RoleCode	2.16.840.1.113883.5.111	Full-time student
SELF	RoleCode	2.16.840.1.113883.5.111	Self
...			

Figure 93: Policy Activity (V2) Example

```
<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.61" extension="2014-06-09" />
  <id root="3e676a50-7aac-11db-9fe1-0800200c9a66" />
  <code code="81" displayName="self-pay"
        codeSystemName="Source of Payment Typology (PHDSC)"
        codeSystem="2.16.840.1.113883.3.221.5" />
  <statusCode code="completed" />
  <!-- Insurance company information -->
  <performer typeCode="PRF">
    <templateId root="2.16.840.1.113883.10.20.22.4.87" />
    <time>
      <low nullFlavor="UNK" />
      <high nullFlavor="UNK" />
    </time>
    <assignedEntity>
      <id root="2.16.840.1.113883.19" />
      <code code="PAYOR" codeSystem="2.16.840.1.113883.5.110" codeSystemName="HL7
RoleCode" />
      <addr use="WP">
        <streetAddressLine>123 Insurance Road</streetAddressLine>
        <city>Blue Bell</city>
        <state>MA</state>
        <postalCode>02368</postalCode>
        <country>US</country>
        <!-- US is "United States" from ISO 3166-1 Country Codes: 1.0.3166.1 -->
      </addr>
      <telecom value="tel:+(555)555-1515" use="WP" />
      <representedOrganization>
        <name>Good Health Insurance</name>
        <telecom value="tel:+(555)555-1515" use="WP" />
        <addr use="WP">
          <streetAddressLine>123 Insurance Road</streetAddressLine>
          <city>Blue Bell</city>
          <state>MA</state>
          <postalCode>02368</postalCode>
          <country>US</country>
        </addr>
      </representedOrganization>
    </assignedEntity>
  </performer>
  <!-- Guarantor information (the person responsible for the final bill) -->
  <performer typeCode="PRF">
    <templateId root="2.16.840.1.113883.10.20.22.4.88" />
    <time>
      <low nullFlavor="UNK" />
      <high nullFlavor="UNK" />
    </time>
    <assignedEntity>
      <id root="329fcdf0-7ab3-11db-9fe1-0800200c9a66" />
      <code code="GUAR" codeSystem="2.16.840.1.113883.5.111" codeSystemName="HL7
RoleCode" />
      <addr use="HP">
        <streetAddressLine>17 Daws Rd.</streetAddressLine>
        <city>Blue Bell</city>
        <state>MA</state>
```

```

        <postalCode>02368</postalCode>
        <country>US</country>
    </addr>
    <telecom value="tel:+(781)555-1212" use="HP" />
    <assignedPerson>
        <name>
            <prefix>Mr.</prefix>
            <given>Adam</given>
            <given>Frankie</given>
            <family>Everyman</family>
        </name>
    </assignedPerson>
</assignedEntity>
</performer>
<!-- Covered party -->
<participant typeCode="COV">
    <templateId root="2.16.840.1.113883.10.20.22.4.89.2" />
    <time>
        <low nullFlavor="UNK" />
        <high nullFlavor="UNK" />
    </time>
    <participantRole classCode="PAT">
        <!-- Health plan ID for patient. -->
        <id root="1.1.1.1.1.1.1.14" extension="1138345" />
        <code code="SELF" codeSystem="2.16.840.1.113883.5.111" />
        <addr use="HP">
            <streetAddressLine>17 Daws Rd.</streetAddressLine>
            <city>Blue Bell</city>
            <state>MA</state>
            <postalCode>02368</postalCode>
            <country>US</country>
        </addr>
        <playingEntity>
            <name>
                <!-- Name is needed if different than name on health plan. -->
                <prefix>Mr.</prefix>
                <given>Frank</given>
                <given>A.</given>
                <family>Everyman</family>
            </name>
        </playingEntity>
    </participantRole>
</participant>
<!-- Policy holder -->
<participant typeCode="HLD">
    <templateId root="2.16.840.1.113883.10.20.22.4.90.2" />
    <participantRole>
        <id extension="1138345" root="2.16.840.1.113883.19" />
        <addr use="HP">
            <streetAddressLine>17 Daws Rd.</streetAddressLine>
            <city>Blue Bell</city>
            <state>MA</state>
            <postalCode>02368</postalCode>
            <country>US</country>
        </addr>
    </participantRole>
</participant>

```

```

<entryRelationship typeCode="REFR">
  <act classCode="ACT" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.1.19" />
    . . .
  </act>
</entryRelationship>
</act>

```

3.41 Precondition for Substance Administration (V2)

[criterion: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09 (open)]

Table 197: Precondition for Substance Administration (V2) Contexts

Contained By:	Contains:
Medication Activity (V2) (optional) Immunization Activity (V2) (optional) Planned Medication Activity (V2) (optional) Planned Immunization Activity (optional)	

A criterion for administration can be used to record that the medication is to be administered only when the associated criteria are met.

Table 198: Precondition for Substance Administration (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
criterion (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09)					
templateId	1..1	SHALL		1098-7372	
@root	1..1	SHALL		1098-10517	2.16.840.1.113883.10.20.22.4.25
@extension	1..1	SHALL		1098-32603	2014-06-09
code	1..1	SHALL	CD	1098-32396	
@code	1..1	SHALL		1098-32397	ASSERTION
@codeSystem	1..1	SHALL		1098-32398	2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
value	1..1	SHALL	CD	1098-7369	2.16.840.1.113883.3.88.12.3221.7.4 (Problem)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7372) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.25" (CONF:1098-10517).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32603).
2. **SHALL** contain exactly one [1..1] **code** with **@xsi:type**="CD" (CONF:1098-32396).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:1098-32397).

- b. This code **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.5.4" (CodeSystem: ActCode
2.16.840.1.113883.5.4) (CONF:1098-32398).
3. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD", where the code **SHALL** be selected from ValueSet [Problem](#) 2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:1098-7369).

Figure 94: Precondition for Substance Administration (V2) Example

```
<criterion>
  <templateId root="2.16.840.1.113883.10.20.22.4.25"
    extension="2014-06-09" />
  <code code="ASSERTION"
    codeSystem="2.16.840.1.113883.5.4" />
  <value xsi:type="CD"
    code="56018004"
    codeSystem="2.16.840.1.113883.6.96"
    displayName="Wheezing" />
</criterion>
```

3.42 Pregnancy Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.15.3.8 (open)]

Table 199: Pregnancy Observation Contexts

Contained By:	Contains:
Social History Section (V2) (optional)	Estimated Date of Delivery
Patient Information Section (optional)	

This clinical statement represents current and/or prior pregnancy dates enabling investigators to determine if the subject of the case report was pregnant during the course of a condition.

Table 200: Pregnancy Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.8)					
@classCode	1..1	SHALL		81-451	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-452	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		81-16768	
@root	1..1	SHALL		81-16868	2.16.840.1.113883.10.20.15.3.8
code	1..1	SHALL		81-19153	
@code	1..1	SHALL		81-19154	ASSERTION
@codeSystem	1..1	SHALL		81-26505	2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		81-455	
@code	1..1	SHALL		81-19110	2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	0..1	SHOULD		81-2018	
value	1..1	SHALL	CD	81-457	
@code	1..1	SHALL		81-26460	2.16.840.1.113883.6.96 (SNOMED CT) = 77386006
entryRelationship	0..1	MAY		81-458	
@typeCode	1..1	SHALL		81-459	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		81-15584	Estimated Date of Delivery (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.1

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:81-451).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-452).
3. **SHALL** contain exactly one [1..1] templateId (CONF:81-16768) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.15.3.8" (CONF:81-16868).
4. **SHALL** contain exactly one [1..1] code (CONF:81-19153).
 - a. This code **SHALL** contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:81-19154).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: ActCode 2.16.840.1.113883.5.4) (CONF:81-26505).
5. **SHALL** contain exactly one [1..1] statusCode (CONF:81-455).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:81-19110).
6. **SHOULD** contain zero or one [0..1] effectiveTime (CONF:81-2018).
7. **SHALL** contain exactly one [1..1] value with @xsi:type="CD" (CONF:81-457).

- a. This value **SHALL** contain exactly one [1..1] @code="77386006" Pregnant (CodeSystem: SNOMED CT 2.16.840.1.113883.6.96) (CONF:81-26460).
8. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:81-458) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:81-459).
 - b. **SHALL** contain exactly one [1..1] Estimated Date of Delivery (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.1) (CONF:81-15584).

Figure 95: Pregnancy Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.15.3.8"/>
  <id extension="123456789" root="2.16.840.1.113883.19"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="20110410"/>
  </effectiveTime>
  <value xsi:type="CD" code="77386006"
    displayName="pregnant"
    codeSystem="2.16.840.1.113883.6.96"/>
  <entryRelationship typeCode="REFR">
    <templateId root="2.16.840.1.113883.10.20.15.3.1"/>
    . . .
  </entryRelationship>
</observation>
```

3.43 Priority Preference

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.143 (open)]

Table 201: Priority Preference Contexts

Contained By:	Contains:
Problem Observation (V2) (optional) Planned Act (V2) (optional) Planned Procedure (V2) (optional) Planned Observation (V2) (optional) Planned Medication Activity (V2) (optional) Planned Immunization Activity (optional)	Author Participation

This template represents priority preferences chosen by a patient or a care provider. Priority preferences are choices made by care providers or patients or both relative to options for care or treatment (including scheduling, care experience, and meeting of personal health goals), the sharing and disclosure of health information, and the prioritization of concerns and problems.

Table 202: Priority Preference Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143)					
@classCode	1..1	SHALL		1098-30949	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-30950	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-30951	
@root	1..1	SHALL		1098-30952	2.16.840.1.113883.10.20.22.4.143
id	1..*	SHALL		1098-30953	
code	1..1	SHALL		1098-30954	
@code	1..1	SHALL		1098-30955	225773000
@codeSystem	1..1	SHALL		1098-30956	2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
effectiveTime	0..1	SHOULD		1098-32327	
value	1..1	SHALL	CD	1098-30957	2.16.840.1.113883.11.20.9.60 (Priority Level)
author	0..*	SHOULD		1098-30958	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1098-30949).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1098-30950).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-30951) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.143" (CONF:1098-30952).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-30953).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-30954).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="225773000" Preference (CONF:1098-30955).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT 2.16.840.1.113883.6.96) (CONF:1098-30956).
6. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-32327).
7. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHALL** be selected from ValueSet [Priority Level](#) 2.16.840.1.113883.11.20.9.60 **STATIC** 2014-06-11 (CONF:1098-30957).
8. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-30958).

Table 203: Priority Level

Value Set: Priority Level 2.16.840.1.113883.11.20.9.60			
A value set of SNOMED-CT that contains concepts representing priority.			
Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
394849002	SNOMED CT	2.16.840.1.113883.6.96	High priority
394848005	SNOMED CT	2.16.840.1.113883.6.96	Normal priority
441808003	SNOMED CT	2.16.840.1.113883.6.96	Delayed priority

Figure 96: Priority Preference Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.143" />
  <id root="7d66f448-ba82-4291-a9da-9e5db5e58803" />
  <code code="225773000"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"
    displayName="preference" />
  <value xsi:type="CD"
    code="394849002"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED"
    displayName="High priority" />
  <!--
    Author Participation Template
    In this case, the author is the same as a participant already described in the
    header.
    However, the author could be a the record target (patient), a different provider -
    someone else in the header, or a new provider not elsewhere specified.
  -->
  <author>
    <templateId root="2.16.840.1.113883.10.20.22.4.119" />
    <time value="20130801" />
    <assignedAuthor>
      <!-- This id points back to a participant in the header -->
      <id root="20cf14fb-b65c-4c8c-a54d-b0cca834c18c" />
    </assignedAuthor>
  </author>
</observation>
```

3.44 Problem Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09
(open)]

Table 204: Problem Observation (V2) Contexts

Contained By:	Contains:
Hospital Discharge Diagnosis (V2) (required) Encounter Diagnosis (V2) (required)	Age Observation Author Participation Priority Preference Problem Status (DEPRECATED) Prognosis Observation

This template reflects a discrete observation about a patient's problem. Because it is a discrete observation, it will have a statusCode of "completed". The effectiveTime, also referred to as the “biologically relevant time” is the time at which the observation holds for the patient. For a provider seeing a patient in the clinic today, observing a history of heart attack that occurred five years ago, the effectiveTime is five years ago.

The effectiveTime of the Problem Observation is the definitive indication of whether or not the underlying condition is resolved. If the problem is known to be resolved, then an effectiveTime/high would be present. If the date of resolution is not known, then effectiveTime/high will be present with a nullFlavor of "UNK".

Table 205: Problem Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09)					
@classCode	1..1	SHALL		1098-9041	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-9042	2.16.840.1.113883.5.1001 (ActMood) = EVN
@negationInd	0..1	MAY		1098-10139	
templateId	1..1	SHALL		1098-14926	
@root	1..1	SHALL		1098-14927	2.16.840.1.113883.10.20.22.4.4
@extension	1..1	SHALL		1098-32508	2014-06-09
id	1..*	SHALL		1098-9043	
code	1..1	SHALL		1098-9045	2.16.840.1.113883.3.88.12.3221.7.2 (Problem Type)
statusCode	1..1	SHALL		1098-9049	
@code	1..1	SHALL		1098-19112	2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-9050	
low	1..1	SHALL		1098-15603	
high	0..1	MAY		1098-15604	
value	1..1	SHALL	CD	1098-9058	2.16.840.1.113883.3.88.12.3221.7.4 (Problem)
qualifier	0..*	MAY		1098-31870	
translation	0..*	MAY		1098-16749	
@code	0..1	MAY		1098-16750	2.16.840.1.113883.6.90 (ICD10CM)
@code	0..1	MAY		1098-31871	
author	0..*	SHOULD		1098-31147	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	0..1	MAY		1098-9059	
@typeCode	1..1	SHALL		1098-9060	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1098-9069	true
observation	1..1	SHALL		1098-15590	Age Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.31)
entryRelationship	0..1	MAY		1098-29951	
@typeCode	1..1	SHALL		1098-31531	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1098-29952	Prognosis Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.113)
entryRelationship	0..*	MAY		1098-31063	
@typeCode	1..1	SHALL		1098-31532	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1098-31064	Priority Preference (identifier:

					urn:oid:2.16.840.1.113883.10.20.22.4.143
entryRelationship	0..1	MAY		1098-9063	
@typeCode	1..1	SHALL		1098-9068	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1098-15591	Problem Status (DEPRECATED) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2014-06-09)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-9041).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-9042).

The negationInd is used to indicate the absence of the condition in observation/value. A negationInd of "true" coupled with an observation/value of SNOMED code 64572001 "Disease (disorder)" indicates that the patient has no known conditions.

3. **MAY** contain zero or one [0..1] **@negationInd** (CONF:1098-10139).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-14926) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.4" (CONF:1098-14927).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32508).
5. **SHALL** contain at least one [1..*] **id** (CONF:1098-9043).
6. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Problem Type](#) 2.16.840.1.113883.3.88.12.3221.7.2 **STATIC** 2014-09-02 (CONF:1098-9045).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-9049).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19112).

If the problem is known to be resolved, but the date of resolution is not known, then the high element **SHALL** be present, and the nullFlavor attribute **SHALL** be set to 'UNK'. Therefore, the existence of an high element within a problem does indicate that the problem has been resolved.

8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-9050).

The effectiveTime/low (a.k.a. "onset date") asserts when the condition became biologically active.

- a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1098-15603).

The effectiveTime/high (a.k.a. "resolution date") asserts when the condition became biologically resolved.

- b. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:1098-15604).
9. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHOULD** be selected from ValueSet [Problem](#) 2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:1098-9058).

The observation/value and all the qualifiers together (often referred to as a post-coordinated expression) make up one concept. Qualifiers constrain the meaning of the primary code, and

cannot negate it or change its meaning. Qualifiers can only be used according to well-defined rules of post-coordination and only if the underlying code system defines the use of such qualifiers or if there is a third code system that specifies how other code systems may be combined.

For example, SNOMED CT allows constructing concepts as a combination of multiple codes. SNOMED CT defines a concept "pneumonia (disorder)" (233604007) an attribute "finding site" (363698007) and another concept "left lower lobe of lung (body structure)" (41224006). SNOMED CT allows one to combine these codes in a code phrase, as shown in the sample XML.

- a. This value **MAY** contain zero or more [0..*] **qualifier** (CONF:1098-31870).
- b. This value **MAY** contain zero or more [0..*] **translation** (CONF:1098-16749) such that it
 - i. **MAY** contain zero or one [0..1] **@code** (CodeSystem: ICD10CM 2.16.840.1.113883.6.90 **STATIC**) (CONF:1098-16750).

A negationInd of "true" coupled with an observation/value/@code of SNOMED code 64572001 "Disease (disorder)" indicates that the patient has no known conditions.

- c. This value **MAY** contain zero or one [0..1] **@code** (CONF:1098-31871).
10. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31147).
 11. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-9059) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" Has subject (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-9060).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd**="true" True (CONF:1098-9069).
 - c. **SHALL** contain exactly one [1..1] [Age Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.31) (CONF:1098-15590).
 12. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-29951) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-31531).
 - b. **SHALL** contain exactly one [1..1] [Prognosis Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.113) (CONF:1098-29952).
 13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31063) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-31532).
 - b. **SHALL** contain exactly one [1..1] [Priority Preference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-31064).
 14. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-9063) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-9068).
 - b. **SHALL** contain exactly one [1..1] [Problem Status \(DEPRECATED\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2014-06-09) (CONF:1098-15591).

Figure 97: Problem Observation (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- ** Problem Observation (V2) ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
  <id root="ab1791b0-5c71-11db-b0de-0800200c9a66" />
  <code code="75323-6"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        displayName="Condition" />
  <!-- The statusCode reflects the status of the observation itself -->
  <statusCode code="completed" />
  <effectiveTime>
    <!-- The low value reflects the date of onset -->
    <!-- Based on patient symptoms, presumed onset is July 3, 2013 -->
    <low value="20130703" />
    <!-- The high value reflects when the problem was known to be resolved -->
    <!-- Based on signs and symptoms, appears to be resolved on Aug 14, 2013 -->
    <high value="20080814" />
  </effectiveTime>
  <value xsi:type="CD"
        code="233604007"
        codeSystem="2.16.840.1.113883.6.96"
        displayName="Pneumonia" />
  <author typeCode="AUT">
    <templateId root="2.16.840.1.113883.10.20.22.4.119" />
    <time value="200808141030-0800" />
    <assignedAuthor>
      <id extension="555555555" root="2.16.840.1.113883.4.6" />
      <code code="207QA0505X"
            displayName="Adult Medicine"
            codeSystem="2.16.840.1.113883.6.101"
            codeSystemName="Healthcare Provider Taxonomy (HIPAA)" />
    </assignedAuthor>
  </author>
</observation>
```

Figure 98: No Known Problems Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="true">
  <!-- Model of Meaning for No Problems -->
  <!-- This is more consistent with how we did no known allergies. -->
  <!-- The use of negationInd corresponds with the newer Observation.ValueNegationInd -->
  <!-- The negationInd = true negates the value element. -->
  <!-- problem observation template -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"
    extension="2014-06-09" />
  <id root="4adc1021-7b14-11db-9fe1-0800200c9a67" />
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
  <text>
    <reference value="#problems1" />
  </text>
  <statusCode code="completed" />
  <effectiveTime>
    <low value="20130607160506" />
  </effectiveTime>
  <!-- The time when this was biologically relevant, i.e., true for the patient. -->
  <!-- As a minimum time interval over which this is true, populate the effectiveTime/low
with the current time. -->
  <!-- It would be equally valid to have a longer range of time over which this statement
was represented as being true. -->
  <!-- As a maximum, you would never indicate an effectiveTime/high that was greater than
the current point in time. -->
  <!-- This idea assumes that the value element could come from the Problem value set, or--
>
  <!-- when negationInd was true, is could also come from the ProblemType value set (and
code would be ASSERTION). -->
  <value xsi:type="CD" code="55607006" displayName="Problem"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <originalText>
      <reference value="#problemType1" />
    </originalText>
  </value>
</observation>
```

Figure 99: Resolved Problem and Resolved Concern Example

```
<act classCode="ACT" moodCode="EVN">
  <!-- ** Problem concern act (V2) ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.3"
    extension="2014-06-09" />
  <id root="b5159d48-04aa-4927-b355-00d1dcb7158c" />
  <code code="CONC" codeSystem="2.16.840.1.113883.5.6" displayName="Concern" />
  <!-- The statusCode represents the need to continue tracking the problem -->
  <!-- This is no longer of ongoing concern to the provider -->
  <statusCode code="completed" />
  <effectiveTime>
    <!-- The low value represents when the problem was first recorded in the patient's
  chart -->
    <!-- Concern was documented on Mar 10, 1998 -->
    <low value="199803101030-0800" />
    <!-- The high value reflects when there was no longer a need to track the problem -->
    <!-- Concern was closed on May 4, 1998 -->
    <high value="199805041145-0800" />
  </effectiveTime>
  <author typeCode="AUT">
    <templateId root="2.16.840.1.113883.10.20.22.4.119" />
    <!-- Same as Concern effectiveTime/low -->
    <time value="199803161030-0800" />
    <assignedAuthor>
      <id extension="555555555" root="2.16.840.1.113883.4.6" />
      <code code="207QA0505X"
        displayName="Adult Medicine"
        codeSystem="2.16.840.1.113883.6.101"
        codeSystemName="Healthcare Provider Taxonomy (HIPAA)" />
    </assignedAuthor>
  </author>
  <entryRelationship typeCode="SUBJ">
    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Problem observation (V2) ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"
        extension="2014-06-09" />
      <id root="10506b4d-c30a-4220-8bec-97bff9568fd1" />
      <code code="75323-6"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        displayName="Condition" />
      <!-- The statusCode reflects the status of the observation itself -->
      <statusCode code="completed" />
      <effectiveTime>
        <!-- The low value reflects the date of onset -->
        <!-- Based on patient symptoms, presumed onset is Mar 10, 1998 -->
        <low value="19980310" />
        <!-- The high value reflects when the problem was known to be resolved -->
        <high value="19980316" />
      </effectiveTime>
      <value xsi:type="CD"
        code="233604007"
        codeSystem="2.16.840.1.113883.6.96"
        displayName="Pneumonia">
        <qualifier>
          <name code="363698007" displayName="Finding site" />
        </qualifier>
      </value>
    </observation>
  </entryRelationship>
</act>
```



```

        <value code="41224006" displayName="Left lower lobe of lung" />
      </qualifier>
    </value>
    <author typeCode="AUT">
      <templateId root="2.16.840.1.113883.10.20.22.4.119" />
      <time value="199803161030-0800" />
      <assignedAuthor>
        <id extension="555555555" root="2.16.840.1.113883.4.6" />
        <code code="207QA0505X"
          displayName="Adult Medicine"
          codeSystem="2.16.840.1.113883.6.101"
          codeSystemName="Healthcare Provider Taxonomy (HIPAA)" />
      </assignedAuthor>
    </author>
  </observation>
</entryRelationship>
</act>

