Attachment I- EHR Implementation Guide Templates

HL7 CDA® R2 Implementation Guide:
National Health Care Surveys Release 1,
DSTU Release 1.2 –
US Realm

August 2016

Draft Standard for Trial Use (DSTU)

Volume 2 — Templates and Supporting

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Terminology	Owner/Contact
Current Procedures Terminology (CPT) code set	American Medical Association http://www.ama-assn.org/ama/pub/physician-resources/solutions-managing-your-practice/coding-billing-insurance/cpt/cpt-products-services/licensing.page?
SNOMED CT	International Healthcare Terminology Standards Developing Organization (IHTSDO) http://www.ihtsdo.org/snomed-ct/get-snomed-ct or info@ihtsdo.org
Logical Observation Identifiers Names & Codes (LOINC)	Regenstrief Institute
International Classification of Diseases (ICD) codes	World Health Organization (WHO)
NUCC Health Care Provider Taxonomy code set	American Medical Association. Please see 222.nucc.org. AMA licensing contact: 312-464-5022 (AMA IP services)

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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)]

Published as part of Consolidated CDA Templates for Clinical Notes (US Realm) DSTU R2

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.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4
confidentialityCode	1..1	SHALL		1098-5259	urn:oid:2.16.840.1.113883.1.11.16926 (HL7 BasicConfidentialityKind)
languageCode	1..1	SHALL		1098-5372	urn:oid: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.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2

telecom	1..*	SHALL		[1098-5280](#)	
@use	0..1	SHOULD		[1098-5375](#)	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
patient	1..1	SHALL		[1098-5283](#)	
name	1..*	SHALL		[1098-5284](#)	US Realm Person Name (PN.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1
administrativeGenderCode	1..1	SHALL		[1098-6394](#)	urn:oid:2.16.840.1.113883.1.11.1 (Administrative Gender (HL7 V3))
birthTime	1..1	SHALL		[1098-5298](#)	
maritalStatusCode	0..1	SHOULD		[1098-5303](#)	urn:oid:2.16.840.1.113883.1.11.12212 (Marital Status)
religiousAffiliationCode	0..1	MAY		[1098-5317](#)	urn:oid:2.16.840.1.113883.1.11.19185 (Religious Affiliation)
raceCode	1..1	SHALL		[1098-5322](#)	urn:oid:2.16.840.1.113883.3.2074.1.1.3 (Race Category Excluding Nulls)
sdtc:raceCode	0..*