```

Figure 100: Problem with Qualifiers Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- ** Problem observation (V2) ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"
    extension="2014-06-09" />
  <id root="10506b4d-c30a-4220-8bec-97bff9568fd1" />
  <code code="75323-6"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Condition" />
  <!-- The statusCode reflects the status of the observation itself -->
  <statusCode code="completed" />
  <effectiveTime>
    <!-- The low value reflects the date of onset -->
    <!-- Based on patient symptoms, presumed onset is Mar 10, 1998 -->
    <low value="19980310" />
    <!-- The high value reflects when the problem was known to be resolved -->
    <high value="19980316" />
  </effectiveTime>
  <value xsi:type="CD"
    code="233604007"
    codeSystem="2.16.840.1.113883.6.96"
    displayName="Pneumonia">
    <qualifier>
      <name code="363698007" displayName="Finding site" />
      <value code="41224006" displayName="Left lower lobe of lung" />
    </qualifier>
  </value>
  <author typeCode="AUT">
    <templateId root="2.16.840.1.113883.10.20.22.4.119" />
    <time value="199803161030-0800" />
    <assignedAuthor>
      <id extension="555555555" root="2.16.840.1.113883.4.6" />
      <code code="207QA0505X"
        displayName="Adult Medicine"
        codeSystem="2.16.840.1.113883.6.101"
        codeSystemName="Healthcare Provider Taxonomy (HIPAA)" />
    </assignedAuthor>
  </author>
</observation>
```

3.44.1 Adverse Effect of Medical Treatment

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.14 (open)]

Table 206: Adverse Effect of Medical Treatment Contexts

Contained By:	Contains:
Diagnoses Section (optional)	Cause of Injury, Poisoning, or Adverse Effect

This template represents that the visit is related to an adverse effect of medical treatment. If it is unknown whether this visit is related to adverse effect of medical treatment use nullFlavor="UNK".

Table 207: Adverse Effect of Medical Treatment Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.14)					
@classCode	1..1	SHALL		1106-487	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-488	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-489	
@root	1..1	SHALL		1106-490	2.16.840.1.113883.10.20.34.3.14
code	1..1	SHALL		1106-491	
@code	1..1	SHALL		1106-492	ASSERTION
@codeSystem	1..1	SHALL		1106-493	2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
value	1..1	SHALL	CD	1106-494	
@nullFlavor	0..1	MAY		1106-703	UNK
@code	0..1	SHOULD		1106-495	269691005
@codeSystem	0..1	SHOULD		1106-496	2.16.840.1.113883.6.96
entryRelationship	0..1	MAY		1106-640	
@typeCode	1..1	SHALL		1106-641	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = CAUS
observation	1..1	SHALL		1106-642	Cause of Injury, Poisoning, or Adverse Effect (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.27)

1. Conforms to [Problem Observation \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-487).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-488).
4. **SHALL** contain exactly one [1..1] templateId (CONF:1106-489) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.34.3.14" (CONF:1106-490).
5. **SHALL** contain exactly one [1..1] code (CONF:1106-491).
 - a. This code **SHALL** contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:1106-492).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: ActCode 2.16.840.1.113883.5.4) (CONF:1106-493).
6. **SHALL** contain exactly one [1..1] value with @xsi:type="CD" (CONF:1106-494).
 - a. This value **MAY** contain zero or one [0..1] @nullFlavor="UNK" (CONF:1106-703).

- b. This value **SHOULD** contain zero or one [0..1] @code="269691005" Medical accidents to patients during surgical and medical care (CONF:1106-495).
 - c. This value **SHOULD** contain zero or one [0..1]
@codeSystem="2.16.840.1.113883.6.96" (CONF:1106-496).
- 7. **MAY** contain zero or one [0..1] entryRelationship (CONF:1106-640).
 - a. The entryRelationship, if present, **SHALL** contain exactly one [1..1]
@typeCode="CAUS" (CodeSystem: HL7ActRelationshipType
2.16.840.1.113883.5.1002) (CONF:1106-641).
 - b. The entryRelationship, if present, **SHALL** contain exactly one [1..1] Cause of Injury, Poisoning, or Adverse Effect (identifier:
urn:oid:2.16.840.1.113883.10.20.34.3.27) (CONF:1106-642).

Figure 101: Adverse Effect of Medical Treatment Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- C-CDA R2 Problem Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
  <!-- Adverse Effect of Medical Treatment -->
  <templateId root="2.16.840.1.113883.10.20.34.3.14" />
  <id root="80d0febf-016e-45b5-a531-291dbc2b2d68" />
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
  <statusCode code="completed" />
  <effectiveTime>
    <low value="20130815" />
  </effectiveTime>
  <value xsi:type="CD" code="269691005" codeSystem="2.16.840.1.113883.6.96"
    displayName="Medical accidents to patients during surgical and medical care" />
  <!-- Cause of Injury, Poisoning, or Adverse Effect -->
  <entryRelationship typeCode="CAUS">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.34.3.27" />
      ...
    </observation>
  </entryRelationship>
</observation>
```

3.44.2 Co-morbid Condition Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.4 (open)]

Table 208: Co-morbid Condition Observation Contexts

Contained By:	Contains:
Diagnoses Section (optional)	

This template represents a co-morbid condition.

Table 209: Co-morbid Condition Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.4)					
@classCode	1..1	SHALL		1106-326	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-327	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-328	
@root	1..1	SHALL		1106-329	2.16.840.1.113883.10.20.34.3.4
code	1..1	SHALL		1106-402	
@code	1..1	SHALL		1106-403	75618-9
@codeSystem	1..1	SHALL		1106-404	2.16.840.1.113883.6.1
value	1..1	SHALL		1106-330	2.16.840.1.113883.3.88.12.3221.7.4 (Problem)

1. Conforms to [Problem Observation \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-326).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-327).
4. **SHALL** contain exactly one [1..1] templateId (CONF:1106-328) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.34.3.4" (CONF:1106-329).
5. **SHALL** contain exactly one [1..1] code (CONF:1106-402).
 - a. This code **SHALL** contain exactly one [1..1] @code="75618-9" Comorbid condition (CONF:1106-403).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CONF:1106-404).
6. **SHALL** contain exactly one [1..1] value, which **SHALL** be selected from ValueSet [Problem](#) 2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:1106-330).

Figure 102: Co-morbid Condition Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- Conforms to C-CDA Problem Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
  <!-- Comorbid Condition Observation -->
  <templateId root="2.16.840.1.113883.10.20.34.3.4" />
  <id root="b5d36d7f-37ec-48b9-a914-0706dea2a304" />
  <code code="75618-9" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    displayName="Comorbid condition" />
  <!-- The statusCode reflects the status of the observation itself -->
  <statusCode code="completed" />
  <effectiveTime>
    <!-- The low value reflects the date of onset -->
    <low value="20130803" />
  </effectiveTime>
  <value xsi:type="CD" code="90688005" codeSystemName="SNOMED CT"
    codeSystem="2.16.840.1.113883.6.96" displayName="Chronic renal failure" />
</observation>
```

3.44.3 Diagnosis Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.1 (open)]

Table 210: Diagnosis Observation Contexts

Contained By:	Contains:
Diagnoses Section (optional)	

This template represents a diagnosis. It is based on the Problem Observation (V2) template and constrains the code to "Diagnosis" and the statusCode to "Active".

Table 211: Diagnosis Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.1)					
@classCode	1..1	SHALL		1106-268	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-269	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-270	
@root	1..1	SHALL		1106-271	2.16.840.1.113883.10.20.34.3.1
code	1..1	SHALL		1106-272	
@code	1..1	SHALL		1106-273	282291009
@codeSystem	1..1	SHALL		1106-274	2.16.840.1.113883.6.96

1. Conforms to [Problem Observation \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09).

2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-268).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-269).
4. **SHALL** contain exactly one [1..1] templateId (CONF:1106-270) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.34.3.1" (CONF:1106-271).
5. **SHALL** contain exactly one [1..1] code (CONF:1106-272).
 - a. This code **SHALL** contain exactly one [1..1] @code="282291009" Diagnosis (CONF:1106-273).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CONF:1106-274).

Figure 103: Diagnosis Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- Conforms to C-CDA Problem Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
  <!-- Diagnosis Observation -->
  <templateId root="2.16.840.1.113883.10.20.34.3.1" />
  <id root="0d746213-e380-4ced-a835-bda0369e4c8c" />
  <code code="282291009" codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT" displayName="Diagnosis" />
  <!-- The statusCode reflects the status of the observation itself -->
  <statusCode code="completed" />
  <effectiveTime>
    <!-- The low value reflects the date of onset -->
    <low value="20130703" />
  </effectiveTime>
  <value xsi:type="CD" code="49008000" codeSystemName="SNOMED CT"
    codeSystem="2.16.840.1.113883.6.96" displayName="Kidney malrotation" />
</observation>
```

3.44.4 Asthma Diagnosis Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.5 (open)]

Table 212: Asthma Diagnosis Observation Contexts

Contained By:	Contains:
Diagnoses Section (optional)	Condition Control Observation Severity Observation (V2)

This template represents a diagnosis of Asthma.

Table 213: Asthma Diagnosis Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.5)					
@classCode	1..1	SHALL		1106-334	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-335	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-443	
@root	1..1	SHALL		1106-444	2.16.840.1.113883.10.20.34.3.5
value	1..1	SHALL	CD	1106-336	2.16.840.1.114222.4.11.7432 (Asthma (NCHS))
entryRelationship	0..1	SHOULD		1106-394	
@typeCode	1..1	SHALL		1106-395	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1106-396	true
observation	1..1	SHALL		1106-397	Condition Control Observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.21)
entryRelationship	1..1	SHALL		1106-515	
@typeCode	1..1	SHALL		1106-516	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
observation	1..1	SHALL		1106-517	Severity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09)

1. Conforms to [Diagnosis Observation](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.1).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-334).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-335).
4. **SHALL** contain exactly one [1..1] templateId (CONF:1106-443) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.34.3.5" (CONF:1106-444).
5. **SHALL** contain exactly one [1..1] value with @xsi:type="CD", where the code **SHALL** be selected from ValueSet [Asthma \(NCHS\)](#) 2.16.840.1.114222.4.11.7432 **DYNAMIC** (CONF:1106-336).
6. **SHOULD** contain zero or one [0..1] entryRelationship (CONF:1106-394) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="SUBJ" Subject (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1106-395).
 - b. **SHALL** contain exactly one [1..1] @inversionInd="true" True (CONF:1106-396).
 - c. **SHALL** contain exactly one [1..1] [Condition Control Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.21) (CONF:1106-397).
7. **SHALL** contain exactly one [1..1] entryRelationship (CONF:1106-515) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="SUBJ" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1106-516).

- b. **SHALL** contain exactly one [1..1] [Severity Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09) (CONF:1106-517).

Table 214: Asthma (NCHS)

Value Set: Asthma (NCHS) 2.16.840.1.114222.4.11.7432			
All SNOMED CT concepts that are children of the SNOMED CT concept 'Asthma', including the SNOMED CT concept 'Asthma'.			
Value Set Source: https://phinivads.cdc.gov/vads/SearchHome.action			
Code	Code System	Code System OID	Print Name
195967001	SNOMED CT	2.16.840.1.113883.6.96	Asthma
304527002	SNOMED CT	2.16.840.1.113883.6.96	Acute asthma
389145006	SNOMED CT	2.16.840.1.113883.6.96	Allergic asthma
233678006	SNOMED CT	2.16.840.1.113883.6.96	Childhood asthma
409663006	SNOMED CT	2.16.840.1.113883.6.96	Cough variant asthma
31387002	SNOMED CT	2.16.840.1.113883.6.96	Exercise-induced asthma
...			

Figure 104: Asthma Diagnosis Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- C-CDA R2 Problem Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
  <!-- Asthma Diagnosis Observation -->
  <templateId root="2.16.840.1.113883.10.20.34.3.5" />
  <id root="ac01c12d-8947-4046-845b-8c8ea220f861" />
  <code code="282291009" codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT" displayName="Diagnosis" />
  <!-- The statusCode reflects the status of the observation itself -->
  <statusCode code="completed" />
  <effectiveTime>
    <!-- The low value reflects the date of onset -->
    <low value="20130703" />
  </effectiveTime>
  <!-- Form Element: Asthma -->
  <value xsi:type="CD" code="195967001" codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT" displayName="Asthma" />
  <!-- This entryRelationship represents the asthma control finding -->
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Condition Control Observation -->
      <templateId root="2.16.840.1.113883.10.20.34.3.21" />
      ...
    </observation>
  </entryRelationship>
  <!-- This entryRelationship represents the severity -->
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <observation classCode="OBS" moodCode="EVN">
      <!-- C-CDA R2 Severity Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.8" extension="2014-06-09" />
      ...
    </observation>
  </entryRelationship>
</observation>
```

3.44.5 Injury or Poisoning Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.17 (open)]

Table 215: Injury or Poisoning Observation Contexts

Contained By:	Contains:
Diagnoses Section (optional)	Cause of Injury, Poisoning, or Adverse Effect

This template represents whether this visit is related to an injury or poisoning. The code is constrained to "Clinical Finding" and the value is constrained to the Injury or Poisoning value set. If it is unknown whether this visit is related to an injury or poisoning use nullFlavor="UNK".

Table 216: Injury or Poisoning Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.17)					
@classCode	1..1	SHALL		1106-209	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-210	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-211	
@root	1..1	SHALL		1106-212	2.16.840.1.113883.10.20.34.3.17
code	1..1	SHALL		1106-445	
@code	1..1	SHALL		1106-446	75321-0
@codeSystem	1..1	SHALL		1106-447	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
value	1..1	SHALL	CD	1106-218	2.16.840.1.114222.4.11.7403 (Injury or Poisoning (NCHS))
@nullFlavor	0..1	MAY		1106-702	UNK
entryRelationship	0..1	MAY		1106-637	
@typeCode	1..1	SHALL		1106-638	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = CAUS
observation	1..1	SHALL		1106-639	Cause of Injury, Poisoning, or Adverse Effect (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.27)

1. Conforms to [Problem Observation \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-209).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-210).
4. **SHALL** contain exactly one [1..1] templateId (CONF:1106-211) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.34.3.17" (CONF:1106-212).
5. **SHALL** contain exactly one [1..1] code (CONF:1106-445).
 - a. This code **SHALL** contain exactly one [1..1] @code="75321-0" Clinical finding (CONF:1106-446).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1106-447).
6. **SHALL** contain exactly one [1..1] value with @xsi:type="CD", where the code **SHOULD** be selected from ValueSet [Injury or Poisoning \(NCHS\)](#) 2.16.840.1.114222.4.11.7403 **DYNAMIC** (CONF:1106-218).
 - a. This value **MAY** contain zero or one [0..1] @nullFlavor="UNK" (CONF:1106-702).
7. **MAY** contain zero or one [0..1] entryRelationship (CONF:1106-637).

- a. The entryRelationship, if present, **SHALL** contain exactly one [1..1] `@typeCode="CAUS"` (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1106-638).
- b. The entryRelationship, if present, **SHALL** contain exactly one [1..1] Cause of Injury, Poisoning, or Adverse Effect (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.27) (CONF:1106-639).

Table 217: Injury or Poisoning (NCHS)

Value Set: Injury or Poisoning (NCHS) 2.16.840.1.114222.4.11.7403			
All SNOMED CT concepts that are children of the SNOMED CT concept 'traumatic AND/OR non-traumatic injury', including the SNOMED CT concept 'traumatic AND/OR non-traumatic injury' plus all SNOMED CT concepts that are children of the SNOMED CT concept 'poisoning', including the SNOMED CT concept 'poisoning'.			
Value Set Source: https://phinivads.cdc.gov/vads/SearchHome.action			
Code	Code System	Code System OID	Print Name
72431002	SNOMED CT	2.16.840.1.113883.6.96	Accidental Poisoning
410061008	SNOMED CT	2.16.840.1.113883.6.96	Intentional Poisoning
269736006	SNOMED CT	2.16.840.1.113883.6.96	Poisoning of undetermined intent
242056005	SNOMED CT	2.16.840.1.113883.6.96	Accidental injury
420025004	SNOMED CT	2.16.840.1.113883.6.96	Non-accidental injury
269735005	SNOMED CT	2.16.840.1.113883.6.96	Injury undetermined whether accidental or purposely inflicted
...			

Figure 105: Injury or Poisoning Observation Example

<pre> <observation classCode="OBS" moodCode="EVN"> <!-- C-CDA R2 Problem Observation (V2) --> <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" /> <!-- Injury or Poisoning Observation --> <templateId root="2.16.840.1.113883.10.20.34.3.17" /> <id root="0beae416-311b-413b-b341-5c642bbb0523" /> <code code="75321-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Clinical finding" /> <statusCode code="completed" /> <effectiveTime> <low value="20130815" /> </effectiveTime> <value xsi:type="CD" code="410061008" codeSystem="2.16.840.1.113883.6.96" displayName="Intentional poisoning" /> </observation> </pre>

3.44.6 Primary Diagnosis Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.6 (open)]

Table 218: Primary Diagnosis Observation Contexts

Contained By:	Contains:
Diagnoses Section (required)	

This template represents the primary diagnosis.

Table 219: Primary Diagnosis Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.6)					
@classCode	1..1	SHALL		1106-339	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-340	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-341	
@root	1..1	SHALL		1106-342	2.16.840.1.113883.10.20.34.3.6
code	1..1	SHALL		1106-518	
@code	1..1	SHALL		1106-519	52534-5
@codeSystem	1..1	SHALL		1106-520	2.16.840.1.113883.6.1

1. Conforms to [Problem Observation \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-339).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-340).
4. **SHALL** contain exactly one [1..1] templateId (CONF:1106-341) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.34.3.6" (CONF:1106-342).
5. **SHALL** contain exactly one [1..1] code (CONF:1106-518).
 - a. This code **SHALL** contain exactly one [1..1] @code="52534-5" Principal Diagnosis (CONF:1106-519).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CONF:1106-520).

Figure 106: Primary Diagnosis Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- C-CDA R2 Problem Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
  <!-- Primary Diagnosis Observation -->
  <templateId root="2.16.840.1.113883.10.20.34.3.6" />
  <id root="7d49bb4a-4764-4126-82dd-dcfe7901f701" />
  <code code="52534-5" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    displayName="Principal Diagnosis" />
  <!-- The statusCode reflects the status of the observation itself -->
  <statusCode code="completed" />
  <effectiveTime>
    <!-- The low value reflects the date of onset -->
    <low value="20130703" />
  </effectiveTime>
  <value xsi:type="CD" code="55822004" codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT" displayName="Hyperlipidemia" />
</observation>
```

3.45 Problem Status (DEPRECATED) - Deprecated

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2014-06-09
(open)]

Table 220: Problem Status (DEPRECATED) Contexts

Contained By:	Contains:
Problem Observation (V2) (optional)	

The Problem Status records whether the indicated problem is active, inactive, or resolved.

THIS TEMPLATE HAS BEEN DEPRECATED IN C-CDA R2 AND MAY BE DELETED FROM A FUTURE RELEASE OF THIS IMPLEMENTATION GUIDE. USE OF THIS TEMPLATE IS NOT RECOMMENDED.

Reason for deprecation: Per the explanation in Volume 1, Section 3.2 "Determining a Clinical Statement's Status", the status of a problem is determined based on attributes of the Problem Observation.

Table 221: Problem Status (DEPRECATED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2014-06-09)					
@classCode	1..1	SHALL		1098-7357	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-7358	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-7359	
@root	1..1	SHALL		1098-10518	2.16.840.1.113883.10.20.22.4.6
@extension	1..1	SHALL		1098-32581	2014-06-09
code	1..1	SHALL		1098-19162	
@code	1..1	SHALL		1098-19163	2.16.840.1.113883.6.1 (LOINC) = 33999-4
statusCode	1..1	SHALL		1098-7364	
@code	1..1	SHALL		1098-19113	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1098-7365	2.16.840.1.113883.3.88.12.80.68 (Problem Status)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7357).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7358).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7359) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.6" (CONF:1098-10518).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32581).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1098-19162).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="33999-4" Status (CodeSystem: LOINC 2.16.840.1.113883.6.1 **STATIC**) (CONF:1098-19163).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7364).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19113).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHALL** be selected from ValueSet [Problem Status](#) 2.16.840.1.113883.3.88.12.80.68 **DYNAMIC** (CONF:1098-7365).

Table 222: Problem Status

Value Set: Problem Status 2.16.840.1.113883.3.88.12.80.68 A value set of SNOMED-CT codes reflecting state of existence. Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
55561003	SNOMED CT	2.16.840.1.113883.6.96	Active
73425007	SNOMED CT	2.16.840.1.113883.6.96	Inactive
413322009	SNOMED CT	2.16.840.1.113883.6.96	Resolved

3.46 Procedure Activity Act (V2)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.12:2014-06-09 (open)]

Table 223: Procedure Activity Act (V2) Contexts

Contained By:	Contains:
	Author Participation Indication (V2) Instruction (V2) Medication Activity (V2) Service Delivery Location

This template represents any act that cannot be classified as an observation or procedure according to the HL7 RIM. Examples of these acts are a dressing change, teaching or feeding a patient, or providing comfort measures.

The common notion of "procedure" is broader than that specified by the HL7 Version 3 Reference Information Model (RIM). Procedure templates can be represented with various RIM classes: act (e.g., dressing change), observation (e.g., EEG), procedure (e.g., splenectomy).

Table 224: Procedure Activity Act (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.12:2014-06-09)					
@classCode	1..1	SHALL		1098-8289	2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-8290	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-8291	
@root	1..1	SHALL		1098-10519	2.16.840.1.113883.10.20.22.4.12
@extension	1..1	SHALL		1098-32505	2014-06-09
id	1..*	SHALL		1098-8292	
code	1..1	SHALL		1098-8293	
originalText	0..1	SHOULD		1098-19186	
reference	0..1	MAY		1098-19187	
@value	0..1	MAY		1098-19188	
statusCode	1..1	SHALL		1098-8298	
@code	1..1	SHALL		1098-32364	2.16.840.1.113883.11.20.9.22 (ProcedureAct statusCode)
effectiveTime	1..1	SHALL		1098-8299	
priorityCode	0..1	MAY		1098-8300	2.16.840.1.113883.1.11.16866 (Act Priority)
performer	0..*	SHOULD		1098-8301	
assignedEntity	1..1	SHALL		1098-8302	
id	1..1	SHALL		1098-8303	
addr	1..1	SHALL		1098-8304	
telecom	1..*	SHALL		1098-8305	
represented Organization	0..1	SHOULD		1098-8306	
id	0..*	SHOULD		1098-8307	
name	0..*	MAY		1098-8308	
telecom	1..*	SHALL		1098-8310	
addr	1..*	SHALL		1098-8309	
author	1..*	SHOULD		1098-32477	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
participant	0..*	MAY		1098-8311	
@typeCode	1..1	SHALL		1098-8312	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = LOC
participantRole	1..1	SHALL		1098-15599	Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32)
entryRelationship	0..*	MAY		1098-8314	
@typeCode	1..1	SHALL		1098-8315	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
@inversionInd	1..1	SHALL		1098-8316	true
encounter	1..1	SHALL		1098-8317	

@classCode	1..1	SHALL		1098-8318	2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1098-8319	2.16.840.1.113883.5.1001 (ActMood) = EVN
id	1..1	SHALL		1098-8320	
entryRelationship	0..1	MAY		1098-8322	
@typeCode	1..1	SHALL		1098-8323	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1098-8324	true
act	1..1	SHALL		1098-31396	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09)
entryRelationship	0..*	MAY		1098-8326	
@typeCode	1..1	SHALL		1098-8327	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-15601	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09)
entryRelationship	0..*	MAY		1098-8329	
@typeCode	1..1	SHALL		1098-8330	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
substanceAdministration	1..1	SHALL		1098-15602	Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09)

1. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8289).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-8290).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-8291) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.12" (CONF:1098-10519).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-06-09" (CONF:1098-32505).
4. **SHALL** contain at least one [1..*] id (CONF:1098-8292).
5. **SHALL** contain exactly one [1..1] code (CONF:1098-8293).
 - a. This code **SHOULD** contain zero or one [0..1] originalText (CONF:1098-19186).
 - i. The originalText, if present, **MAY** contain zero or one [0..1] reference (CONF:1098-19187).
 1. The reference, if present, **MAY** contain zero or one [0..1] @value (CONF:1098-19188).
 - a. This reference/@value **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1098-19189).
 - b. This @code **SHOULD** be selected from LOINC (CodeSystem: 2.16.840.1.113883.6.1) or SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96), and **MAY** be selected from

CPT-4 (CodeSystem: 2.16.840.1.113883.6.12) or ICD10 PCS (CodeSystem: 2.16.840.1.113883.6.4) or CDT-2 (Code System: 2.16.840.1.113883.6.13) (CONF:1098-19190).

6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-8298).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [ProcedureAct statusCode](#) 2.16.840.1.113883.11.20.9.22 **STATIC** 2014-04-23 (CONF:1098-32364).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-8299).
8. **MAY** contain zero or one [0..1] **priorityCode**, which **SHALL** be selected from ValueSet [Act Priority](#) 2.16.840.1.113883.1.11.16866 **DYNAMIC** (CONF:1098-8300).
9. **SHOULD** contain zero or more [0..*] **performer** (CONF:1098-8301).
 - a. The performer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-8302).
 - i. This **assignedEntity** **SHALL** contain exactly one [1..1] **id** (CONF:1098-8303).
 - ii. This **assignedEntity** **SHALL** contain exactly one [1..1] **addr** (CONF:1098-8304).
 - iii. This **assignedEntity** **SHALL** contain at least one [1..*] **telecom** (CONF:1098-8305).
 - iv. This **assignedEntity** **SHOULD** contain zero or one [0..1] **representedOrganization** (CONF:1098-8306).
 1. The **representedOrganization**, if present, **SHOULD** contain zero or more [0..*] **id** (CONF:1098-8307).
 2. The **representedOrganization**, if present, **MAY** contain zero or more [0..*] **name** (CONF:1098-8308).
 3. The **representedOrganization**, if present, **SHALL** contain at least one [1..*] **telecom** (CONF:1098-8310).
 4. The **representedOrganization**, if present, **SHALL** contain at least one [1..*] **addr** (CONF:1098-8309).
10. **SHOULD** contain at least one [1..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32477).
11. **MAY** contain zero or more [0..*] **participant** (CONF:1098-8311) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8312).
 - b. **SHALL** contain exactly one [1..1] [Service Delivery Location](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) (CONF:1098-15599).
12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-8314) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has Component (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8315).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** true (CONF:1098-8316).
 - c. **SHALL** contain exactly one [1..1] **encounter** (CONF:1098-8317).

- i. This encounter **SHALL** contain exactly one [1..1] **@classCode="ENC"** Encounter (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8318).
 - ii. This encounter **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-8319).
 - iii. This encounter **SHALL** contain exactly one [1..1] **id** (CONF:1098-8320).
 - 1. Set the encounter ID to the ID of an encounter in another section to signify they are the same encounter (CONF:1098-16849).
- 13. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-8322) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has Subject (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8323).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** true (CONF:1098-8324).
 - c. **SHALL** contain exactly one [1..1] **Instruction (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-31396).
- 14. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-8326) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8327).
 - b. **SHALL** contain exactly one [1..1] **Indication (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-15601).
- 15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-8329) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has Component (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8330).
 - b. **SHALL** contain exactly one [1..1] **Medication Activity (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09) (CONF:1098-15602).

Table 225: Act Priority

Value Set: Act Priority 2.16.840.1.113883.1.11.16866			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
A	ActPriority	2.16.840.1.113883.5.7	ASAP
CR	ActPriority	2.16.840.1.113883.5.7	Callback results
CS	ActPriority	2.16.840.1.113883.5.7	Callback for scheduling
CSP	ActPriority	2.16.840.1.113883.5.7	Callback placer for scheduling
CSR	ActPriority	2.16.840.1.113883.5.7	Contact recipient for scheduling
EL	ActPriority	2.16.840.1.113883.5.7	Elective
EM	ActPriority	2.16.840.1.113883.5.7	Emergency
P	ActPriority	2.16.840.1.113883.5.7	Preoperative
PRN	ActPriority	2.16.840.1.113883.5.7	As needed
R	ActPriority	2.16.840.1.113883.5.7	Routine
RR	ActPriority	2.16.840.1.113883.5.7	Rush reporting
S	ActPriority	2.16.840.1.113883.5.7	Stat
T	ActPriority	2.16.840.1.113883.5.7	Timing critical
UD	ActPriority	2.16.840.1.113883.5.7	Use as directed
UR	ActPriority	2.16.840.1.113883.5.7	Urgent

Table 226: ProcedureAct statusCode

Value Set: ProcedureAct statusCode 2.16.840.1.113883.11.20.9.22			
Code System: ActStatus 2.16.840.1.113883.5.14			
A ValueSet of HL7 actStatus codes for use with a procedure activity			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
completed	ActStatus	2.16.840.1.113883.5.14	Completed
active	ActStatus	2.16.840.1.113883.5.14	Active
aborted	ActStatus	2.16.840.1.113883.5.14	Aborted
cancelled	ActStatus	2.16.840.1.113883.5.14	Cancelled

Figure 107: Procedure Activity Act Example

```

<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.12" extension="2014-06-09" />
  <id root="1.2.3.4.5.6.7.8" extension="1234567" />
  <code code="274025005" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"
displayName="Colonic polypectomy">
    <originalText>
      <reference value="#Proc1" />
    </originalText>
  </code>
  <statusCode code="completed" />
  <effectiveTime value="20110203" />
  <priorityCode code="CR" codeSystem="2.16.840.1.113883.5.7" codeSystemName="ActPriority"
displayName="Callback results" />
  <performer>
    <assignedEntity>
      <id root="2.16.840.1.113883.19" extension="1234" />
      <addr>
        <streetAddressLine>1001 Village Avenue</streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
      <telecom use="WP" value="tel: +1(555)-555-5000" />
      <representedOrganization>
        <id root="2.16.840.1.113883.19.5" />
        <name>Community Health and Hospitals</name>
        <telecom use="WP" value="tel:+1(555)-555-5000" />
        <addr>
          <streetAddressLine>1001 Village Avenue</streetAddressLine>
          <city>Portland</city>
          <state>OR</state>
          <postalCode>99123</postalCode>
          <country>US</country>
        </addr>
      </representedOrganization>
    </assignedEntity>
  </performer>
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <templateId root="2.16.840.1.113883.10.20.22.4.32" />
      . . .
    </participantRole>
  </participant>
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09" />
      . . .
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <act classCode="ACT" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.20" extension="2014-06-09" />
      . . .
    </act>
  </entryRelationship>
</act>

```

```

</entryRelationship>
</act>

```

3.46.1 Provided Service Act

[act: identifier urn:oid:2.16.840.1.113883.10.20.34.3.20 (open)]

Table 227: Provided Service Act Contexts

Contained By:	Contains:
Services and Procedures Section (optional)	

This template represents a service activity that has been provided. Examples of service acts include non-medication treatments, such as physical therapy, home health care, feeding a patient, medical nutrition therapy, other tests and procedures (except excision of tissue), as well as health education or counseling (e.g., nutrition counseling). To represent the provided service act, the moodCode value is constrained to "EVN" and the statusCode value is constrained to "completed".

Table 228: Provided Service Act Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.20)					
@classCode	1..1	SHALL		1106-227	2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1106-228	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-229	
@root	1..1	SHALL		1106-230	2.16.840.1.113883.10.20.34.3.20
code	1..1	SHALL		1106-231	
@code	0..1	SHOULD		1106-358	
translation	0..*	MAY		1106-359	
@code	1..1	SHALL		1106-375	2.16.840.1.113883.6.12 (CPT4)
statusCode	1..1	SHALL		1106-233	
@code	1..1	SHALL		1106-364	2.16.840.1.113883.5.14 (ActStatus) = completed

1. Conforms to [Procedure Activity Act \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.12:2014-06-09).
2. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-227).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-228).
4. **SHALL** contain exactly one [1..1] templateId (CONF:1106-229) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.34.3.20" (CONF:1106-230).

5. **SHALL** contain exactly one [1..1] **code** (CONF:1106-231).
 - a. This code **SHOULD** contain zero or one [0..1] **@code** (CONF:1106-358).
 Note: Inclusion of both SNOMED CT/LOINC and CPT/HCPCS codes is recommended. When both codes are available, include the CPT code within the translation element. When only the CPT code is available, include the CPT code within the translation element and use @nullFlavor="OTH" in the code element.
 - i. This **@code** **SHOULD** be selected from LOINC (CodeSystem: 2.16.840.1.113883.6.1) or SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96) (CONF:1106-772).
 - b. This code **MAY** contain zero or more [0..*] **translation** (CONF:1106-359).
 - i. The translation, if present, **SHALL** contain exactly one [1..1] **@code**, which **SHOULD** be selected from CodeSystem CPT4 (2.16.840.1.113883.6.12) (CONF:1106-375).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1106-233).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1106-364).

Figure 108: Provided Service Act Example 1

```
<act classCode="ACT" moodCode="EVN">
  <!-- Conforms to C-CDA Procedure Activity Act (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.12" extension="2014-06-09" />
  <!-- Provided Service Act -->
  <templateId root="2.16.840.1.113883.10.20.34.3.20" />
  <id root="30590de2-2fd4-42db-a130-6fd8cd4c9d2d" />
  <code code="307571006" displayName="Anticoagulant drug monitoring"
    codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <translation code="99363"
      displayName="ANTICOAGULANT MGMT OUTPATIENT INIT 90 DAYS"
      codeSystemName="CPT-4" codeSystem="2.16.840.1.113883.6.12" />
    </code>
  <statusCode code="completed" />
  <effectiveTime value="201308150000-0400" />
</act>
```

Figure 109: Provided Service Act Example 2

```
<act classCode="ACT" moodCode="EVN">
  <!-- Conforms to C-CDA Procedure Activity Act (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.12" extension="2014-06-09" />
  <!-- Provided Service Act -->
  <templateId root="2.16.840.1.113883.10.20.34.3.20" />
  <id root="30590de2-2fd4-42db-a120-6cd8cd4c912d" />
  <code code="266724001" displayName="Weight-reducing diet education"
    codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"> </code>
  <statusCode code="completed" />
  <effectiveTime value="201308150000-0400" />
</act>
```


3.47 Procedure Activity Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09
(open)]

Table 229: Procedure Activity Observation (V2) Contexts

Contained By:	Contains:
	Author Participation Indication (V2) Instruction (V2) Medication Activity (V2) Reaction Observation (V2) Service Delivery Location

The common notion of procedure is broader than that specified by the HL7 Version 3 Reference Information Model (RIM). Therefore procedure templates can be represented with various RIM classes: act (e.g., dressing change), observation (e.g., EEG), procedure (e.g., splenectomy).

This template represents procedures that result in new information about the patient that cannot be classified as a procedure according to the HL7 RIM. Examples of these procedures are diagnostic imaging procedures, EEGs, and EKGs.

Table 230: Procedure Activity Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09)					
@classCode	1..1	SHALL		1098-8282	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-8237	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-8238	
@root	1..1	SHALL		1098-10520	2.16.840.1.113883.10.20.22.4.13
@extension	1..1	SHALL		1098-32507	2014-06-09
id	1..*	SHALL		1098-8239	
code	1..1	SHALL		1098-19197	
originalText	0..1	SHOULD		1098-19198	
reference	0..1	SHOULD		1098-19199	
@value	0..1	SHOULD		1098-19200	
statusCode	1..1	SHALL		1098-8245	
@code	1..1	SHALL		1098-32365	2.16.840.1.113883.11.20.9.22 (ProcedureAct statusCode)
effectiveTime	0..1	SHOULD		1098-8246	
priorityCode	0..1	MAY		1098-8247	2.16.840.1.113883.1.11.16866 (Act Priority)
value	1..1	SHALL		1098-16846	
@nullFlavor	0..1	MAY		1098-32778	
methodCode	0..1	MAY		1098-8248	
targetSiteCode	0..*	SHOULD		1098-8250	2.16.840.1.113883.3.88.12.3221.8.9 (Body Site)
performer	0..*	SHOULD		1098-8251	
assignedEntity	1..1	SHALL		1098-8252	
id	1..*	SHALL		1098-8253	
addr	1..*	SHALL		1098-8254	
telecom	1..*	SHALL		1098-8255	
represented Organization	0..1	SHOULD		1098-8256	
id	0..*	SHOULD		1098-8257	
name	0..*	MAY		1098-8258	
telecom	1..1	SHALL		1098-8260	
addr	1..1	SHALL		1098-8259	
author	1..*	SHOULD		1098-32478	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
participant	0..*	MAY		1098-8261	
@typeCode	1..1	SHALL		1098-8262	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = LOC
participantRole	1..1	SHALL		1098-15904	Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32)

entryRelationship	0..*	MAY		1098-8264	
@typeCode	1..1	SHALL		1098-8265	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
@inversionInd	1..1	SHALL		1098-8266	true
encounter	1..1	SHALL		1098-8267	
@classCode	1..1	SHALL		1098-8268	2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1098-8269	2.16.840.1.113883.5.1001 (ActMood) = EVN
id	1..1	SHALL		1098-8270	
entryRelationship	0..1	MAY		1098-8272	
@typeCode	1..1	SHALL		1098-8273	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1098-8274	true
act	1..1	SHALL		1098-31394	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09)
entryRelationship	0..*	MAY		1098-8276	
@typeCode	1..1	SHALL		1098-8277	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-15906	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09)
entryRelationship	0..*	MAY		1098-8279	
@typeCode	1..1	SHALL		1098-8280	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
substance Administration	1..1	SHALL		1098-15907	Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09)
entryRelationship	0..*	MAY		1098-32470	
@typeCode	1..1	SHALL		1098-32471	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1098-32472	Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8282).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-8237).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-8238) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.13" (CONF:1098-10520).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32507).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8239).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-19197).
 - a. This code **SHOULD** contain zero or one [0..1] **originalText** (CONF:1098-19198).

- i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1098-19199).
 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1098-19200).
 - a. This reference/@value **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1098-19201).
 - b. This @code **SHOULD** be selected from LOINC (CodeSystem: 2.16.840.1.113883.6.1) or SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96), and **MAY** be selected from CPT-4 (CodeSystem: 2.16.840.1.113883.6.12) or ICD10 PCS (CodeSystem: 2.16.840.1.113883.6.4) or CDT-2 (Code System: 2.16.840.1.113883.6.13) (CONF:1098-19202).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-8245).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [ProcedureAct statusCode](#) 2.16.840.1.113883.11.20.9.22 **STATIC** 2014-04-23 (CONF:1098-32365).
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-8246).
8. **MAY** contain zero or one [0..1] **priorityCode**, which **SHALL** be selected from ValueSet [Act Priority](#) 2.16.840.1.113883.1.11.16866 **DYNAMIC** (CONF:1098-8247).
9. **SHALL** contain exactly one [1..1] **value** (CONF:1098-16846).

If nothing is appropriate for value, use an appropriate nullFlavor.

- a. This value **MAY** contain zero or one [0..1] **@nullFlavor** (CONF:1098-32778).
10. **MAY** contain zero or one [0..1] **methodCode** (CONF:1098-8248).
 - a. MethodCode **SHALL NOT** conflict with the method inherent in Observation / code (CONF:1098-8249).
11. **SHOULD** contain zero or more [0..*] **targetSiteCode**, which **SHALL** be selected from ValueSet [Body Site](#) 2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-8250).
12. **SHOULD** contain zero or more [0..*] **performer** (CONF:1098-8251).
 - a. The performer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-8252).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1098-8253).
 - ii. This assignedEntity **SHALL** contain at least one [1..*] **addr** (CONF:1098-8254).
 - iii. This assignedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1098-8255).
 - iv. This assignedEntity **SHOULD** contain zero or one [0..1] **representedOrganization** (CONF:1098-8256).
 1. The representedOrganization, if present, **SHOULD** contain zero or more [0..*] **id** (CONF:1098-8257).
 2. The representedOrganization, if present, **MAY** contain zero or more [0..*] **name** (CONF:1098-8258).

3. The representedOrganization, if present, **SHALL** contain exactly one [1..1] **telecom** (CONF:1098-8260).
4. The representedOrganization, if present, **SHALL** contain exactly one [1..1] **addr** (CONF:1098-8259).
13. **SHOULD** contain at least one [1..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32478).
14. **MAY** contain zero or more [0..*] **participant** (CONF:1098-8261) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8262).
 - b. **SHALL** contain exactly one [1..1] [Service Delivery Location](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) (CONF:1098-15904).
15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-8264) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Component (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8265).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** true (CONF:1098-8266).
 - c. **SHALL** contain exactly one [1..1] **encounter** (CONF:1098-8267).
 - i. This encounter **SHALL** contain exactly one [1..1] **@classCode="ENC"** Encounter (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8268).
 - ii. This encounter **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-8269).
 - iii. This encounter **SHALL** contain exactly one [1..1] **id** (CONF:1098-8270).
 1. Set encounter/id to the id of an encounter in another section to signify they are the same encounter (CONF:1098-16847).
16. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-8272) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has Subject (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8273).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** true (CONF:1098-8274).
 - c. **SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-31394).
17. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-8276) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8277).
 - b. **SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-15906).
18. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-8279) such that it

- a. **SHALL** contain exactly one [1..1] @typeCode="COMP" Has Component (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8280).
 - b. **SHALL** contain exactly one [1..1] [Medication Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09) (CONF:1098-15907).
19. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32470) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="COMP" Has Component (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-32471).
 - b. **SHALL** contain exactly one [1..1] [Reaction Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09) (CONF:1098-32472).

Figure 110: Procedure Activity Observation (V2) Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.13" extension="2014-06-09" />
  <id extension="123456789" root="2.16.840.1.113883.19" />
  <code code="274025005"
    codeSystem="2.16.840.1.113883.6.96"
    displayName="Colonic polypectomy"
    codeSystemName="SNOMED-CT">
    <originalText>
      <reference value="#Proc1" />
    </originalText>
  </code>
  <statusCode code="aborted" />
  <effectiveTime value="20110203" />
  <priorityCode code="CR" codeSystem="2.16.840.1.113883.5.7" codeSystemName="ActPriority"
  displayName="Callback results" />
  <value nullFlavor="NA" />
  <methodCode nullFlavor="UNK" />
  <targetSiteCode code="416949008" codeSystem="2.16.840.1.113883.6.96"
  codeSystemName="SNOMED CT" displayName="Abdomen and pelvis" />
  <performer>
    <assignedEntity>
      <id root="2.16.840.1.113883.19" extension="1234" />
      <addr>
        <streetAddressLine>1001 Village Avenue</streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
      <telecom use="WP" value="tel: +1(555)-555-5000" />
      <representedOrganization>
        <id root="2.16.840.1.113883.19.5" />
        <name>Community Health and Hospitals</name>
        <telecom use="WP" value="tel:+1(555)-555-5000" />
        <addr>
          <streetAddressLine>1001 Village Avenue</streetAddressLine>
          <city>Portland</city>
          <state>OR</state>
          <postalCode>99123</postalCode>
          <country>US</country>
        </addr>
      </representedOrganization>
    </assignedEntity>
  </performer>
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <templateId root="2.16.840.1.113883.10.20.22.4.32" />
      . . .
    </participantRole>
  </participant>
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09" />
      . . .
    </observation>
  </entryRelationship>
</observation>

```

```

    </observation>
  </entryRelationship>
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <act classCode="ACT" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.20" extension="2014-06-09" />
      . . .
    </act>
  </entryRelationship>
</observation>

```

3.47.1 Provided Service Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.3 (open)]

Table 231: Provided Service Observation Contexts

Contained By:	Contains:
Services and Procedures Section (optional)	

This template represents a service observation that has been provided. Examples of service observations include examinations, blood tests, and imaging. To represent the provided service observation, the moodCode value is constrained to "EVN" and the statusCode value is constrained to "completed".

Table 232: Provided Service Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.3)					
@classCode	1..1	SHALL		1106-365	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-366	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-367	
@root	1..1	SHALL		1106-368	2.16.840.1.113883.10.20.34.3.3
code	1..1	SHALL		1106-369	
@code	1..1	SHALL		1106-370	
translation	0..*	MAY		1106-371	
@code	1..1	SHALL		1106-372	2.16.840.1.113883.6.12 (CPT4)
statusCode	1..1	SHALL		1106-373	
@code	1..1	SHALL		1106-374	2.16.840.1.113883.5.14 (ActStatus) = completed

1. Conforms to [Procedure Activity Observation \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-365).

3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-366).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-367) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.3" (CONF:1106-368).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1106-369).
 - a. This code **SHALL** contain exactly one [1..1] **@code** (CONF:1106-370).
 Note: Inclusion of both SNOMED CT/LOINC and CPT/HCPSCS codes is recommended. When both codes are available, include the CPT code within the translation element. When only the CPT code is available, include the CPT code within the translation element and use **@nullFlavor**="OTH" in the code element.
 - i. This **@code** **SHOULD** be selected from LOINC (CodeSystem: 2.16.840.1.113883.6.1) or SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96) (CONF:1106-771).
 - b. This code **MAY** contain zero or more [0..*] **translation** (CONF:1106-371).
 - i. The translation, if present, **SHALL** contain exactly one [1..1] **@code**, which **SHOULD** be selected from CodeSystem CPT4 (2.16.840.1.113883.6.12) (CONF:1106-372).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1106-373).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1106-374).

Figure 111: Provided Service Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- Conforms to C-CDA R2 Procedure Activity Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.13" extension="2014-06-09" />
  <!-- Provided Service Observation -->
  <templateId root="2.16.840.1.113883.10.20.34.3.3" />
  <id root="dc507ac6-cb15-4d21-9410-fb399a2b95f6" />
  <code code="22059005"
    displayName="Computerized tomography, bone density study"
    codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <translation code="77078"
      displayName="CT BONE MINERL DENSITY STUDY 1/> SITS AXIAL SKE"
      codeSystemName="CPT-4" codeSystem="2.16.840.1.113883.6.12" />
    </code>
    <statusCode code="completed" />
    <value xsi:type="CD" nullFlavor="NA" />
  </observation>
```

3.48 Procedure Activity Procedure (V2)

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09
(open)]

Table 233: Procedure Activity Procedure (V2) Contexts

Contained By:	Contains:
Reaction Observation (V2) (optional)	Author Participation Indication (V2) Instruction (V2) Medication Activity (V2) Product Instance Reaction Observation (V2) Service Delivery Location

The common notion of "procedure" is broader than that specified by the HL7 Version 3 Reference Information Model (RIM). Therefore procedure templates can be represented with various RIM classes: act (e.g., dressing change), observation (e.g., EEG), procedure (e.g., splenectomy).

This template represents procedures whose immediate and primary outcome (post-condition) is the alteration of the physical condition of the patient. Examples of these procedures are an appendectomy, hip replacement, and a creation of a gastrostomy.

This template can be used with a contained Product Instance template to represent a device in or on a patient. In this case, targetSiteCode is used to record the location of the device in or on the patient's body. Equipment supplied to the patient (e.g., pumps, inhalers, wheelchairs) is represented by the Non-Medicinal Supply Activity (V2) template.

Table 234: Procedure Activity Procedure (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09)					
@classCode	1..1	SHALL		1098-7652	2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		1098-7653	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-7654	
@root	1..1	SHALL		1098-10521	2.16.840.1.113883.10.20.22.4.14
@extension	1..1	SHALL		1098-32506	2014-06-09
id	1..*	SHALL		1098-7655	
code	1..1	SHALL		1098-7656	
originalText	0..1	SHOULD		1098-19203	
reference	0..1	SHOULD		1098-19204	
@value	0..1	SHOULD		1098-19205	
statusCode	1..1	SHALL		1098-7661	
@code	1..1	SHALL		1098-32366	2.16.840.1.113883.11.20.9.22 (ProcedureAct statusCode)
effectiveTime	0..1	SHOULD		1098-7662	
priorityCode	0..1	MAY		1098-7668	2.16.840.1.113883.1.11.16866 (Act Priority)
methodCode	0..1	MAY		1098-7670	
targetSiteCode	0..*	SHOULD		1098-7683	
@code	1..1	SHALL		1098-16082	2.16.840.1.113883.3.88.12.3221.8.9 (Body Site)
specimen	0..*	MAY		1098-7697	
specimenRole	1..1	SHALL		1098-7704	
id	0..*	SHOULD		1098-7716	
performer	0..*	SHOULD		1098-7718	
assignedEntity	1..1	SHALL		1098-7720	
id	1..*	SHALL		1098-7722	
addr	1..*	SHALL		1098-7731	
telecom	1..*	SHALL		1098-7732	
represented Organization	0..1	SHOULD		1098-7733	
id	0..*	SHOULD		1098-7734	
name	0..*	MAY		1098-7735	
telecom	1..1	SHALL		1098-7737	
addr	1..1	SHALL		1098-7736	
author	1..*	SHOULD		1098-32479	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
participant	0..*	MAY		1098-7751	
@typeCode	1..1	SHALL		1098-7752	2.16.840.1.113883.5.1002

					(HL7ActRelationshipType) = DEV
participantRole	1..1	SHALL		1098-15911	Product Instance (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.37)
participant	0..*	MAY		1098-7765	
@typeCode	1..1	SHALL		1098-7766	2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
participantRole	1..1	SHALL		1098-15912	Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32)
entryRelationship	0..*	MAY		1098-7768	
@typeCode	1..1	SHALL		1098-7769	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
@inversionInd	1..1	SHALL		1098-8009	true
encounter	1..1	SHALL		1098-7770	
@classCode	1..1	SHALL		1098-7771	2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1098-7772	2.16.840.1.113883.5.1001 (ActMood) = EVN
id	1..1	SHALL		1098-7773	
entryRelationship	0..1	MAY		1098-7775	
@typeCode	1..1	SHALL		1098-7776	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1098-7777	true
act	1..1	SHALL		1098-31395	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09)
entryRelationship	0..*	MAY		1098-7779	
@typeCode	1..1	SHALL		1098-7780	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-15914	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09)
entryRelationship	0..*	MAY		1098-7886	
@typeCode	1..1	SHALL		1098-7887	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
substance Administration	1..1	SHALL		1098-15915	Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09)
entryRelationship	0..*	MAY		1098-32473	
@typeCode	1..1	SHALL		1098-32474	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1098-32475	Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09)

1. **SHALL** contain exactly one [1..1] **@classCode**="PROC" Procedure (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7652).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7653).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7654) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.14" (CONF:1098-10521).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32506).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7655).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-7656).
 - a. This code **SHOULD** contain zero or one [0..1] **originalText** (CONF:1098-19203).
 - i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1098-19204).
 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1098-19205).
 - a. This reference/**@value** **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1098-19206).
 - b. This **@code** **SHOULD** be selected from LOINC (CodeSystem: 2.16.840.1.113883.6.1) or SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96), and **MAY** be selected from CPT-4 (CodeSystem: 2.16.840.1.113883.6.12) or ICD10 PCS (CodeSystem: 2.16.840.1.113883.6.4) or CDT-2 (Code System: 2.16.840.1.113883.6.13) (CONF:1098-19207).
 6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7661).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet ProcedureAct statusCode 2.16.840.1.113883.11.20.9.22 **STATIC** 2014-04-23 (CONF:1098-32366).
 7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-7662).
 8. **MAY** contain zero or one [0..1] **priorityCode**, which **SHALL** be selected from ValueSet Act Priority 2.16.840.1.113883.1.11.16866 **DYNAMIC** (CONF:1098-7668).
 9. **MAY** contain zero or one [0..1] **methodCode** (CONF:1098-7670).
 - a. MethodCode **SHALL NOT** conflict with the method inherent in Procedure / code (CONF:1098-7890).

In the case of an implanted medical device, targetSiteCode is used to record the location of the device, in or on the patient's body.

10. **SHOULD** contain zero or more [0..*] **targetSiteCode** (CONF:1098-7683).
 - a. The targetSiteCode, if present, **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet Body Site 2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-16082).
11. **MAY** contain zero or more [0..*] **specimen** (CONF:1098-7697).

- a. The specimen, if present, **SHALL** contain exactly one [1..1] **specimenRole** (CONF:1098-7704).
 - i. This specimenRole **SHOULD** contain zero or more [0..*] **id** (CONF:1098-7716).
 - 1. If you want to indicate that the Procedure and the Results are referring to the same specimen, the Procedure/specimen/specimenRole/id **SHOULD** be set to equal an Organizer/specimen/ specimenRole/id (CONF:1098-29744).
 - b. This specimen is for representing specimens obtained from a procedure (CONF:1098-16842).
- 12. **SHOULD** contain zero or more [0..*] **performer** (CONF:1098-7718) such that it
 - a. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-7720).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1098-7722).
 - ii. This assignedEntity **SHALL** contain at least one [1..*] **addr** (CONF:1098-7731).
 - iii. This assignedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1098-7732).
 - iv. This assignedEntity **SHOULD** contain zero or one [0..1] **representedOrganization** (CONF:1098-7733).
 - 1. The representedOrganization, if present, **SHOULD** contain zero or more [0..*] **id** (CONF:1098-7734).
 - 2. The representedOrganization, if present, **MAY** contain zero or more [0..*] **name** (CONF:1098-7735).
 - 3. The representedOrganization, if present, **SHALL** contain exactly one [1..1] **telecom** (CONF:1098-7737).
 - 4. The representedOrganization, if present, **SHALL** contain exactly one [1..1] **addr** (CONF:1098-7736).
- 13. **SHOULD** contain at least one [1..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32479).
- 14. **MAY** contain zero or more [0..*] **participant** (CONF:1098-7751) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="DEV"** Device (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7752).
 - b. **SHALL** contain exactly one [1..1] [Product Instance](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.37) (CONF:1098-15911).
- 15. **MAY** contain zero or more [0..*] **participant** (CONF:1098-7765) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ParticipationType 2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-7766).
 - b. **SHALL** contain exactly one [1..1] [Service Delivery Location](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) (CONF:1098-15912).
- 16. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7768) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has Component (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7769).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** true (CONF:1098-8009).

- c. **SHALL** contain exactly one [1..1] **encounter** (CONF:1098-7770).
 - i. This encounter **SHALL** contain exactly one [1..1] @**classCode**="ENC" Encounter (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7771).
 - ii. This encounter **SHALL** contain exactly one [1..1] @**moodCode**="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7772).
 - iii. This encounter **SHALL** contain exactly one [1..1] **id** (CONF:1098-7773).
 - 1. Set the encounter ID to the ID of an encounter in another section to signify they are the same encounter (CONF:1098-16843).
- 17. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-7775) such that it
 - a. **SHALL** contain exactly one [1..1] @**typeCode**="SUBJ" Has Subject (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7776).
 - b. **SHALL** contain exactly one [1..1] @**inversionInd**="true" true (CONF:1098-7777).
 - c. **SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-31395).
- 18. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7779) such that it
 - a. **SHALL** contain exactly one [1..1] @**typeCode**="RSON" Has Reason (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7780).
 - b. **SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-15914).
- 19. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7886) such that it
 - a. **SHALL** contain exactly one [1..1] @**typeCode**="COMP" Has Component (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7887).
 - b. **SHALL** contain exactly one [1..1] [Medication Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09) (CONF:1098-15915).
- 20. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32473) such that it
 - a. **SHALL** contain exactly one [1..1] @**typeCode**="COMP" Has Component (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:1098-32474).
 - b. **SHALL** contain exactly one [1..1] [Reaction Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09) (CONF:1098-32475).

Figure 112: Procedure Activity Procedure (V2) Example

```
<procedure classCode="PROC" moodCode="EVN">
  <!-- Procedure Activity Procedure V2-->
  <templateId root="2.16.840.1.113883.10.20.22.4.14" extension="2014-06-09" />
  <id root="d5b614bd-01ce-410d-8726-e1fd01dcc72a" />
  <code code="103716009" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"
displayName="Stent Placement">
    <originalText>
      <reference value="#Proc1" />
    </originalText>
  </code>
  <statusCode code="completed" />
  <effectiveTime value="20130512" />
  <targetSiteCode code="28273000" displayName="bile duct"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" />
  <specimen typeCode="SPC">
    <specimenRole classCode="SPEC">
      <id root="a6d7b927-2b70-43c7-bdf3-0e7c4133062c" />
      <specimenPlayingEntity>
        <code code="57259009" codeSystem="2.16.840.1.113883.6.96"
displayName="gallbladder bile" />
      </specimenPlayingEntity>
    </specimenRole>
  </specimen>
  <performer>
    ...
  </performer>
</procedure>
```

3.48.1 Provided Service Procedure

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.34.3.12 (open)]

Table 235: Provided Service Procedure Contexts

Contained By:	Contains:
Services and Procedures Section (optional)	

This template represents a procedure service that has been provided. Examples of procedure services include excisions of tissue and biopsies. To represent the provided procedure service, the moodCode value is constrained to "EVN" and the statusCode value is constrained to "completed".

Table 236: Provided Service Procedure Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.12)					
@classCode	1..1	SHALL		1106-145	2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		1106-146	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-147	
@root	1..1	SHALL		1106-148	2.16.840.1.113883.10.20.34.3.12
code	1..1	SHALL		1106-149	
@code	0..1	SHOULD	CS	1106-150	
translation	0..*	MAY		1106-360	2.16.840.1.113883.6.12 (CPT4)
@code	1..1	SHALL		1106-376	2.16.840.1.113883.6.12 (CPT4)
statusCode	1..1	SHALL		1106-152	
@code	1..1	SHALL		1106-377	2.16.840.1.113883.5.14 (ActStatus) = completed

1. Conforms to [Procedure Activity Procedure \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09).
2. **SHALL** contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1106-145).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1106-146).
4. **SHALL** contain exactly one [1..1] templateId (CONF:1106-147) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.34.3.12" (CONF:1106-148).
5. **SHALL** contain exactly one [1..1] code (CONF:1106-149).
 - a. This code **SHOULD** contain zero or one [0..1] @code (CONF:1106-150).
Note: Inclusion of both SNOMED CT/LOINC and CPT/HCPSCS codes is recommended. When both codes are available, include the CPT code within the translation element. When only the CPT code is available, include the CPT code within the translation element and use @nullFlavor="OTH" in the code element.
 - i. This @code **SHOULD** be selected from LOINC (CodeSystem: 2.16.840.1.113883.6.1) or SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96) (CONF:1106-770).
 - b. This code **MAY** contain zero or more [0..*] translation (CodeSystem: CPT4 2.16.840.1.113883.6.12) (CONF:1106-360).
 - i. The translation, if present, **SHALL** contain exactly one [1..1] @code, which **SHOULD** be selected from CodeSystem CPT4 (2.16.840.1.113883.6.12) (CONF:1106-376).
6. **SHALL** contain exactly one [1..1] statusCode (CONF:1106-152).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1106-377).

Figure 113: Provided Service Procedure Example

```
<procedure classCode="PROC" moodCode="EVN">
  <!-- Conforms to C-CDA R2 Procedure Activity Procedure (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.14" extension="2014-06-09" />
  <!-- Provided Service Procedure -->
  <templateId root="2.16.840.1.113883.10.20.34.3.12" />
  <id root="305c55e3-ff9d-4402-b34a-97da397cc29e" />
  <code code="30374004" displayName="Excision of uvula"
    codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
    <translation code="42140" displayName="UVULECTOMY EXCISION UVULA"
      codeSystemName="CPT-4" codeSystem="2.16.840.1.113883.6.12" />
  </code>
  <statusCode code="completed" />
</procedure>
```

3.49 Product Instance

[participantRole: identifier urn:oid:2.16.840.1.113883.10.20.22.4.37 (open)]

Table 237: Product Instance Contexts

Contained By:	Contains:
Procedure Activity Procedure (V2) (optional)	

This clinical statement represents a particular device that was placed in a patient or used as part of a procedure or other act. This provides a record of the identifier and other details about the given product that was used. For example, it is important to have a record that indicates not just that a hip prostheses was placed in a patient but that it was a particular hip prostheses number with a unique identifier.

The FDA Amendments Act specifies the creation of a Unique Device Identification (UDI) System that requires the label of devices to bear a unique identifier that will standardize device identification and identify the device through distribution and use.

The FDA permits an issuing agency to designate that their Device Identifier (DI) + Production Identifier (PI) format qualifies as a UDI through a process of accreditation. Currently, there are three FDA-accredited issuing agencies that are allowed to call their format a UDI. These organizations are GS1, HIBCC, and ICCBBA. For additional information on technical formats that qualify as UDI from each of the issuing agencies see the UDI Appendix.

When communicating only the issuing agency device identifier (i.e., subcomponent of the UDI), the use of the issuing agency OID is appropriate. However, when communicating the unique device identifier (DI + PI), the FDA OID (2.16.840.1.113883.3.3719) must be used.

When sending a UDI, populate the participantRole/id/@root with the FDA OID (2.16.840.1.113883.3.3719) and participantRole/id/@extension with the UDI.

When sending a DI, populate the participantRole/id/@root with the appropriate assigning agency OID and participantRole/id/@extension with the DI.

The scopingEntity/id should correspond to FDA or the appropriate issuing agency.

Table 238: Product Instance Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
participantRole (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.37)					
@classCode	1..1	SHALL		81-7900	2.16.840.1.113883.5.110 (RoleClass) = MANU
templateId	1..1	SHALL		81-7901	
@root	1..1	SHALL		81-10522	2.16.840.1.113883.10.20.22.4.37
id	1..*	SHALL		81-7902	
playingDevice	1..1	SHALL		81-7903	
code	0..1	SHOULD		81-16837	
scopingEntity	1..1	SHALL		81-7905	
id	1..*	SHALL		81-7908	

1. **SHALL** contain exactly one [1..1] **@classCode**="MANU" Manufactured Product (CodeSystem: RoleClass 2.16.840.1.113883.5.110 **STATIC**) (CONF:81-7900).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7901) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.37" (CONF:81-10522).
3. **SHALL** contain at least one [1..*] **id** (CONF:81-7902).
4. **SHALL** contain exactly one [1..1] **playingDevice** (CONF:81-7903).
 - a. This playingDevice **SHOULD** contain zero or one [0..1] **code** (CONF:81-16837).
5. **SHALL** contain exactly one [1..1] **scopingEntity** (CONF:81-7905).
 - a. This scopingEntity **SHALL** contain at least one [1..*] **id** (CONF:81-7908).

Figure 114: Product Instance Example

```

<participantRole classCode="MANU">
  <templateId root="2.16.840.1.113883.10.20.22.4.37"/>
  <id root="2.16.840.1.113883.3.3719"
    extension="(01)5102222233336(11)141231(17)150707(10)A213B1(21)1234"
    assigningAuthorityName="FDA"/>
  <playingDevice>
    <code code="90412006" codeSystem="2.16.840.1.113883.6.96"
      displayName="Colonoscope"/>
  </playingDevice>
  <scopingEntity>
    <id root="2.16.840.1.113883.3.3719"/>
  </scopingEntity>
</participantRole>

```

3.50 Prognosis Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.113 (open)]

Table 239: Prognosis Observation Contexts

Contained By:	Contains:
Problem Observation (V2) (optional)	

This template represents the patient's prognosis, which must be associated with a problem observation. It may serve as an alert to scope intervention plans.

The effectiveTime represents the clinically relevant time of the observation. The observation/value is not constrained and can represent the expected life duration in PQ, an anticipated course of the disease in text, or coded term.

Table 240: Prognosis Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.113)					
@classCode	1..1	SHALL		1098-29035	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-29036	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-29037	
@root	1..1	SHALL		1098-29038	2.16.840.1.113883.10.20.22.4.113
code	1..1	SHALL		1098-29039	
@code	1..1	SHALL		1098-29468	75328-5
@codeSystem	1..1	SHALL		1098-31349	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1098-31350	
@code	1..1	SHALL		1098-31351	2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-31123	
value	1..1	SHALL		1098-29469	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-29035).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-29036).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-29037) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.113" (CONF:1098-29038).
4. **SHALL** contain exactly one [1..1] code (CONF:1098-29039).
 - a. This code **SHALL** contain exactly one [1..1] @code="75328-5" Prognosis (CONF:1098-29468).

- b. This code **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC
2.16.840.1.113883.6.1) (CONF:1098-31349).
- 5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-31350).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1098-31351).
- 6. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-31123).
- 7. **SHALL** contain exactly one [1..1] **value** (CONF:1098-29469).

Figure 115: Prognosis, Free Text Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- Prognosis -->
  <templateId root="2.16.840.1.113883.10.20.22.4.113" />
  <id root="2097c709-291b-4a0f-bef9-ad9b23b3bb43" />
  <code code="75328-5"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Prognosis" />
  <text>
    Presence of a life limiting condition(>50% possibility of death within 2 year)
  </text>
  <statusCode code="completed" />
  <effectiveTime value="20130606" />
  <value xsi:type="ST">Presence of a life limiting condition(>50% possibility of death
within 2 year</value>
</observation>
```

Figure 116: Prognosis, Coded Example

```
<entryRelationship typeCode="REFR">
  <observation classCode="OBS" moodCode="EVN">
    <!-- Prognosis -->
    <templateId root="2.16.840.1.113883.10.20.22.4.113" />
    <id root="2097c709-291b-4a0f-bef9-ad9b23b3bb43" />
    <code code="75328-5"
      codeSystem="2.16.840.1.113883.6.1"
      codeSystemName="LOINC"
      displayName="Prognosis" />
    <statusCode code="completed" />
    <effectiveTime>
      <low value="20130301" />
    </effectiveTime>
    <value xsi:type="CD" code="67334001" codeSystem="2.16.840.1.113883.6.96"
      displayName="guarded prognosis" codeSystemName="SNOMED CT" />
  </observation>
</entryRelationship>
```

3.51 Reaction Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09
(open)]

Table 241: Reaction Observation (V2) Contexts

Contained By:	Contains:
Medication Activity (V2) (optional) Procedure Activity Procedure (V2) (optional) Procedure Activity Observation (V2) (optional) Immunization Activity (V2) (optional)	Medication Activity (V2) Procedure Activity Procedure (V2) Severity Observation (V2)

This clinical statement represents the response to an undesired symptom, finding, etc. due to administered or exposed substance. This reaction may be an undesired symptom, finding, etc. or it could be a desired response to a treatment. A reaction can be defined with respect to its severity, and can have been treated by one or more interventions.

Table 242: Reaction Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09)					
@classCode	1..1	SHALL		1098-7325	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-7326	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-7323	
@root	1..1	SHALL		1098-10523	2.16.840.1.113883.10.20.22.4.9
@extension	1..1	SHALL		1098-32504	2014-06-09
id	1..*	SHALL		1098-7329	
code	1..1	SHALL		1098-16851	
@code	1..1	SHALL		1098-31124	ASSERTION
@codeSystem	1..1	SHALL		1098-32169	2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		1098-7328	
@code	1..1	SHALL		1098-19114	2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	0..1	SHOULD		1098-7332	
low	0..1	SHOULD		1098-7333	
high	0..1	SHOULD		1098-7334	
value	1..1	SHALL	CD	1098-7335	2.16.840.1.113883.3.88.12.3221.7.4 (Problem)
entryRelationship	0..*	MAY		1098-7337	
@typeCode	1..1	SHALL		1098-7338	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
@inversionInd	1..1	SHALL		1098-7343	true
procedure	1..1	SHALL		1098-15920	Procedure Activity Procedure (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09)
entryRelationship	0..*	MAY		1098-7340	
@typeCode	1..1	SHALL		1098-7341	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
@inversionInd	1..1	SHALL		1098-7344	true
substance Administration	1..1	SHALL		1098-15921	Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09)
entryRelationship	0..1	MAY		1098-7580	
@typeCode	1..1	SHALL		1098-7581	2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1098-10375	true
observation	1..1	SHALL		1098-15922	Severity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09)

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7325).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7326).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7323) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.9"** (CONF:1098-10523).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32504).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7329).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-16851).
 - a. This code **SHALL** contain exactly one [1..1] **@code="ASSERTION"** (CONF:1098-31124).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.5.4"** (CodeSystem: ActCode 2.16.840.1.113883.5.4) (CONF:1098-32169).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7328).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19114).
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-7332).
 - a. The effectiveTime, if present, **SHOULD** contain zero or one [0..1] **low** (CONF:1098-7333).
 - b. The effectiveTime, if present, **SHOULD** contain zero or one [0..1] **high** (CONF:1098-7334).
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"**, where the code **SHALL** be selected from ValueSet [Problem](#) 2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:1098-7335).
9. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7337) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has reason (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7338).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1098-7343).

This procedure activity is intended to contain information about procedures that were performed in response to an allergy reaction.

- c. **SHALL** contain exactly one [1..1] [Procedure Activity Procedure \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09) (CONF:1098-15920).
10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7340) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has reason (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7341).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1098-7344).

This medication activity is intended to contain information about medications that were administered in response to an allergy reaction.

- c. **SHALL** contain exactly one [1..1] [Medication Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09) (CONF:1098-15921).
- 11. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-7580) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has subject (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7581).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** TRUE (CONF:1098-10375).
 - c. **SHALL** contain exactly one [1..1] [Severity Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09) (CONF:1098-15922).

Figure 117: Reaction Observation (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.9" extension="2014-06-09" />
  <id root="4adc1020-7b14-11db-9fe1-0800200c9a64" />
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
  <text>
    <reference value="#reaction1" />
  </text>
  <statusCode code="completed" />
  <effectiveTime>
    <low value="200802260805-0800" />
    <high value="200802281205-0800" />
  </effectiveTime>
  <value xsi:type="CD" code="422587007" codeSystem="2.16.840.1.113883.6.96"
  displayName="Nausea" />
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.8" extension="2014-06-09" />
      . . .
    </observation>
  </entryRelationship>
</observation>
```

3.52 Result Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2014-06-09 (open)]

Table 243: Result Observation (V2) Contexts

Contained By:	Contains:
Result Organizer (V2) (required)	Author Participation

This template represents the results of a laboratory, radiology, or other study performed on a patient.

The result observation includes a statusCode to allow recording the status of an observation. “Pending” results (e.g., a test has been run but results have not been reported yet) should be represented as “active” ActStatus.

Table 244: Result Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2014-06-09)					
@classCode	1..1	SHALL		1098-7130	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-7131	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-7136	
@root	1..1	SHALL		1098-9138	2.16.840.1.113883.10.20.22.4.2
@extension	1..1	SHALL		1098-32575	2014-06-09
id	1..*	SHALL		1098-7137	
code	1..1	SHALL		1098-7133	2.16.840.1.113883.6.1 (LOINC)
statusCode	1..1	SHALL		1098-7134	
@code	1..1	SHALL		1098-14849	2.16.840.1.113883.11.20.9.39 (Result Status)
effectiveTime	1..1	SHALL		1098-7140	
value	0..1	SHOULD		1098-7143	2.16.840.1.113883.6.96 (SNOMED CT)
interpretationCode	0..*	SHOULD		1098-7147	
@code	1..1	SHALL		1098-32476	2.16.840.1.113883.1.11.78 (Observation Interpretation (HL7))
methodCode	0..1	MAY	SET< CE>	1098-7148	
targetSiteCode	0..1	MAY	SET< CD>	1098-7153	
author	0..*	SHOULD		1098-7149	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
referenceRange	0..*	SHOULD		1098-7150	
observationRange	1..1	SHALL		1098-7151	
code	0..0	SHALL NOT		1098-7152	
value	1..1	SHALL		1098-32175	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7130).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7131).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-7136) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.2" (CONF:1098-9138).

- b. **SHALL** contain exactly one [1..1] `@extension="2014-06-09"` (CONF:1098-32575).
- 4. **SHALL** contain at least one [1..*] `id` (CONF:1098-7137).
- 5. **SHALL** contain exactly one [1..1] `code`, which **SHOULD** be selected from CodeSystem LOINC (2.16.840.1.113883.6.1) (CONF:1098-7133).
 - a. This code **SHOULD** be a code from the LOINC that identifies the result observation. If an appropriate LOINC code does not exist, then the local code for this result **SHALL** be sent (CONF:1098-19212).
- 6. **SHALL** contain exactly one [1..1] `statusCode` (CONF:1098-7134).
 - a. This `statusCode` **SHALL** contain exactly one [1..1] `@code`, which **SHALL** be selected from ValueSet [Result Status](#) 2.16.840.1.113883.11.20.9.39 **STATIC** 2013-08-09 (CONF:1098-14849).
- 7. **SHALL** contain exactly one [1..1] `effectiveTime` (CONF:1098-7140).
 Note: Represents the biologically relevant time of the measurement (e.g., the time a blood pressure reading is obtained, the time the blood sample was obtained for a chemistry test).
- 8. **SHOULD** contain zero or one [0..1] `value`, which **SHOULD** be selected from CodeSystem SNOMED CT (2.16.840.1.113883.6.96) (CONF:1098-7143).
 - a. If Observation/value is a physical quantity (`xsi:type="PQ"`), the unit of measure **SHALL** be selected from ValueSet UnitsOfMeasureCaseSensitive 2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-31484).
 - b. A coded value **MAY** contain zero or more [0..*] translations, which can be used to represent the original results as output by the lab (CONF:1098-31866).
 - c. If Observation/value is a CD (`xsi:type="CD"`) the value **SHOULD** be SNOMED-CT (CONF:1098-32610).
- 9. **SHOULD** contain zero or more [0..*] `interpretationCode` (CONF:1098-7147).
 - a. The `interpretationCode`, if present, **SHALL** contain exactly one [1..1] `@code`, which **SHALL** be selected from ValueSet [Observation Interpretation \(HL7\)](#) 2.16.840.1.113883.1.11.78 **STATIC** 2014-09-01 (CONF:1098-32476).
- 10. **MAY** contain zero or one [0..1] `methodCode` (CONF:1098-7148).
- 11. **MAY** contain zero or one [0..1] `targetSiteCode` (CONF:1098-7153).
- 12. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-7149).
- 13. **SHOULD** contain zero or more [0..*] `referenceRange` (CONF:1098-7150).
 - a. The `referenceRange`, if present, **SHALL** contain exactly one [1..1] `observationRange` (CONF:1098-7151).
 - i. This `observationRange` **SHALL NOT** contain [0..0] `code` (CONF:1098-7152).
 - ii. This `observationRange` **SHALL** contain exactly one [1..1] `value` (CONF:1098-32175).

Table 245: Result Status

Value Set: Result Status 2.16.840.1.113883.11.20.9.39			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
aborted	ActStatus	2.16.840.1.113883.5.14	aborted
active	ActStatus	2.16.840.1.113883.5.14	active
cancelled	ActStatus	2.16.840.1.113883.5.14	cancelled
completed	ActStatus	2.16.840.1.113883.5.14	completed
held	ActStatus	2.16.840.1.113883.5.14	held
suspended	ActStatus	2.16.840.1.113883.5.14	suspended

Table 246: Observation Interpretation (HL7)

Value Set: Observation Interpretation (HL7) 2.16.840.1.113883.1.11.78			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
A	HITSP-CS-83	2.16.840.1.113883.5.83	abnormal
B	HITSP-CS-83	2.16.840.1.113883.5.83	better
Carrier	HITSP-CS-83	2.16.840.1.113883.5.83	carrier
D	HITSP-CS-83	2.16.840.1.113883.5.83	decreased
HX	HITSP-CS-83	2.16.840.1.113883.5.83	above high threshold
I	HITSP-CS-83	2.16.840.1.113883.5.83	intermediate
IND	HITSP-CS-83	2.16.840.1.113883.5.83	indeterminate
LX	HITSP-CS-83	2.16.840.1.113883.5.83	below low threshold
MS	HITSP-CS-83	2.16.840.1.113883.5.83	moderately susceptible
N	HITSP-CS-83	2.16.840.1.113883.5.83	normal
NEG	HITSP-CS-83	2.16.840.1.113883.5.83	negative
POS	HITSP-CS-83	2.16.840.1.113883.5.83	positive
R	HITSP-CS-83	2.16.840.1.113883.5.83	resistent
S	HITSP-CS-83	2.16.840.1.113883.5.83	susceptible
U	HITSP-CS-83	2.16.840.1.113883.5.83	increased
...			

Figure 118: Result Observation (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.2" extension="2014-06-09" />
  <id root="7c0704bb-9c40-41b5-9c7d-26b2d59e234f" />
  <code code="4544-3" displayName="Hematocrit" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" />
  <statusCode code="completed" />
  <effectiveTime value="200803190830-0800" />
  <value xsi:type="PQ" value="35.3" unit="%" />
  <interpretationCode code="L" codeSystem="2.16.840.1.113883.5.83" />
  <author>
    <time value="200803190830-0800" />
    <assignedAuthor>
      <id extension="333444444" root="1.1.1.1.1.1.4" />
      <addr>
        <streetAddressLine>1017 Health Drive</streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
      <telecom use="WP" value="tel:+1(555)555-1017" />
      <assignedPerson>
        <name>
          <given>William</given>
          <given qualifier="CL">Bill</given>
          <family>Beaker</family>
        </name>
      </assignedPerson>
      <representedOrganization>
        <name>Good Health Laboratory</name>
      </representedOrganization>
    </assignedAuthor>
  </author>
  <referenceRange>
    <observationRange>
      <value xsi:type="IVL_PQ">
        <low value="34.9" unit="%" />
        <high value="44.5" unit="%" />
      </value>
    </observationRange>
  </referenceRange>
</observation>
```

Figure 119: Pending Result Observation (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- ** Result observation ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.2" extension="2014-06-09" />
  <id root="aed821af-3330-4138-97f0-e84dfe5f3c35" />
  <code code="3094-0" displayName="Urea nitrogen, Serum"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <statusCode code="active" />
  <effectiveTime value="200803200930-0800" />
  <value xsi:type="PQ" nullFlavor="NI" />
</observation>
```

Figure 120: Original Lab Units in <translation> Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- ** Result observation ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.2" extension="2014-06-09" />
  <id root="a69b3d60-2ffd-4440-958b-72b3335ff35f" />
  <code code="6690-2" displayName="Leukocytes" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" />
  <statusCode code="completed" />
  <effectiveTime value="200803190830-0800" />
  <value xsi:type="PQ" value="6.7" unit="10*9/L">
    <translation>
      <originalText>6.7 billion per liter</originalText>
    </translation>
  </value>
  <interpretationCode code="N" codeSystem="2.16.840.1.113883.5.83" />
  <author typeCode="AUT">
    <time value="200803190830-0800" />
    <assignedAuthor>
      <id extension="333444444" root="1.1.1.1.1.1.4" />
    </assignedAuthor>
  </author>
  <referenceRange>
    <observationRange>
      <value xsi:type="IVL_PQ">
        <low value="4.3" unit="10*9/L" />
        <high value="10.8" unit="10*9/L" />
      </value>
    </observationRange>
  </referenceRange>
</observation>
```

3.53 Result Organizer (V2)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2014-06-09
(open)]

Table 247: Result Organizer (V2) Contexts

Contained By:	Contains:
Results Section (entries optional) (V2) (optional)	Author Participation Result Observation (V2)

This template provides a mechanism for grouping result observations. It contains information applicable to all of the contained result observations. The Result Organizer code categorizes the contained results into one of several commonly accepted values (e.g., “Hematology”, “Chemistry”, “Nuclear Medicine”).

If any Result Observation within the organizer has a statusCode of "active", the Result Organizer must also have a statusCode of "active".

Table 248: Result Organizer (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2014-06-09)					
@classCode	1..1	SHALL		1098-7121	2.16.840.1.113883.5.6 (HL7ActClass)
@moodCode	1..1	SHALL		1098-7122	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-7126	
@root	1..1	SHALL		1098-9134	2.16.840.1.113883.10.20.22.4.1
@extension	1..1	SHALL		1098-32588	2014-06-09
id	1..*	SHALL		1098-7127	
code	1..1	SHALL		1098-7128	
statusCode	1..1	SHALL		1098-7123	
@code	1..1	SHALL		1098-14848	2.16.840.1.113883.11.20.9.39 (Result Status)
effectiveTime	0..1	MAY		1098-31865	
low	1..1	SHALL		1098-32488	
high	1..1	SHALL		1098-32489	
author	0..*	SHOULD		1098-31149	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
component	1..*	SHALL		1098-7124	
observation	1..1	SHALL		1098-14850	Result Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2014-06-09)

1. **SHALL** contain exactly one [1..1] @classCode (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7121).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7122).

3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7126) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.1" (CONF:1098-9134).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32588).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7127).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-7128).
 - a. **SHOULD** be selected from LOINC (codeSystem 2.16.840.1.113883.6.1) **OR** SNOMED CT (codeSystem 2.16.840.1.113883.6.96), and **MAY** be selected from CPT-4 (codeSystem 2.16.840.1.113883.6.12) (CONF:1098-19218).
 - b. Laboratory results **SHOULD** be from LOINC (CodeSystem: 2.16.840.1.113883.6.1) or other constrained terminology named by the US Department of Health and Human Services Office of National Coordinator or other federal agency (CONF:1098-19219).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7123).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet Result Status 2.16.840.1.113883.11.20.9.39 **STATIC** 2013-08-09 (CONF:1098-14848).
7. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:1098-31865).
 Note: The effectiveTime is an interval that spans the effectiveTimes of the contained result observations. Because all contained result observations have a required time stamp, it is not required that this effectiveTime be populated.
 - a. The effectiveTime, if present, **SHALL** contain exactly one [1..1] **low** (CONF:1098-32488).
 - b. The effectiveTime, if present, **SHALL** contain exactly one [1..1] **high** (CONF:1098-32489).
8. **SHOULD** contain zero or more [0..*] Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31149).
9. **SHALL** contain at least one [1..*] **component** (CONF:1098-7124) such that it
 - a. **SHALL** contain exactly one [1..1] Result Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2014-06-09) (CONF:1098-14850).

Figure 121: Result Organizer (V2) Example

```
<organizer classCode="BATTERY" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.1" extension="2014-06-09" />
  <id root="7d5a02b0-67a4-11db-bd13-0800200c9a66" />
  <code code="57021-8" displayName="CBC W Auto Differential panel in Blood"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <statusCode code="completed" />
  <effectiveTime>
    <low value="200803190830-0800" />
    <high value="200803190830-0800" />
  </effectiveTime>
  <author>
    . . .
  </author>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Result observation ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.2" extension="2014-06-09" />
      . . .
    </observation>
  </component>
</organizer>
```

3.54 Service Delivery Location

[participantRole: identifier urn:oid:2.16.840.1.113883.10.20.22.4.32 (open)]

Table 249: Service Delivery Location Contexts

Contained By:	Contains:
Procedure Activity Act (V2) (optional) Procedure Activity Procedure (V2) (optional) Procedure Activity Observation (V2) (optional) Encounter Activity (V2) (optional) Hospital Admission Encounter (required)	

This clinical statement represents the location of a service event where an act, observation or procedure took place.

Table 250: Service Delivery Location Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
participantRole (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32)					
@classCode	1..1	SHALL		81-7758	2.16.840.1.113883.5.111 (RoleCode) = SDLOC
templateId	1..1	SHALL		81-7635	
@root	1..1	SHALL		81-10524	2.16.840.1.113883.10.20.22.4.32
code	1..1	SHALL		81-16850	2.16.840.1.113883.1.11.20275 (HealthcareServiceLocation)
addr	0..*	SHOULD		81-7760	
telecom	0..*	SHOULD		81-7761	
playingEntity	0..1	MAY		81-7762	
@classCode	1..1	SHALL		81-7763	2.16.840.1.113883.5.41 (EntityClass) = PLC
name	0..1	MAY		81-16037	

1. **SHALL** contain exactly one [1..1] **@classCode="SDLOC"** (CodeSystem: RoleCode 2.16.840.1.113883.5.111 **STATIC**) (CONF:81-7758).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7635) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.32"** (CONF:81-10524).
3. **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [HealthcareServiceLocation](#) 2.16.840.1.113883.1.11.20275 **STATIC** (CONF:81-16850).
4. **SHOULD** contain zero or more [0..*] **addr** (CONF:81-7760).
5. **SHOULD** contain zero or more [0..*] **telecom** (CONF:81-7761).
6. **MAY** contain zero or one [0..1] **playingEntity** (CONF:81-7762).
 - a. The playingEntity, if present, **SHALL** contain exactly one [1..1] **@classCode="PLC"** (CodeSystem: EntityClass 2.16.840.1.113883.5.41 **STATIC**) (CONF:81-7763).
 - b. The playingEntity, if present, **MAY** contain zero or one [0..1] **name** (CONF:81-16037).

Table 251: HealthcareServiceLocation

Value Set: HealthcareServiceLocation 2.16.840.1.113883.1.11.20275 A comprehensive classification of locations and settings where healthcare services are provided. This value set is based on the National Healthcare Safety Network (NHSN) location code system that has been developed over a number of years through CDC's interaction with a variety of healthcare facilities and is intended to serve a variety of reporting needs where coding of healthcare service locations is required. Value Set Source: http://phinivads.cdc.gov/vads/SearchAllVocab_search.action?searchOptions.searchText=Healthcare+Service+Location+%28NHSN%29			
Code	Code System	Code System OID	Print Name
1162-7	HL7 HealthcareServiceLocation	2.16.840.1.113883.6.259	24-Hour observation area
1184-1	HL7 HealthcareServiceLocation	2.16.840.1.113883.6.259	Administrative area
1210-4	HL7 HealthcareServiceLocation	2.16.840.1.113883.6.259	Adult Mixed Acuity Unit
1099-1	HL7 HealthcareServiceLocation	2.16.840.1.113883.6.259	Adult step down unit [post-critical care]
1110-6	HL7 HealthcareServiceLocation	2.16.840.1.113883.6.259	Allergy clinic
1166-8	HL7 HealthcareServiceLocation	2.16.840.1.113883.6.259	Ambulatory surgical setting
1212-0	HL7 HealthcareServiceLocation	2.16.840.1.113883.6.259	Any Age Mixed Acuity Unit
1106-4	HL7 HealthcareServiceLocation	2.16.840.1.113883.6.259	Assisted living area
1145-2	HL7 HealthcareServiceLocation	2.16.840.1.113883.6.259	Behavioral health clinic
1185-8	HL7 HealthcareServiceLocation	2.16.840.1.113883.6.259	Blood bank
1195-7	HL7 HealthcareServiceLocation	2.16.840.1.113883.6.259	Blood collection [Blood drive campaign]
1147-8	HL7 HealthcareServiceLocation	2.16.840.1.113883.6.259	Blood collection center
1022-3	HL7 HealthcareServiceLocation	2.16.840.1.113883.6.259	Bone marrow transplant unit
1026-4	HL7 HealthcareServiceLocation	2.16.840.1.113883.6.259	Burn critical care unit
1005-8	HL7 HealthcareServiceLocation	2.16.840.1.113883.6.259	Cardiac catheterization lab
...			

Figure 122: Service Delivery Location Example

```
<participantRole classCode="SDLOC">
  <templateId root="2.16.840.1.113883.10.20.22.4.32"/>
  <code code="1160-1" codeSystem="2.16.840.1.113883.6.259"
    codeSystemName="HealthcareServiceLocation" displayName="Urgent Care Center"/>
  <addr>
    <streetAddressLine>17 Daws Rd.</streetAddressLine>
    <city>Blue Bell</city>
    <state>MA</state>
    <postalCode>02368</postalCode>
    <country>US</country>
  </addr>
  <telecom use="WP" value="tel:+1(555)555-5000"/>
  <playingEntity classCode="PLC">
    <name>Community Health and Hospitals</name>
  </playingEntity>
</participantRole>
```

3.55 Severity Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09
(open)]

Table 252: Severity Observation (V2) Contexts

Contained By:	Contains:
Reaction Observation (V2) (optional) Asthma Diagnosis Observation (required)	

This clinical statement represents the gravity of the problem, such as allergy or reaction, in terms of its actual or potential impact on the patient. The Severity Observation can be associated with an Allergy - Intolerance Observation, Substance or Device Allergy - Intolerance Observation, Reaction Observation or all. When the Severity Observation is associated directly with an allergy it characterizes the allergy. When the Severity Observation is associated with a Reaction Observation it characterizes a reaction. A person may manifest many symptoms in a reaction to a single substance, and each reaction to the substance can be represented. However, each reaction observation can have only one severity observation associated with it. For example, someone may have a rash reaction observation as well as an itching reaction observation, but each can have only one level of severity.

Table 253: Severity Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09)					
@classCode	1..1	SHALL		1098-7345	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-7346	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-7347	
@root	1..1	SHALL		1098-10525	2.16.840.1.113883.10.20.22.4.8
@extension	1..1	SHALL		1098-32577	2014-06-09
code	1..1	SHALL		1098-19168	
@code	1..1	SHALL		1098-19169	SEV
@codeSystem	1..1	SHALL		1098-32170	2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		1098-7352	
@code	1..1	SHALL		1098-19115	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1098-7356	2.16.840.1.113883.3.88.12.3221.6.8 (Problem Severity)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7345).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7346).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7347) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.8" (CONF:1098-10525).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32577).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1098-19168).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="SEV" Severity (CONF:1098-19169).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: ActCode 2.16.840.1.113883.5.4) (CONF:1098-32170).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7352).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19115).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHALL** be selected from ValueSet [Problem Severity](#) 2.16.840.1.113883.3.88.12.3221.6.8 **DYNAMIC** (CONF:1098-7356).

Table 254: Problem Severity

Value Set: Problem Severity 2.16.840.1.113883.3.88.12.3221.6.8			
This is a description of the level of the severity of the problem.			
Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
255604002	SNOMED CT	2.16.840.1.113883.6.96	Mild (qualifier value)
371923003	SNOMED CT	2.16.840.1.113883.6.96	Mild to moderate (qualifier value)
6736007	SNOMED CT	2.16.840.1.113883.6.96	Moderate (severity modifier) (qualifier value)
371924009	SNOMED CT	2.16.840.1.113883.6.96	Moderate to severe (qualifier value)
24484000	SNOMED CT	2.16.840.1.113883.6.96	Severe (severity modifier) (qualifier value)
399166001	SNOMED CT	2.16.840.1.113883.6.96	Fatal (qualifier value)

Figure 123: Severity Observation (V2) Example

<pre> <observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.20.22.4.8" extension="2014-06-09" /> <code code="SEV" displayName="Severity Observation" codeSystem="2.16.840.1.113883.5.4" codeSystemName="ActCode" /> <text> <reference value="#allergyseverity1" /> </text> <statusCode code="completed" /> <value xsi:type="CD" code="371924009" displayName="Moderate to severe" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" /> </observation> </pre>

3.56 Smoking Status - Meaningful Use (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09 (open)]

Table 255: Smoking Status - Meaningful Use (V2) Contexts

Contained By:	Contains:
Social History Section (V2) (optional)	Author Participation

This template represents the current smoking status of the patient as specified in Meaningful Use (MU) Stage 2 requirements. Historic smoking status observations as well as details about the smoking habit (e.g., how many per day) would be represented in the Tobacco Use template.

This template represents a “snapshot in time” observation, simply reflecting what the patient’s current smoking status is at the time of the observation. As a result, the effectiveTime is constrained to a time stamp, and will approximately correspond with the author/time. Details regarding the time period when the patient is/was smoking would be recorded in the Tobacco Use template.

If the patient's current smoking status is unknown, the value element must be populated with SNOMED CT code 266927001 to communicate "Unknown if ever smoked" from the Current Smoking Status Value Set.

Table 256: Smoking Status - Meaningful Use (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09)					
@classCode	1..1	SHALL		1098-14806	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-14807	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-14815	
@root	1..1	SHALL		1098-14816	2.16.840.1.113883.10.20.22.4.78
@extension	1..1	SHALL		1098-32573	2014-06-09
id	1..*	SHALL		1098-32401	
code	1..1	SHALL		1098-19170	
@code	1..1	SHALL		1098-31039	72166-2
@codeSystem	1..1	SHALL		1098-32157	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1098-14809	
@code	1..1	SHALL		1098-19116	2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-31928	
value	1..1	SHALL	CD	1098-14810	
@code	1..1	SHALL		1098-14817	2.16.840.1.113883.11.20.9.38 (Current Smoking Status)
author	0..*	SHOULD		1098-31148	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-14806).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-14807).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-14815) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.78" (CONF:1098-14816).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-06-09" (CONF:1098-32573).
4. **SHALL** contain at least one [1..*] id (CONF:1098-32401).
5. **SHALL** contain exactly one [1..1] code (CONF:1098-19170).
 - a. This code **SHALL** contain exactly one [1..1] @code="72166-2" Tobacco smoking status NHIS (CONF:1098-31039).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1098-32157).

6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-14809).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19116).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-31928).

Note: This template represents a “snapshot in time” observation, simply reflecting what the patient’s current smoking status is at the time of the observation. As a result, the **effectiveTime** is constrained to just a time stamp, and will approximately correspond with the author/time.
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1098-14810).
 - a. This **value** **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet Current Smoking Status 2.16.840.1.113883.11.20.9.38 **STATIC** 2014-09-01 (CONF:1098-14817).
 - b. If the patient's current smoking status is unknown, **@code** **SHALL** contain '266927001' (Unknown if ever smoked) from ValueSet Current Smoking Status (2.16.840.1.113883.11.20.9.38 **STATIC** 2014-09-01) (CONF:1098-31019).
9. **SHOULD** contain zero or more [0..*] Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31148).

Table 257: Current Smoking Status

Value Set: Current Smoking Status 2.16.840.1.113883.11.20.9.38 This value set indicates the current smoking status of a patient. Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
449868002	SNOMED CT	2.16.840.1.113883.6.96	Current every day smoker
428041000124106	SNOMED CT	2.16.840.1.113883.6.96	Current some day smoker
8517006	SNOMED CT	2.16.840.1.113883.6.96	Former smoker
266919005	SNOMED CT	2.16.840.1.113883.6.96	Never smoker (Never Smoked)
77176002	SNOMED CT	2.16.840.1.113883.6.96	Smoker, current status unknown
266927001	SNOMED CT	2.16.840.1.113883.6.96	Unknown if ever smoked
428071000124103	SNOMED CT	2.16.840.1.113883.6.96	Heavy tobacco smoker
428061000124105	SNOMED CT	2.16.840.1.113883.6.96	Light tobacco smoker

Figure 124: Smoking Status - Meaningful Use (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.78" extension="2014-06-09" />
  <id extension="123456789" root="2.16.840.1.113883.19" />
  <code code="72166-2" codeSystem="2.16.840.1.113883.6.1" displayName="Tobacco smoking
status NHIS" />
  <statusCode code="completed" />
  <!-- The effectiveTime reflects when the current smoking status was observed. -->
  <effectiveTime value="20120910" />
  <!-- The value represents the patient's smoking status currently observed. -->
  <value xsi:type="CD" code="8517006" displayName="Former smoker"
codeSystem="2.16.840.1.113883.6.96" />
  <author typeCode="AUT">
    <time value="199803161030-0800" />
    <assignedAuthor>
      <id extension="555555555" root="1.1.1.1.1.1.2" />
    </assignedAuthor>
  </author>
</observation>
```

3.57 Social History Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2014-06-09
(open)]

Table 258: Social History Observation (V2) Contexts

Contained By:	Contains:
Social History Section (V2) (optional)	Author Participation

This template represents a patient's occupations, lifestyle, and environmental health risk factors. Demographic data (e.g., marital status, race, ethnicity, religious affiliation) are captured in the header. Though tobacco use and exposure may be represented with a Social History Observation, it is recommended to use the Current Smoking Status template or the Tobacco Use template instead, to represent smoking or tobacco habits.

Table 259: Social History Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2014-06-09)					
@classCode	1..1	SHALL		1098-8548	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-8549	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-8550	
@root	1..1	SHALL		1098-10526	2.16.840.1.113883.10.20.22.4.38
@extension	1..1	SHALL		1098-32495	2014-06-09
id	1..*	SHALL		1098-8551	
code	1..1	SHALL		1098-8558	2.16.840.1.113883.6.1 (LOINC)
originalText	0..1	SHOULD		1098-19221	
reference	0..1	SHOULD		1098-19222	
@value	0..1	SHOULD		1098-19223	
statusCode	1..1	SHALL		1098-8553	
@code	1..1	SHALL		1098-19117	2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-31868	
value	0..1	SHOULD		1098-8559	
author	0..*	SHOULD		1098-31869	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8548).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-8549).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-8550) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.38" (CONF:1098-10526).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32495).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8551).
5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from CodeSystem LOINC (2.16.840.1.113883.6.1) **DYNAMIC** (CONF:1098-8558).
 - a. This code **SHOULD** contain zero or one [0..1] **originalText** (CONF:1098-19221).
 - i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1098-19222).
 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1098-19223).
 - a. This reference/@value **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1098-19224).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-8553).

- a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19117).
7. **SHALL** contain exactly one [1..1] effectiveTime (CONF:1098-31868).
8. **SHOULD** contain zero or one [0..1] value (CONF:1098-8559).
 - a. If Observation/value is a physical quantity (xsi:type="PQ"), the unit of measure **SHALL** be selected from ValueSet UnitsOfMeasureCaseSensitive (2.16.840.1.113883.1.11.12839) **DYNAMIC** (CONF:1098-8555).
9. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31869).

Figure 125: Social History Observation (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.38"
    extension="2014-06-09" />
  <id root="37f76c51-6411-4e1d-8a37-957fd49d2cef" />
  <code code="74013-4"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Alcoholic drinks per day" />
  <statusCode code="completed" />
  <effectiveTime>
    <low value="20120215" />
  </effectiveTime>
  <value xsi:type="PQ" value="12" />
  <author typeCode="AUT">
    <templateId root="2.16.840.1.113883.10.20.22.4.119" />
    ...
  </author>
</observation>
```

3.58 Substance Administered Act

[act: identifier urn:oid:2.16.840.1.113883.10.20.22.4.118 (open)]

Table 260: Substance Administered Act Contexts

Contained By:	Contains:
Medication Activity (V2) (optional) Immunization Activity (V2) (optional)	

This template represents the administration course in a series. The entryRelationship/sequenceNumber in the containing template shows the order of this particular administration in that medication series.

Table 261: Substance Administered Act Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.118)					
@classCode	1..1	SHALL		1098-31500	2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-31501	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-31502	
@root	1..1	SHALL		1098-31503	2.16.840.1.113883.10.20.22.4.118
id	1..*	SHALL		1098-31504	
code	1..1	SHALL		1098-31506	
@code	1..1	SHALL		1098-31507	416118004
@codeSystem	1..1	SHALL		1098-31508	2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
statusCode	1..1	SHALL		1098-31505	2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	0..1	MAY		1098-31509	

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:1098-31500).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:1098-31501).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-31502) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.118" (CONF:1098-31503).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-31504).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-31506).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="416118004" Administration (CONF:1098-31507).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT 2.16.840.1.113883.6.96) (CONF:1098-31508).
6. **SHALL** contain exactly one [1..1] **statusCode**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1098-31505).
7. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:1098-31509).

Figure 126: Substance Administered Act Example

```
<substanceAdministration classCode="SBADM" moodCode="EVN">
  ...
  <consumable>
    ...
    <code code="43" codeSystem="2.16.840.1.113883.6.59" displayName="Hepatitis B
Vaccine" codeSystemName="CVX" />
  </consumable>
  <entryRelationship typeCode="COMP">
    <!-- This entryRelationship sequenceNumber indicates this is #2 in the series -->
    <sequenceNumber value="2" />
    <act classCode="ACT" moodCode="EVN">
      <!-- Substance Administered Act Template -->
      <templateId root="2.16.840.1.113883.10.20.22.4.118" />
      <id root="df8908d0-40f2-11e3-aa6e-0800200c9a66" />
      <code code="416118004" displayName="administration"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED-CT" />
      <statusCode code="completed" />
      <effectiveTime value="19991101" />
    </act>
  </entryRelationship>
  ...
</substanceAdministration>
```

3.59 Tobacco Use (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09
(open)]

Table 262: Tobacco Use (V2) Contexts

Contained By:	Contains:
Social History Section (V2) (optional) Patient Information Section (optional)	Author Participation

This template represents a patient's tobacco use.

All the types of tobacco use are represented using the codes from the tobacco use and exposure-finding hierarchy in SNOMED CT, including codes required for recording smoking status in Meaningful Use Stage 2.

The effectiveTime element is used to describe dates associated with the patient's tobacco use. Whereas the Smoking Status - Meaningful Use (V2) template (2.16.840.1.113883.10.20.22.4.78:2014-06-09) represents a “snapshot in time” observation, simply reflecting what the patient's current smoking status is at the time of the observation, this Tobacco Use template uses effectiveTime to represent the biologically relevant time of the observation. Thus, to record a former smoker, an observation of “cigarette smoker” will have an effectiveTime/low defining the time the patient started to smoke cigarettes and an effectiveTime/high defining the time the patient ceased to smoke cigarettes. To record a current smoker, the effectiveTime/low will define the time the patient started smoking and will have no effectiveTime/high to indicated that the patient is still smoking.

Table 263: Tobacco Use (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09)					
@classCode	1..1	SHALL		1098-16558	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-16559	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-16566	
@root	1..1	SHALL		1098-16567	2.16.840.1.113883.10.20.22.4.85
@extension	1..1	SHALL		1098-32589	2014-06-09
id	1..*	SHALL		1098-32400	
code	1..1	SHALL		1098-19174	
@code	1..1	SHALL		1098-19175	11367-0
@codeSystem	1..1	SHALL		1098-32172	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1098-16561	
@code	1..1	SHALL		1098-19118	2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-16564	
low	1..1	SHALL		1098-16565	
high	0..1	MAY		1098-31431	
value	1..1	SHALL	CD	1098-16562	
@code	1..1	SHALL		1098-16563	2.16.840.1.113883.11.20.9.41 (Tobacco Use)
author	0..*	SHOULD		1098-31152	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-16558).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-16559).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-16566) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.85" (CONF:1098-16567).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-06-09" (CONF:1098-32589).
4. **SHALL** contain at least one [1..*] id (CONF:1098-32400).
5. **SHALL** contain exactly one [1..1] code (CONF:1098-19174).
 - a. This code **SHALL** contain exactly one [1..1] @code="11367-0" History of tobacco use (CONF:1098-19175).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1098-32172).
6. **SHALL** contain exactly one [1..1] statusCode (CONF:1098-16561).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19118).

7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-16564).
 Note: The effectiveTime represents the biologically relevant time of the observation. Thus, an observation of “former smoker” will have an effectiveTime defining the time during which the patient has been a former smoker; an observation of “current smoker” will have an effectiveTime defining the time during which the patient has been a current smoker.
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1098-16565).
 - b. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:1098-31431).
8. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:1098-16562).
 - a. This value **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [Tobacco Use](#) 2.16.840.1.113883.11.20.9.41 **DYNAMIC** (CONF:1098-16563).
9. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31152).

Table 264: Tobacco Use

Value Set: Tobacco Use 2.16.840.1.113883.11.20.9.41 Contains values descending from the SNOMED CT® Finding of tobacco use and exposure (finding) (365980008) hierarchy. Value Set Source: http://vtsl.vetmed.vt.edu/TerminologyMgt/RF2Browser/ISA.cfm?SCT_ConceptID=365980008			
Code	Code System	Code System OID	Print Name
81703003	SNOMED CT	2.16.840.1.113883.6.96	Chews tobacco
228494002	SNOMED CT	2.16.840.1.113883.6.96	Snuff user
59978006	SNOMED CT	2.16.840.1.113883.6.96	Cigar smoker
43381005	SNOMED CT	2.16.840.1.113883.6.96	Passive smoker
228524006	SNOMED CT	2.16.840.1.113883.6.96	Exposed to tobacco smoke at home
427189007	SNOMED CT	2.16.840.1.113883.6.96	Maternal tobacco use
394871007	SNOMED CT	2.16.840.1.113883.6.96	Thinking about stopping smoking
65568007	SNOMED CT	2.16.840.1.113883.6.96	Cigarette smoker
160619003	SNOMED CT	2.16.840.1.113883.6.96	Rolls own cigarettes
266927001	SNOMED CT	2.16.840.1.113883.6.96	Pipe smoker
81703003	SNOMED CT	2.16.840.1.113883.6.96	Chews tobacco
428061000124105	SNOMED CT	2.16.840.1.113883.6.96	Light tobacco smoker
...			

Figure 127: Tobacco Use (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- ** Tobacco use ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.85" extension="2014-06-09" />
  <id root="45efb604-7049-4a2e-ad33-d38556c9636c" />
  <code code="11367-0" codeSystem="2.16.840.1.113883.6.1" displayName="History of tobacco
use" />
  <statusCode code="completed" />
  <effectiveTime>
    <!-- The low value reflects the start date of the observation/value (moderate
smoker) -->
    <low value="20090214" />
    <!-- The high value reflects the end date of the observation/value (moderate
smoker) -->
    <high value="20110215" />
  </effectiveTime>
  <value xsi:type="CD" code="160604004" displayName="Moderate cigarette smoker, 10-
19/day" codeSystem="2.16.840.1.113883.6.96" />
  <author typeCode="AUT">
    <time value="201209101145-0800" />
    <assignedAuthor>
      <id extension="555555555" root="1.1.1.1.1.1.2" />
    </assignedAuthor>
  </author>
</observation>
```

3.60 Transport Mode to Hospital Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.24 (open)]

Table 265: Transport Mode to Hospital Observation Contexts

Contained By:	Contains:
Current Visit (optional)	

This template represents the patient's mode of transport to the hospital.

Table 266: Transport Mode to Hospital Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.24)					
@classCode	1..1	SHALL		1106-614	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-615	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1106-609	
@root	1..1	SHALL		1106-611	2.16.840.1.113883.10.20.34.3.24
id	1..*	SHALL		1106-682	
code	1..1	SHALL		1106-610	
@code	1..1	SHALL		1106-612	74286-6
@codeSystem	1..1	SHALL		1106-613	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1106-683	
@code	1..1	SHALL		1106-684	2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1106-616	2.16.840.1.114222.4.11.7405 (Transport Mode to Hospital (NCHS))
@nullFlavor	0..1	MAY		1106-866	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1106-614).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1106-615).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1106-609) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.24" (CONF:1106-611).
4. **SHALL** contain at least one [1..*] **id** (CONF:1106-682).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1106-610).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="74286-6" Transport mode to hospital (CONF:1106-612).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1106-613).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1106-683).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:1106-684).
7. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHALL** be selected from ValueSet [Transport Mode to Hospital \(NCHS\)](#) 2.16.840.1.114222.4.11.7405 **DYNAMIC** (CONF:1106-616).
 - a. This value **MAY** contain zero or one [0..1] **@nullFlavor** (CONF:1106-866).
 - i. NullFlavor **SHALL** be "UNK" Unknown, "OTH" Other, or "NA" Not Applicable (CONF:1106-867).

Table 267: Transport Mode to Hospital (NCHS)

Value Set: Transport Mode to Hospital (NCHS) 2.16.840.1.114222.4.11.7405 The mode of transport (e.g., ground ambulance, walk-in, police) delivering the patient to a hospital.			
Code	Code System	Code System OID	Print Name
44613004	SNOMED CT	2.16.840.1.113883.6.96	Ground transport ambulance
32472009	SNOMED CT	2.16.840.1.113883.6.96	Medical helicopter
73957001	SNOMED CT	2.16.840.1.113883.6.96	Air transport ambulance
46160005	SNOMED CT	2.16.840.1.113883.6.96	Motor vehicle
257250006	SNOMED CT	2.16.840.1.113883.6.96	Pedestrian conveyance
442301000124107	SNOMED CT	2.16.840.1.113883.6.96	Police vehicle

Figure 128: Transport Mode to Hospital Observation Example

<pre> <observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.20.34.3.24"/> <id root="0c957122-f93f-484b-9a8e-8d1adbecea10"/> <code code="74286-6" displayName="Transport mode to hospital" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/> <statusCode code="completed"/> <!-- Form element: Arrival by ambulance --> <value xsi:type="CD" code="LA9315-8" displayName="Ground ambulance" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/> </observation> </pre>
--

3.61 Vital Sign Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09 (open)]

Table 268: Vital Sign Observation (V2) Contexts

Contained By:	Contains:
Vital Signs Organizer (V2) (required)	Author Participation

This template represents measurement of common vital signs. Vital signs are represented with additional vocabulary constraints for type of vital sign and unit of measure.

The following is a list of recommended units for common types of vital sign measurements:

Name	Unit
PulseOx	%
Height/Head Circumf	cm
Weight	kg
Temp	Cel
BP	mm[Hg]

Name	Unit
Pulse/Resp Rate	/min
BMI	kg/m2
BSA	m2

Table 269: Vital Sign Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09)					
@classCode	1..1	SHALL		1098-7297	2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-7298	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-7299	
@root	1..1	SHALL		1098-10527	2.16.840.1.113883.10.20.22.4.27
@extension	1..1	SHALL		1098-32574	2014-06-09
id	1..*	SHALL		1098-7300	
code	1..1	SHALL		1098-7301	2.16.840.1.113883.3.88.12.80.62 (Vital Sign Result)
statusCode	1..1	SHALL		1098-7303	
@code	1..1	SHALL		1098-19119	2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-7304	
value	1..1	SHALL	PQ	1098-7305	
@unit	1..1	SHALL		1098-31579	2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive)
interpretationCode	0..1	MAY		1098-7307	
@code	1..1	SHALL		1098-32886	2.16.840.1.113883.1.11.78 (Observation Interpretation (HL7))
methodCode	0..1	MAY	SET<CE>	1098-7308	
targetSiteCode	0..1	MAY	SET<CD>	1098-7309	
author	0..*	SHOULD		1098-7310	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7297).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7298).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-7299) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.27" (CONF:1098-10527).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-06-09" (CONF:1098-32574).
4. **SHALL** contain at least one [1..*] id (CONF:1098-7300).

5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Vital Sign Result](#) 2.16.840.1.113883.3.88.12.80.62 **DYNAMIC** (CONF:1098-7301).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7303).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19119).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-7304).
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:1098-7305).
 - a. This value **SHALL** contain exactly one [1..1] **@unit**, which **SHALL** be selected from ValueSet [UnitsOfMeasureCaseSensitive](#) 2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-31579).
9. **MAY** contain zero or one [0..1] **interpretationCode** (CONF:1098-7307).
 - a. The interpretationCode, if present, **SHALL** contain exactly one [1..1] **@code** (ValueSet: [Observation Interpretation \(HL7\)](#) 2.16.840.1.113883.1.11.78 **STATIC** 2014-09-01) (CONF:1098-32886).
10. **MAY** contain zero or one [0..1] **methodCode** (CONF:1098-7308).
11. **MAY** contain zero or one [0..1] **targetSiteCode** (CONF:1098-7309).
12. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-7310).

Table 270: Vital Sign Result

Value Set: Vital Sign Result 2.16.840.1.113883.3.88.12.80.62 This identifies the vital sign result type. Specific URL Pending Value Set Source: http://www.loinc.org/			
Code	Code System	Code System OID	Print Name
8310-5	LOINC	2.16.840.1.113883.6.1	Body Temperature
8462-4	LOINC	2.16.840.1.113883.6.1	BP Diastolic
8480-6	LOINC	2.16.840.1.113883.6.1	BP Systolic
8287-5	LOINC	2.16.840.1.113883.6.1	Head Circumference
8867-4	LOINC	2.16.840.1.113883.6.1	Heart Rate
8302-2	LOINC	2.16.840.1.113883.6.1	Height
39156-5	LOINC	2.16.840.1.113883.6.1	BMI (Body Mass Index)
2710-2	LOINC	2.16.840.1.113883.6.1	O2 % BldC Oximetry
9279-1	LOINC	2.16.840.1.113883.6.1	Respiratory Rate
3141-9	LOINC	2.16.840.1.113883.6.1	Weight Measured
8306-3	LOINC	2.16.840.1.113883.6.1	Height (Lying)
3140-1	LOINC	2.16.840.1.113883.6.1	BSA (Body Surface Area)

Figure 129: Vital Sign Observation (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.27" extension="2014-06-09" />
  <!-- Vital Sign Observation template -->
  <id root="c6f88321-67ad-11db-bd13-0800200c9a66" />
  <code code="8302-2" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Height" />
  <statusCode code="completed" />
  <effectiveTime value="20121114" />
  <value xsi:type="PQ" value="177" unit="cm" />
  ....
</observation>
```

3.62 Vital Signs Organizer (V2)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2014-06-09
(open)]

Table 271: Vital Signs Organizer (V2) Contexts

Contained By:	Contains:
Vital Signs Section (entries optional) (V2) (optional)	Author Participation
Vital Signs Section (entries required) (V2) (required)	Vital Sign Observation (V2)

This template provides a mechanism for grouping vital signs (e.g., grouping systolic blood pressure and diastolic blood pressure).

Table 272: Vital Signs Organizer (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2014-06-09)					
@classCode	1..1	SHALL		1098-7279	2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		1098-7280	2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-7281	
@root	1..1	SHALL		1098-10528	2.16.840.1.113883.10.20.22.4.26
@extension	1..1	SHALL		1098-32582	2014-06-09
id	1..*	SHALL		1098-7282	
code	0..1	MAY		1098-32740	
@code	1..1	SHALL		1098-32741	74728-7
@codeSystem	1..1	SHALL		1098-32742	2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1098-7284	
@code	1..1	SHALL		1098-19120	2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	0..1	MAY		1098-7288	
author	0..*	SHOULD		1098-31153	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
component	1..*	SHALL		1098-7285	
observation	1..1	SHALL		1098-15946	Vital Sign Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09)

1. **SHALL** contain exactly one [1..1] **@classCode**="CLUSTER" CLUSTER (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7279).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7280).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7281) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.26" (CONF:1098-10528).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32582).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7282).
5. **MAY** contain zero or one [0..1] **code** (CONF:1098-32740).
 - a. The code, if present, **SHALL** contain exactly one [1..1] **@code**="74728-7" Vital signs, weight, height, head circumference, oximetry, BMI, and BSA panel - HL7.CCDAr1.1 (CONF:1098-32741).
 - b. The code, if present, **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1 " LOINC (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:1098-32742).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7284).

- a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19120).
7. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:1098-7288).
 Note: The effectiveTime is an interval that spans the effectiveTimes of the contained vital signs observations. Because all contained vital signs observations have a required time stamp, it is not required that this effectiveTime be populated.
8. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31153).
9. **SHALL** contain at least one [1..*] **component** (CONF:1098-7285) such that it
 - a. **SHALL** contain exactly one [1..1] [Vital Sign Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09) (CONF:1098-15946).

Figure 130: Vital Signs Organizer (V2) Example

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <!-- ** Vital signs organizer ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.26" extension="2014-06-09" />
  <id root="24f6ad18-c512-40fc-82bd-1e131aa9e52b" />
  <code code="46680005" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED -CT"
  displayName="Vital signs" />
  <statusCode code="completed" />
  <effectiveTime>
    <low value="20120910" />
    <high value="20120910" />
  </effectiveTime>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.27" extension="2014-06-09" />
      <!-- Vital Sign Observation template -->
      ...
    </observation>
  </component>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.27" extension="2014-06-09" />
      <!-- Vital Sign Observation template -->
      ...
    </observation>
  </component>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.27" extension="2014-06-09" />
      <!-- Vital Sign Observation template -->
      ...
    </observation>
  </component>
</organizer>
```

4 PARTICIPATION AND OTHER TEMPLATES

4.1 Author Participation

[author: identifier urn:oid:2.16.840.1.113883.10.20.22.4.119 (open)]

Table 273: Author Participation Contexts

Contained By:	Contains:
Social History Observation (V2) (optional) Medication Activity (V2) (optional) Procedure Activity Act (V2) (optional) Procedure Activity Procedure (V2) (optional) Procedure Activity Observation (V2) (optional) Problem Observation (V2) (optional) Immunization Activity (V2) (optional) Planned Act (V2) (optional) Planned Procedure (V2) (optional) Planned Observation (V2) (optional) Planned Medication Activity (V2) (optional) Smoking Status - Meaningful Use (V2) (optional) Vital Sign Observation (V2) (optional) Result Observation (V2) (optional) Vital Signs Organizer (V2) (optional) Priority Preference (optional) Result Organizer (V2) (optional) Tobacco Use (V2) (optional) Planned Coverage (optional) Planned Immunization Activity (optional)	

This template represents the Author Participation (including the author timestamp). CDA R2 requires that Author and Author timestamp be asserted in the document header. From there, authorship propagates to contained sections and contained entries, unless explicitly overridden.

The Author Participation template was added to those templates in scope for analysis in R2. Although it is not explicitly stated in all templates the Author Participation template can be used in any template.

Table 274: Author Participation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
author (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)					
templateId	1..1	SHALL		1098-32017	
@root	1..1	SHALL		1098-32018	2.16.840.1.113883.10.20.22.4.119
time	1..1	SHALL		1098-31471	
assignedAuthor	1..1	SHALL		1098-31472	
id	1..*	SHALL		1098-31473	
code	0..1	SHOULD		1098-31671	2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
assignedPerson	0..1	MAY		1098-31474	
name	0..*	MAY		1098-31475	
representedOrganization	0..1	MAY		1098-31476	
@classCode	1..1	SHALL		1098-31477	ORG
id	0..*	MAY		1098-31478	
name	0..*	MAY		1098-31479	
telecom	0..*	MAY		1098-31480	
addr	0..*	MAY		1098-31481	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-32017) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.119" (CONF:1098-32018).
2. **SHALL** contain exactly one [1..1] **time** (CONF:1098-31471).
3. **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:1098-31472).
 - a. This assignedAuthor **SHALL** contain at least one [1..*] **id** (CONF:1098-31473).
 Note: This id may be set equal to (a pointer to) an id on a participant elsewhere in the document (header or entries) or a new author participant can be described here. If the id is pointing to a participant already described elsewhere in the document, assignedAuthor/id is sufficient to identify this participant and none of the remaining details of assignedAuthor are required to be set. Application Software must be responsible for resolving the identifier back to its original object and then rendering the information in the correct place in the containing section's narrative text. This id must be a pointer to another author participant.
 - i. If the ID isn't referencing an author described elsewhere in the document, then the author components required in US Realm Header are required here as well (CONF:1098-32628).
 - b. This assignedAuthor **SHOULD** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy \(HIPAA\)](#) 2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1098-31671).

- i. If the content is patient authored the code **SHOULD** be selected from Personal And Legal Relationship Role Type (2.16.840.1.113883.11.20.12.1) (CONF:1098-32315).
- c. This assignedAuthor **MAY** contain zero or one [0..1] **assignedPerson** (CONF:1098-31474).
 - i. The assignedPerson, if present, **MAY** contain zero or more [0..*] **name** (CONF:1098-31475).
- d. This assignedAuthor **MAY** contain zero or one [0..1] **representedOrganization** (CONF:1098-31476).
 - i. The representedOrganization, if present, **SHALL** contain exactly one [1..1] **@classCode="ORG"** (CONF:1098-31477).
 - ii. The representedOrganization, if present, **MAY** contain zero or more [0..*] **id** (CONF:1098-31478).
 - iii. The representedOrganization, if present, **MAY** contain zero or more [0..*] **name** (CONF:1098-31479).
 - iv. The representedOrganization, if present, **MAY** contain zero or more [0..*] **telecom** (CONF:1098-31480).
 - v. The representedOrganization, if present, **MAY** contain zero or more [0..*] **addr** (CONF:1098-31481).

Figure 131: New Author Participant Example

```

<author>
  <templateId root="2.16.840.1.113883.10.20.22.4.119" />
  <time value="201308011235-0800" />
  <assignedAuthor>
    <id root="20cf14fb-b65c-4c8c-a54d-b0cca834c18c" />
    <code code="163W00000X" codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health
Care Provider Taxonomy" displayName="Registered nurse" />
    <assignedPerson>
      <name>
        <given>Nurse</given>
        <family>Nightingale</family>
        <suffix>RN</suffix>
      </name>
    </assignedPerson>
    <representedOrganization>
      <id root="2.16.840.1.113883.19.5" />
      <name>Good Health Hospital</name>
    </representedOrganization>
  </assignedAuthor>
</author>

```

Figure 132: Existing Author Reference Example

```
<author>
  <time value="201308011235-0800" />
  <assignedAuthor>
    <!--
      This id points to a participant already described
      elsewhere in the document
    -->
    <id root="20cf14fb-b65c-4c8c-a54d-b0cca834c18c" />
  </assignedAuthor>
</author>
```

4.2 US Realm Address (AD.US.FIELDDED)

[addr: identifier urn:oid:2.16.840.1.113883.10.20.22.5.2 (open)]

Table 275: US Realm Address (AD.US.FIELDDED) Contexts

Contained By:	Contains:
US Realm Header (V2) (required) Medication Dispense (V2) (optional) Policy Activity (V2) (optional)	

Reusable address template, for use in US Realm CDA Header.

Table 276: US Realm Address (AD.US.FIELDDED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
addr (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)					
@use	0..1	SHOULD		81-7290	2.16.840.1.113883.1.11.10637 (PostalAddressUse)
country	0..1	SHOULD		81-7295	2.16.840.1.113883.3.88.12.80.63 (Country)
state	0..1	SHOULD	ST	81-7293	2.16.840.1.113883.3.88.12.80.1 (StateValueSet)
city	1..1	SHALL	ST	81-7292	
postalCode	0..1	SHOULD		81-7294	2.16.840.1.113883.3.88.12.80.2 (PostalCode)
streetAddressLine	1..4	SHALL	ST	81-7291	

1. **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet [PostalAddressUse](#) 2.16.840.1.113883.1.11.10637 **STATIC** 2005-05-01 (CONF:81-7290).
2. **SHOULD** contain zero or one [0..1] **country**, which **SHALL** be selected from ValueSet [Country](#) 2.16.840.1.113883.3.88.12.80.63 **DYNAMIC** (CONF:81-7295).
3. **SHOULD** contain zero or one [0..1] **state** (ValueSet: [StateValueSet](#) 2.16.840.1.113883.3.88.12.80.1 **DYNAMIC**) (CONF:81-7293).

- a. State is required if the country is US. If country is not specified, it's assumed to be US. If country is something other than US, the state **MAY** be present but **MAY** be bound to different vocabularies (CONF:81-10024).
4. **SHALL** contain exactly one [1..1] **city** (CONF:81-7292).
5. **SHOULD** contain zero or one [0..1] **postalCode**, which **SHOULD** be selected from ValueSet [PostalCode](#) 2.16.840.1.113883.3.88.12.80.2 **DYNAMIC** (CONF:81-7294).
 - a. PostalCode is required if the country is US. If country is not specified, it's assumed to be US. If country is something other than US, the postalCode **MAY** be present but **MAY** be bound to different vocabularies (CONF:81-10025).
6. **SHALL** contain at least one and not more than 4 **streetAddressLine** (CONF:81-7291).
7. **SHALL NOT** have mixed content except for white space (CONF:81-7296).

Table 277: PostalAddressUse

Value Set: PostalAddressUse 2.16.840.1.113883.1.11.10637			
A value set of HL7 Codes for address use.			
Value Set Source:			
http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
BAD	AddressUse	2.16.840.1.113883.5.1119	bad address
CONF	AddressUse	2.16.840.1.113883.5.1119	confidential
DIR	AddressUse	2.16.840.1.113883.5.1119	direct
H	AddressUse	2.16.840.1.113883.5.1119	home address
HP	AddressUse	2.16.840.1.113883.5.1119	primary home
HV	AddressUse	2.16.840.1.113883.5.1119	vacation home
PHYS	AddressUse	2.16.840.1.113883.5.1119	physical visit address
PST	AddressUse	2.16.840.1.113883.5.1119	postal address
PUB	AddressUse	2.16.840.1.113883.5.1119	public
TMP	AddressUse	2.16.840.1.113883.5.1119	temporary
WP	AddressUse	2.16.840.1.113883.5.1119	work place
...			

Table 278: StateValueSet

Value Set: StateValueSet 2.16.840.1.113883.3.88.12.80.1			
Identifies addresses within the United States are recorded using the FIPS 5-2 two-letter alphabetic codes for the State, District of Columbia, or an outlying area of the United States or associated area			
Value Set Source: http://www.itl.nist.gov/fipspubs/fip5-2.htm			
Code	Code System	Code System OID	Print Name
AL	FIPS 5-2 (State)	2.16.840.1.113883.6.92	Alabama
AK	FIPS 5-2 (State)	2.16.840.1.113883.6.92	Alaska
AZ	FIPS 5-2 (State)	2.16.840.1.113883.6.92	Arizona
...			

Figure 133: US Realm Address Example

<pre> <addr use="HP"> <streetAddressLine>22 Sample Street</streetAddressLine> <city>Beaverton</city> <state>OR</state> <postalCode>97867</postalCode> <country>US</country> </addr> </pre>
--

4.3 US Realm Date and Time (DTM.US.FIELDDED)

[effectiveTime: identifier urn:oid:2.16.840.1.113883.10.20.22.5.4 (open)]

Table 279: US Realm Date and Time (DTM.US.FIELDDED) Contexts

Contained By:	Contains:
US Realm Header [V2] (required)	

The US Realm Clinical Document Date and Time datatype flavor records date and time information. If no time zone offset is provided, you can make no assumption about time, unless you have made a local exchange agreement.

This data type uses the same rules as US Realm Date and Time (DT.US.FIELDDED), but is used with elements having a datatype of TS.

Table 280: US Realm Date and Time (DTM.US.FIELDDED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
effectiveTime (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4)					

1. **SHALL** be precise to the day (CONF:81-10127).
2. **SHOULD** be precise to the minute (CONF:81-10128).

3. **MAY** be precise to the second (CONF:81-10129).
4. If more precise than day, **SHOULD** include time-zone offset (CONF:81-10130).

Figure 134: US Realm Date and Time Example

```
<!-- Common values for date/time elements would range in precision to the day YYYYMMDD to
precision to the second with a time zone offset YYYYMMDDHHMMSS - ZZzz -->
<!-- time element with TS data type precise to the day for a birthdate -->
<time value="19800531"/>
<!-- effectiveTime element with IVL<TS> data type precise to the second for an observation
-->
<effectiveTime>
  <low value='20110706122735-0800' />
  <high value='20110706122815-0800' />
</effectiveTime>
```

4.4 US Realm Patient Name (PTN.US.FIELDDED)

[name: identifier urn:oid:2.16.840.1.113883.10.20.22.5.1 (open)]

Table 281: US Realm Patient Name (PTN.US.FIELDDED) Contexts

Contained By:	Contains:
Drug Monitoring Act (required)	

The US Realm Patient Name datatype flavor is a set of reusable constraints that can be used for the patient or any other person. It requires a first (given) and last (family) name. If a patient or person has only one name part (e.g., patient with first name only) place the name part in the field required by the organization. Use the appropriate nullFlavor, "Not Applicable" (NA), in the other field.

For information on mixed content see the Extensible Markup Language reference (<http://www.w3c.org/TR/2008/REC-xml-20081126/>).

Table 282: US Realm Patient Name (PTN.US.FIELDDED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
name (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1)					
@use	0..1	MAY		81-7154	2.16.840.1.113883.1.11.15913 (EntityNameUse)
family	1..1	SHALL	ST	81-7159	
@qualifier	0..1	MAY		81-7160	2.16.840.1.113883.11.20.9.26 (EntityPersonNamePartQualifier)
given	1..*	SHALL	ST	81-7157	
@qualifier	0..1	MAY		81-7158	2.16.840.1.113883.11.20.9.26 (EntityPersonNamePartQualifier)
prefix	0..*	MAY	ST	81-7155	
@qualifier	0..1	MAY		81-7156	2.16.840.1.113883.11.20.9.26 (EntityPersonNamePartQualifier)
suffix	0..1	MAY	ST	81-7161	
@qualifier	0..1	MAY		81-7162	2.16.840.1.113883.11.20.9.26 (EntityPersonNamePartQualifier)

1. **MAY** contain zero or one [0..1] @use, which **SHALL** be selected from ValueSet [EntityNameUse](#) 2.16.840.1.113883.1.11.15913 **STATIC** 2005-05-01 (CONF:81-7154).
2. **SHALL** contain exactly one [1..1] family (CONF:81-7159).
 - a. This family **MAY** contain zero or one [0..1] @qualifier, which **SHALL** be selected from ValueSet [EntityPersonNamePartQualifier](#) 2.16.840.1.113883.11.20.9.26 **STATIC** 2011-09-30 (CONF:81-7160).
3. **SHALL** contain at least one [1..*] given (CONF:81-7157).
 - a. Such givens **MAY** contain zero or one [0..1] @qualifier, which **SHALL** be selected from ValueSet [EntityPersonNamePartQualifier](#) 2.16.840.1.113883.11.20.9.26 **STATIC** 2011-09-30 (CONF:81-7158).
 - b. The second occurrence of given (given2)) if provided, **SHALL** include middle name or middle initial (CONF:81-7163).
4. **MAY** contain zero or more [0..*] prefix (CONF:81-7155).
 - a. The prefix, if present, **MAY** contain zero or one [0..1] @qualifier, which **SHALL** be selected from ValueSet [EntityPersonNamePartQualifier](#) 2.16.840.1.113883.11.20.9.26 **STATIC** 2011-09-30 (CONF:81-7156).
5. **MAY** contain zero or one [0..1] suffix (CONF:81-7161).
 - a. The suffix, if present, **MAY** contain zero or one [0..1] @qualifier, which **SHALL** be selected from ValueSet [EntityPersonNamePartQualifier](#) 2.16.840.1.113883.11.20.9.26 **STATIC** 2011-09-30 (CONF:81-7162).
6. **SHALL NOT** have mixed content except for white space (CONF:81-7278).

Table 283: EntityNameUse

Value Set: EntityNameUse 2.16.840.1.113883.1.11.15913			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
A	EntityNameUse	2.16.840.1.113883.5.45	Artist/Stage
ABC	EntityNameUse	2.16.840.1.113883.5.45	Alphabetic
ASGN	EntityNameUse	2.16.840.1.113883.5.45	Assigned
C	EntityNameUse	2.16.840.1.113883.5.45	License
I	EntityNameUse	2.16.840.1.113883.5.45	Indigenous/Tribal
IDE	EntityNameUse	2.16.840.1.113883.5.45	Ideographic
L	EntityNameUse	2.16.840.1.113883.5.45	Legal
P	EntityNameUse	2.16.840.1.113883.5.45	Pseudonym
PHON	EntityNameUse	2.16.840.1.113883.5.45	Phonetic
R	EntityNameUse	2.16.840.1.113883.5.45	Religious
SNDX	EntityNameUse	2.16.840.1.113883.5.45	Soundex
SRCH	EntityNameUse	2.16.840.1.113883.5.45	Search
SYL	EntityNameUse	2.16.840.1.113883.5.45	Syllabic

Table 284: EntityPersonNamePartQualifier

Value Set: EntityPersonNamePartQualifier 2.16.840.1.113883.11.20.9.26			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
AC	EntityNamePartQualifier	2.16.840.1.113883.5.43	academic
AD	EntityNamePartQualifier	2.16.840.1.113883.5.43	adopted
BR	EntityNamePartQualifier	2.16.840.1.113883.5.43	birth
CL	EntityNamePartQualifier	2.16.840.1.113883.5.43	callme
IN	EntityNamePartQualifier	2.16.840.1.113883.5.43	initial
NB	EntityNamePartQualifier	2.16.840.1.113883.5.43	nobility
PR	EntityNamePartQualifier	2.16.840.1.113883.5.43	professional
SP	EntityNamePartQualifier	2.16.840.1.113883.5.43	spouse
TITLE	EntityNamePartQualifier	2.16.840.1.113883.5.43	title
VV	EntityNamePartQualifier	2.16.840.1.113883.5.43	voorvoegsel

Figure 135: US Realm Patient Name Example

```
<name use="L">
  <prefix qualifier="TITLE">Rep</suffix>
  <given>Evelyn</given>
  <given qualifier="CL">Eve</given>
  <family qualifier="BR">Everywoman</family>
  <suffix qualifier="AC">J.D.</suffix>
</name>
```

4.5 US Realm Person Name (PN.US.FIELDED)

[name: identifier urn:oid:2.16.840.1.113883.10.20.22.5.1.1 (open)]

Table 285: US Realm Person Name (PN.US.FIELDED) Contexts

Contained By:	Contains:
US Realm Header (V2) (required)	

The US Realm Clinical Document Person Name datatype flavor is a set of reusable constraints that can be used for Persons.

Table 286: US Realm Person Name (PN.US.FIELDED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
name (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)					
name	1..1	SHALL		81-9368	

1. **SHALL** contain exactly one [1..1] **name** (CONF:81-9368).
 - a. The content of name **SHALL** be either a conformant Patient Name (PTN.US.FIELDED), or a string (CONF:81-9371).
 - b. The string **SHALL NOT** contain name parts (CONF:81-9372).

5 TEMPLATE IDS IN THIS GUIDE

Table 287: Template List

Template Title	Template Type	templateId
National Ambulatory Medical Care Survey	document	urn:oid:2.16.840.1.113883.10.20.34.1.2
National Health Care Surveys	document	urn:oid:2.16.840.1.113883.10.20.34.1.1
National Hospital Ambulatory Medical Care Survey - ED	document	urn:oid:2.16.840.1.113883.10.20.34.1.4
National Hospital Ambulatory Medical Care Survey - OPD	document	urn:oid:2.16.840.1.113883.10.20.34.1.3
US Realm Header (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09
Chief Complaint and Reason for Visit Section	section	urn:oid:2.16.840.1.113883.10.20.22.2.13
Continuity of Care Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.8
Diagnoses Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.2
Encounters Section (entries optional) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.22:2014-06-09
Hospital Admission Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.9
Immunizations Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.7
Medications Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.1
Medications Section (entries optional) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.1:2014-06-09
Observation Unit Stay Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.11
Patient Information Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.5
Payers Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2014-06-09
Payment Sources Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.4
Results Section (entries optional) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2014-06-09
Services and Procedures Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.3
Social History Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2014-06-09
Triage Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.10
Vital Signs Section (entries optional) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.4:2014-06-09
Vital Signs Section (entries required) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2014-06-09
Adverse Effect of Medical Treatment	entry	urn:oid:2.16.840.1.113883.10.20.34.3.14
Age Observation	entry	urn:oid:2.16.840.1.113883.10.20.22.4.31
Assessment Scale Observation	entry	urn:oid:2.16.840.1.113883.10.20.22.4.69
Assessment Scale Supporting Observation	entry	urn:oid:2.16.840.1.113883.10.20.22.4.86

Template Title	Template Type	templateId
Asthma Diagnosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.5
Caregiver Characteristics	entry	urn:oid:2.16.840.1.113883.10.20.22.4.72
Cause of Injury, Poisoning, or Adverse Effect	entry	urn:oid:2.16.840.1.113883.10.20.34.3.27
Characteristics of Home Environment	entry	urn:oid:2.16.840.1.113883.10.20.22.4.109
Co-morbid Condition Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.4
Condition Control Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.21
Coverage Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.60:2014-06-09
Cultural and Religious Observation	entry	urn:oid:2.16.840.1.113883.10.20.22.4.111
Current Visit	entry	urn:oid:2.16.840.1.113883.10.20.34.3.10
Diagnosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.1
Discharge Status Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.28
Drug Monitoring Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.123
Drug Vehicle	entry	urn:oid:2.16.840.1.113883.10.20.22.4.24
Encounter Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2014-06-09
Encounter Diagnosis (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2014-06-09
Episode of Care Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.32
Estimated Date of Delivery	entry	urn:oid:2.16.840.1.113883.10.20.15.3.1
External Document Reference	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09
Hospital Admission Encounter	entry	urn:oid:2.16.840.1.113883.10.20.34.3.18
Hospital Discharge Diagnosis (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.33:2014-06-09
Immunization Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Immunization Refusal Reason	entry	urn:oid:2.16.840.1.113883.10.20.22.4.53
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Injury or Poisoning Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.17
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Listed for Admission to Hospital Act	entry	urn:oid:2.16.840.1.113883.10.20.34.3.15
Major Reason for Visit	entry	urn:oid:2.16.840.1.113883.10.20.34.3.7
Medication Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09
Medication Dispense (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23

Template Title	Template Type	templateId
		:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
New Patient Act	entry	urn:oid:2.16.840.1.113883.10.20.34.3.9
Number of Visits in the Last 12 Months	entry	urn:oid:2.16.840.1.113883.10.20.34.3.26
Observation Unit Stay Encounter	entry	urn:oid:2.16.840.1.113883.10.20.34.3.33
On Oxygen on Arrival Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.29
Ordered Service Act	entry	urn:oid:2.16.840.1.113883.10.20.34.3.19
Ordered Service Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.2
Ordered Service Procedure	entry	urn:oid:2.16.840.1.113883.10.20.34.3.11
Pain Assessment Scale Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.22
Patient Residence Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.25
Patient Seen in this ED in last 72 Hours and Discharged	entry	urn:oid:2.16.840.1.113883.10.20.34.3.31
Planned Act (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09
Planned Coverage	entry	urn:oid:2.16.840.1.113883.10.20.22.4.129
Planned Immunization Activity	entry	urn:oid:2.16.840.1.113883.10.20.22.4.120
Planned Medication Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09
Planned Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09
Planned Procedure (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09
Policy Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.61:2014-06-09
Precondition for Substance Administration (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09
Pregnancy Observation	entry	urn:oid:2.16.840.1.113883.10.20.15.3.8
Primary Diagnosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.6
Priority Preference	entry	urn:oid:2.16.840.1.113883.10.20.22.4.143
Problem Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09
Problem Status (DEPRECATED)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2014-06-09
Procedure Activity Act (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.12:2014-06-09
Procedure Activity Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09
Procedure Activity Procedure (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09
Product Instance	entry	urn:oid:2.16.840.1.113883.10.20.22.4.37

Template Title	Template Type	templateId
Prognosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.22.4.113
Provided Service Act	entry	urn:oid:2.16.840.1.113883.10.20.34.3.20
Provided Service Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.3
Provided Service Procedure	entry	urn:oid:2.16.840.1.113883.10.20.34.3.12
Reaction Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09
Result Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2014-06-09
Result Organizer (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2014-06-09
Service Delivery Location	entry	urn:oid:2.16.840.1.113883.10.20.22.4.32
Severity Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09
Smoking Status - Meaningful Use (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09
Social History Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2014-06-09
Substance Administered Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.118
Tobacco Use (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09
Transport Mode to Hospital Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.24
Triage Level Assigned Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.23
Vital Sign Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09
Vital Signs Organizer (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
US Realm Address (AD.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
US Realm Date and Time (DTM.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.4
US Realm Patient Name (PTN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1
US Realm Person Name (PN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1.1

Table 288: Template Containments

Template Title	Template Type	templateId
National Ambulatory Medical Care Survey	document	urn:oid:2.16.840.1.113883.10.20.34.1.2
Chief Complaint and Reason for Visit Section	section	urn:oid:2.16.840.1.113883.10.20.22.2.13
Continuity of Care Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.8
Current Visit	entry	urn:oid:2.16.840.1.113883.10.20.34.3.10
Episode of Care Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.32
External Document Reference	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09
Major Reason for Visit	entry	urn:oid:2.16.840.1.113883.10.20.34.3.7
New Patient Act	entry	urn:oid:2.16.840.1.113883.10.20.34.3.9
Number of Visits in the Last 12 Months	entry	urn:oid:2.16.840.1.113883.10.20.34.3.26
Patient Seen in this ED in last 72 Hours and Discharged	entry	urn:oid:2.16.840.1.113883.10.20.34.3.31
Transport Mode to Hospital Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.24
Diagnoses Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.2
Adverse Effect of Medical Treatment	entry	urn:oid:2.16.840.1.113883.10.20.34.3.14
Cause of Injury, Poisoning, or Adverse Effect	entry	urn:oid:2.16.840.1.113883.10.20.34.3.27
Asthma Diagnosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.5
Condition Control Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.21
Severity Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09
Co-morbid Condition Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.4
Diagnosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.1
Injury or Poisoning Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.17
Cause of Injury, Poisoning, or Adverse Effect	entry	urn:oid:2.16.840.1.113883.10.20.34.3.27
Primary Diagnosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.6
Immunizations Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.7
Immunization Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Drug Vehicle	entry	urn:oid:2.16.840.1.113883.10.20.22.4.24
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Immunization Refusal Reason	entry	urn:oid:2.16.840.1.113883.10.20.22.4.53
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Dispense (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54

Template Title	Template Type	templateId
		:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
US Realm Address (AD.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Precondition for Substance Administration (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09
Reaction Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09
Medication Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Drug Monitoring Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.123
US Realm Patient Name (PTN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1
Drug Vehicle	entry	urn:oid:2.16.840.1.113883.10.20.22.4.24
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Dispense (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
Immunization Medication Information	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54

Template Title	Template Type	templateId
(V2)		:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
US Realm Address (AD.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Precondition for Substance Administration (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09
Substance Administered Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.118
Procedure Activity Procedure (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Drug Monitoring Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.123
US Realm Patient Name (PTN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1
Drug Vehicle	entry	urn:oid:2.16.840.1.113883.10.20.22.4.24
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Dispense (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17

Template Title	Template Type	templateId
		:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
US Realm Address (AD.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Precondition for Substance Administration (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09
Substance Administered Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.118
Product Instance	entry	urn:oid:2.16.840.1.113883.10.20.22.4.37
Service Delivery Location	entry	urn:oid:2.16.840.1.113883.10.20.22.4.32
Severity Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09
Substance Administered Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.118
Planned Immunization Activity	entry	urn:oid:2.16.840.1.113883.10.20.22.4.120
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Precondition for Substance Administration (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09
Priority Preference	entry	urn:oid:2.16.840.1.113883.10.20.22.4.143
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Medications Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.1
Medication Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Drug Monitoring Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.123

Template Title	Template Type	templateId
US Realm Patient Name (PTN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1
Drug Vehicle	entry	urn:oid:2.16.840.1.113883.10.20.22.4.24
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Dispense (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
US Realm Address (AD.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Precondition for Substance Administration (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09
Reaction Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09
Procedure Activity Procedure (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Product Instance	entry	urn:oid:2.16.840.1.113883.10.20.22.4.37
Service Delivery Location	entry	urn:oid:2.16.840.1.113883.10.20.22.4.32

Template Title	Template Type	templateId
Severity Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09
Substance Administered Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.118
Planned Medication Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Precondition for Substance Administration (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09
Priority Preference	entry	urn:oid:2.16.840.1.113883.10.20.22.4.143
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Patient Information Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.5
Patient Residence Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.25
Pregnancy Observation	entry	urn:oid:2.16.840.1.113883.10.20.15.3.8
Estimated Date of Delivery	entry	urn:oid:2.16.840.1.113883.10.20.15.3.1
Tobacco Use (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Payment Sources Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.4
Planned Coverage	entry	urn:oid:2.16.840.1.113883.10.20.22.4.129
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Results Section (entries optional) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2014-06-09
Result Organizer (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Result Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Services and Procedures Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.3
Ordered Service Act	entry	urn:oid:2.16.840.1.113883.10.20.34.3.19
Ordered Service Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.2
Ordered Service Procedure	entry	urn:oid:2.16.840.1.113883.10.20.34.3.11
Provided Service Act	entry	urn:oid:2.16.840.1.113883.10.20.34.3.20
Provided Service Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.3
Provided Service Procedure	entry	urn:oid:2.16.840.1.113883.10.20.34.3.12

Template Title	Template Type	templateId
Vital Signs Section (entries required) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2014-06-09
Vital Signs Organizer (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Vital Sign Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
National Health Care Surveys	document	urn:oid:2.16.840.1.113883.10.20.34.1.1
National Hospital Ambulatory Medical Care Survey - ED	document	urn:oid:2.16.840.1.113883.10.20.34.1.4
Chief Complaint and Reason for Visit Section	section	urn:oid:2.16.840.1.113883.10.20.22.2.13
Continuity of Care Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.8
Current Visit	entry	urn:oid:2.16.840.1.113883.10.20.34.3.10
Episode of Care Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.32
External Document Reference	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09
Major Reason for Visit	entry	urn:oid:2.16.840.1.113883.10.20.34.3.7
New Patient Act	entry	urn:oid:2.16.840.1.113883.10.20.34.3.9
Number of Visits in the Last 12 Months	entry	urn:oid:2.16.840.1.113883.10.20.34.3.26
Patient Seen in this ED in last 72 Hours and Discharged	entry	urn:oid:2.16.840.1.113883.10.20.34.3.31
Transport Mode to Hospital Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.24
Diagnoses Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.2
Adverse Effect of Medical Treatment	entry	urn:oid:2.16.840.1.113883.10.20.34.3.14
Cause of Injury, Poisoning, or Adverse Effect	entry	urn:oid:2.16.840.1.113883.10.20.34.3.27
Asthma Diagnosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.5
Condition Control Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.21
Severity Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09
Co-morbid Condition Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.4
Diagnosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.1
Injury or Poisoning Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.17
Cause of Injury, Poisoning, or Adverse Effect	entry	urn:oid:2.16.840.1.113883.10.20.34.3.27
Primary Diagnosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.6
Hospital Admission Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.9
Hospital Admission Encounter	entry	urn:oid:2.16.840.1.113883.10.20.34.3.18
Discharge Status Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.28
Hospital Discharge Diagnosis (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.33:2014-06-09
Problem Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:

Template Title	Template Type	templateId
		2014-06-09
Age Observation	entry	urn:oid:2.16.840.1.113883.10.20.22.4.31
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Priority Preference	entry	urn:oid:2.16.840.1.113883.10.20.22.4.143
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Problem Status (DEPRECATED)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.6: 2014-06-09
Prognosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.22.4.113
Listed for Admission to Hospital Act	entry	urn:oid:2.16.840.1.113883.10.20.34.3.15
Service Delivery Location	entry	urn:oid:2.16.840.1.113883.10.20.22.4.32
Immunizations Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.7
Immunization Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.52: 2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Drug Vehicle	entry	urn:oid:2.16.840.1.113883.10.20.22.4.24
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54: 2014-06-09
Immunization Refusal Reason	entry	urn:oid:2.16.840.1.113883.10.20.22.4.53
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19: 2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20: 2014-06-09
Medication Dispense (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.18: 2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54: 2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23: 2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17: 2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54: 2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20: 2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23: 2014-06-09
US Realm Address (AD.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17: 2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54: 2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20: 2014-06-09

Template Title	Template Type	templateId
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Precondition for Substance Administration (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09
Reaction Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09
Medication Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Drug Monitoring Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.123
US Realm Patient Name (PTN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1
Drug Vehicle	entry	urn:oid:2.16.840.1.113883.10.20.22.4.24
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Dispense (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
US Realm Address (AD.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Precondition for Substance Administration (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09

Template Title	Template Type	templateId
Substance Administered Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.118
Procedure Activity Procedure (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Drug Monitoring Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.123
US Realm Patient Name (PTN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1
Drug Vehicle	entry	urn:oid:2.16.840.1.113883.10.20.22.4.24
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Dispense (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
US Realm Address (AD.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09

Template Title	Template Type	templateId
Precondition for Substance Administration (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09
Substance Administered Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.118
Product Instance	entry	urn:oid:2.16.840.1.113883.10.20.22.4.37
Service Delivery Location	entry	urn:oid:2.16.840.1.113883.10.20.22.4.32
Severity Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09
Substance Administered Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.118
Planned Immunization Activity	entry	urn:oid:2.16.840.1.113883.10.20.22.4.120
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Precondition for Substance Administration (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09
Priority Preference	entry	urn:oid:2.16.840.1.113883.10.20.22.4.143
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Medications Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.1
Medication Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Drug Monitoring Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.123
US Realm Patient Name (PTN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1
Drug Vehicle	entry	urn:oid:2.16.840.1.113883.10.20.22.4.24
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Dispense (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09

Template Title	Template Type	templateId
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
US Realm Address (AD.US.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Precondition for Substance Administration (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09
Reaction Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09
Procedure Activity Procedure (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Product Instance	entry	urn:oid:2.16.840.1.113883.10.20.22.4.37
Service Delivery Location	entry	urn:oid:2.16.840.1.113883.10.20.22.4.32
Severity Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09
Substance Administered Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.118
Planned Medication Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Precondition for Substance Administration (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09
Priority Preference	entry	urn:oid:2.16.840.1.113883.10.20.22.4.143
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Observation Unit Stay Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.11

Template Title	Template Type	templateId
Observation Unit Stay Encounter	entry	urn:oid:2.16.840.1.113883.10.20.34.3.33
Patient Information Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.5
Patient Residence Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.25
Pregnancy Observation	entry	urn:oid:2.16.840.1.113883.10.20.15.3.8
Estimated Date of Delivery	entry	urn:oid:2.16.840.1.113883.10.20.15.3.1
Tobacco Use (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Payment Sources Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.4
Planned Coverage	entry	urn:oid:2.16.840.1.113883.10.20.22.4.129
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Services and Procedures Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.3
Ordered Service Act	entry	urn:oid:2.16.840.1.113883.10.20.34.3.19
Ordered Service Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.2
Ordered Service Procedure	entry	urn:oid:2.16.840.1.113883.10.20.34.3.11
Provided Service Act	entry	urn:oid:2.16.840.1.113883.10.20.34.3.20
Provided Service Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.3
Provided Service Procedure	entry	urn:oid:2.16.840.1.113883.10.20.34.3.12
Triage Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.10
On Oxygen on Arrival Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.29
Pain Assessment Scale Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.22
Triage Level Assigned Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.23
Vital Signs Section (entries required) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2014-06-09
Vital Signs Organizer (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Vital Sign Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
National Hospital Ambulatory Medical Care Survey - OPD	document	urn:oid:2.16.840.1.113883.10.20.34.1.3
Chief Complaint and Reason for Visit Section	section	urn:oid:2.16.840.1.113883.10.20.22.2.13
Continuity of Care Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.8
Current Visit	entry	urn:oid:2.16.840.1.113883.10.20.34.3.10
Episode of Care Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.32
External Document Reference	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09
Major Reason for Visit	entry	urn:oid:2.16.840.1.113883.10.20.34.3.7
New Patient Act	entry	urn:oid:2.16.840.1.113883.10.20.34.3.9

Template Title	Template Type	templateId
Number of Visits in the Last 12 Months	entry	urn:oid:2.16.840.1.113883.10.20.34.3.26
Patient Seen in this ED in last 72 Hours and Discharged	entry	urn:oid:2.16.840.1.113883.10.20.34.3.31
Transport Mode to Hospital Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.24
Diagnoses Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.2
Adverse Effect of Medical Treatment	entry	urn:oid:2.16.840.1.113883.10.20.34.3.14
Cause of Injury, Poisoning, or Adverse Effect	entry	urn:oid:2.16.840.1.113883.10.20.34.3.27
Asthma Diagnosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.5
Condition Control Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.21
Severity Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09
Co-morbid Condition Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.4
Diagnosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.1
Injury or Poisoning Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.17
Cause of Injury, Poisoning, or Adverse Effect	entry	urn:oid:2.16.840.1.113883.10.20.34.3.27
Primary Diagnosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.6
Immunizations Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.7
Immunization Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Drug Vehicle	entry	urn:oid:2.16.840.1.113883.10.20.22.4.24
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Immunization Refusal Reason	entry	urn:oid:2.16.840.1.113883.10.20.22.4.53
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Dispense (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09

Template Title	Template Type	templateId
US Realm Address (AD.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Precondition for Substance Administration (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09
Reaction Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09
Medication Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Drug Monitoring Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.123
US Realm Patient Name (PTN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1
Drug Vehicle	entry	urn:oid:2.16.840.1.113883.10.20.22.4.24
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Dispense (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
US Realm Address (AD.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
Immunization Medication Information	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54

Template Title	Template Type	templateId
(V2)		:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Precondition for Substance Administration (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09
Substance Administered Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.118
Procedure Activity Procedure (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Drug Monitoring Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.123
US Realm Patient Name (PTN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1
Drug Vehicle	entry	urn:oid:2.16.840.1.113883.10.20.22.4.24
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Dispense (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
US Realm Address (AD.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17

Template Title	Template Type	templateId
		:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Precondition for Substance Administration (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09
Substance Administered Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.118
Product Instance	entry	urn:oid:2.16.840.1.113883.10.20.22.4.37
Service Delivery Location	entry	urn:oid:2.16.840.1.113883.10.20.22.4.32
Severity Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09
Substance Administered Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.118
Planned Immunization Activity	entry	urn:oid:2.16.840.1.113883.10.20.22.4.120
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Precondition for Substance Administration (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09
Priority Preference	entry	urn:oid:2.16.840.1.113883.10.20.22.4.143
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Medications Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.1
Medication Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Drug Monitoring Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.123
US Realm Patient Name (PTN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1
Drug Vehicle	entry	urn:oid:2.16.840.1.113883.10.20.22.4.24
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Dispense (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23

Template Title	Template Type	templateId
		:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
US Realm Address (AD.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Medication Supply Order (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Precondition for Substance Administration (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09
Reaction Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09
Procedure Activity Procedure (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Product Instance	entry	urn:oid:2.16.840.1.113883.10.20.22.4.37
Service Delivery Location	entry	urn:oid:2.16.840.1.113883.10.20.22.4.32
Severity Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09
Substance Administered Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.118
Planned Medication Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Indication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
Instruction (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23

Template Title	Template Type	templateId
		:2014-06-09
Precondition for Substance Administration (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09
Priority Preference	entry	urn:oid:2.16.840.1.113883.10.20.22.4.143
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Patient Information Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.5
Patient Residence Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.25
Pregnancy Observation	entry	urn:oid:2.16.840.1.113883.10.20.15.3.8
Estimated Date of Delivery	entry	urn:oid:2.16.840.1.113883.10.20.15.3.1
Tobacco Use (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Payment Sources Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.4
Planned Coverage	entry	urn:oid:2.16.840.1.113883.10.20.22.4.129
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Results Section (entries optional) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2014-06-09
Result Organizer (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Result Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Services and Procedures Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.3
Ordered Service Act	entry	urn:oid:2.16.840.1.113883.10.20.34.3.19
Ordered Service Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.2
Ordered Service Procedure	entry	urn:oid:2.16.840.1.113883.10.20.34.3.11
Provided Service Act	entry	urn:oid:2.16.840.1.113883.10.20.34.3.20
Provided Service Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.3
Provided Service Procedure	entry	urn:oid:2.16.840.1.113883.10.20.34.3.12
Vital Signs Section (entries required) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2014-06-09
Vital Signs Organizer (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
Vital Sign Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
US Realm Header (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2014-06-09
US Realm Address (AD.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2

Template Title	Template Type	templateId
US Realm Date and Time (DTM.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.4
US Realm Person Name (PN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1.1

6 VALUE SETS IN THIS GUIDE

Table 289: Value Sets

Name	OID	URL
Act Priority	2.16.840.1.113883.1.11.16866	http://www.hl7.org
ActStatus	2.16.840.1.113883.1.11.159331	http://www.hl7.org
AdministrableDrugForm	2.16.840.1.113883.1.11.14570	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
Administrative Gender (HL7 V3)	2.16.840.1.113883.1.11.1	http://www.hl7.org
AgePQ_UCUM	2.16.840.1.113883.11.20.9.21	http://unitsofmeasure.org/ucum.html
Asthma (NCHS)	2.16.840.1.114222.4.11.7432	https://phinivads.cdc.gov/vads/SearchHome.action
Body Site	2.16.840.1.113883.3.88.12.3221.8.9	https://vsac.nlm.nih.gov
Clinical Substance	2.16.840.1.113762.1.4.1010.2	https://vsac.nlm.nih.gov/
Condition Control (NCHS)	2.16.840.1.114222.4.11.7433	N/A
Country	2.16.840.1.113883.3.88.12.80.63	http://www.iso.org/iso/country_codes/iso_3166_code_lists.htm
Coverage Role Type	2.16.840.1.113883.1.11.18877	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
Current Smoking Status	2.16.840.1.113883.11.20.9.38	https://vsac.nlm.nih.gov
CVX Vaccines Administered - Vaccine Set	2.16.840.1.113762.1.4.1010.6	https://vsac.nlm.nih.gov/
Disposition (NCHS)	2.16.840.1.114222.4.11.7436	https://phinivads.cdc.gov/
Disposition ED (NCHS)	2.16.840.1.114222.4.11.7437	http://phinivads.cdc.gov
EncounterTypeCode	2.16.840.1.113883.3.88.12.80.32	http://www.amacodingonline.com/
EntityNameUse	2.16.840.1.113883.1.11.15913	http://www.hl7.org
EntityPersonNamePartQualifier	2.16.840.1.113883.11.20.9.26	http://www.hl7.org
Episode of Care (NCHS)	2.16.840.1.114222.4.11.7439	https://phinivads.cdc.gov/vads/SearchHome.action
EthnicityGroup	2.16.840.1.114222.4.11.837	http://phinivads.cdc.gov/vads/ViewValueSet.action?id=35D34BBC-617F-DD11-B38D-00188B398520
Healthcare Provider Taxonomy (HIPAA)	2.16.840.1.114222.4.11.1066	http://www.nucc.org/index.php?option=com_content&view=article&id=14&Itemid=125
HealthcareServiceLocation	2.16.840.1.113883.1.11.20275	http://phinivads.cdc.gov/vads/SearchAllVocab_search.action?searchOptions.searchText=Healthcare+Service+Location+%28NHSN%29

Name	OID	URL
HL7 BasicConfidentialityKind	2.16.840.1.113883.1.11.16926	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
HL7FinanciallyResponsiblePartyType	2.16.840.1.113883.1.11.10416	http://www.hl7.org
Hospital Discharge Status (NCHS)	2.16.840.1.114222.4.11.7440	https://phinivads.cdc.gov/vads/SearchHome.action
INDRoleclassCodes	2.16.840.1.113883.11.20.9.33	http://www.hl7.org
Injury or Poisoning (NCHS)	2.16.840.1.114222.4.11.7403	https://phinivads.cdc.gov/vads/SearchHome.action
Language	2.16.840.1.113883.1.11.11526	http://www.ietf.org/rfc/rfc4646.txt
LanguageAbilityMode	2.16.840.1.113883.1.11.12249	http://www.hl7.org
LanguageAbilityProficiency	2.16.840.1.113883.1.11.12199	http://www.hl7.org
Major Reason for Visit (NCHS)	2.16.840.1.114222.4.11.7404	N/A
Marital Status	2.16.840.1.113883.1.11.12212	http://www.hl7.org
Medication Clinical Drug	2.16.840.1.113762.1.4.1010.4	https://vsac.nlm.nih.gov/
Medication Fill Status	2.16.840.1.113883.3.88.12.80.64	https://phinivads.cdc.gov/
Medication Route FDA	2.16.840.1.113883.3.88.12.3221.8.7	http://ushik.ahrq.gov/ViewItemDetails?system=mdr&itemKey=84244000
MoodCodeEvnInt	2.16.840.1.113883.11.20.9.18	http://www.hl7.org
No Immunization Reason Value Set	2.16.840.1.113883.1.11.19717	http://www.hl7.org
Observation Interpretation (HL7)	2.16.840.1.113883.1.11.78	http://www.hl7.org
ParticipationFunction	2.16.840.1.113883.1.11.10267	http://www.hl7.org/
Patient Education	2.16.840.1.113883.11.20.9.34	https://vsac.nlm.nih.gov
Patient Residence (NCHS)	2.16.840.1.114222.4.11.7402	http://www.phinivads.com
PatientLanguage	2.16.840.1.113883.11.20.9.64	http://www.loc.gov/standards/iso639-2/php/code_list.php
Personal And Legal Relationship Role Type	2.16.840.1.113883.11.20.12.1	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
Planned moodCode (Act/Encounter/Procedure)	2.16.840.1.113883.11.20.9.23	http://hl7.org/implement/standards/fhir/v3/ActMood/
Planned moodCode (Observation)	2.16.840.1.113883.11.20.9.25	http://www.hl7.org
Planned moodCode (SubstanceAdministration/Supply)	2.16.840.1.113883.11.20.9.24	http://hl7.org/implement/standards/fhir/v3/ActMood/
PostalAddressUse	2.16.840.1.113883.1.11.10637	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html

Name	OID	URL
PostalCode	2.16.840.1.113883.3.88.12.80.2	http://ushik.ahrq.gov/ViewItemDetails?system=mdr&itemKey=86671000
Priority Level	2.16.840.1.113883.11.20.9.60	https://vsac.nlm.nih.gov
Problem	2.16.840.1.113883.3.88.12.3221.7.4	https://vsac.nlm.nih.gov
Problem Severity	2.16.840.1.113883.3.88.12.3221.6.8	https://vsac.nlm.nih.gov
Problem Status	2.16.840.1.113883.3.88.12.80.68	https://vsac.nlm.nih.gov
Problem Type	2.16.840.1.113883.3.88.12.3221.7.2	http://www.loinc.org/
ProcedureAct statusCode	2.16.840.1.113883.11.20.9.22	http://www.hl7.org
Provider ED (NCHS)	2.16.840.1.114222.4.11.7419	http://www.phinvads.com
Race	2.16.840.1.113883.1.11.14914	http://phinvads.cdc.gov/vads/ViewCodeSystemConcept.action?oid=2.16.840.1.113883.6.238&code=1000-9
Race Category Excluding Nulls	2.16.840.1.113883.3.2074.1.1.3	N/A
Religious Affiliation	2.16.840.1.113883.1.11.19185	http://www.hl7.org/v3ballotarchive_temp_16B8D83E-1C23-BA17-0CBFC625BE7BA72F/v3ballot/html/infrastructure/vocabulary/vocabulary.html#voc-sets
Residence and Accommodation Type	2.16.840.1.113883.11.20.9.49	https://vsac.nlm.nih.gov
Result Status	2.16.840.1.113883.11.20.9.39	http://www.hl7.org
Source of Payment Typology (PHDSC)	2.16.840.1.114222.4.11.3591	http://www.phdsc.org/standards/payer-typology.asp
Specific Vaccine Clinical Drug	2.16.840.1.113762.1.4.1010.10	https://vsac.nlm.nih.gov/
StateValueSet	2.16.840.1.113883.3.88.12.80.1	http://www.itl.nist.gov/fipspubs/fip5-2.htm
Telecom Use (US Realm Header)	2.16.840.1.113883.11.20.9.20	http://www.hl7.org
Tobacco Use	2.16.840.1.113883.11.20.9.41	http://vtsl.vetmed.vt.edu/TerminologyMgt/RF2Browser/ISA.cfm?SCT_ConceptID=365980008
Transport Mode to Hospital (NCHS)	2.16.840.1.114222.4.11.7405	N/A
Triage System (NCHS)	2.16.840.1.114222.4.11.7401	https://phinvads.cdc.gov/vads/SearchHome.action
UnitsOfMeasureCaseSensitive	2.16.840.1.113883.1.11.12839	http://unitsofmeasure.org/ucum.html
Vaccine Clinical Drug	2.16.840.1.113762.1.4.1010.8	https://vsac.nlm.nih.gov/
Vital Sign Result	2.16.840.1.113883.3.88.12.80.62	http://www.loinc.org/
x_ServiceEventPerformer	2.16.840.1.113883.1.11.19601	http://www.hl7.org

7 CODE SYSTEMS IN THIS GUIDE

Table 290: Code Systems

Name	OID
ActCode	2.16.840.1.113883.5.4
ActMood	2.16.840.1.113883.5.1001
ActPriority	2.16.840.1.113883.5.7
ActReason	2.16.840.1.113883.5.8
ActStatus	2.16.840.1.113883.5.14
AddressUse	2.16.840.1.113883.5.1119
AdministrativeGender	2.16.840.1.113883.5.1
CDC Vaccine Code (CVX)	2.16.840.1.113883.12.292
ConfidentialityCode	2.16.840.1.113883.5.25
Country	2.16.840.1.113883.3.88.12.80.63
CPT4	2.16.840.1.113883.6.12
EntityClass	2.16.840.1.113883.5.41
EntityNamePartQualifier	2.16.840.1.113883.5.43
EntityNameUse	2.16.840.1.113883.5.45
FDA RouteOfAdministration	2.16.840.1.113883.3.26.1.1
FIPS 5-2 (State)	2.16.840.1.113883.6.92
Healthcare Provider Taxonomy (HIPAA)	2.16.840.1.113883.6.101
HITSP-CS-83	2.16.840.1.113883.5.83
HL7 HealthcareServiceLocation	2.16.840.1.113883.6.259
HL7ActClass	2.16.840.1.113883.5.6
HL7ActRelationshipType	2.16.840.1.113883.5.1002
HL7NullFlavor	2.16.840.1.113883.5.1008
HL7ParticipationType	2.16.840.1.113883.5.90
ICD10	2.16.840.1.113883.6.3
ICD10CM	2.16.840.1.113883.6.90
Language	2.16.840.1.113883.6.121
LanguageAbilityMode	2.16.840.1.113883.5.60
LanguageAbilityProficiency	2.16.840.1.113883.5.61
LOINC	2.16.840.1.113883.6.1
MaritalStatus	2.16.840.1.113883.5.2
orderableDrugForm	2.16.840.1.113883.5.85
participationFunction	2.16.840.1.113883.5.88
Participationsignature	2.16.840.1.113883.5.89
PHIN VADS code system	2.16.840.1.114222.4.5.274
Provider Role (HL7)	2.16.840.1.113883.3.88.12.3221.4

Name	OID
Race & Ethnicity - CDC	2.16.840.1.113883.6.238
ReligiousAffiliation	2.16.840.1.113883.5.1076
RoleClass	2.16.840.1.113883.5.110
RoleCode	2.16.840.1.113883.5.111
RxNorm	2.16.840.1.113883.6.88
SNOMED CT	2.16.840.1.113883.6.96
Source of Payment Typology (PHDSC)	2.16.840.1.113883.3.221.5
UCUM	2.16.840.1.113883.6.8
Unique Ingredient Identifier (UNII)	2.16.840.1.113883.4.9
USPostalCodes	2.16.840.1.113883.6.231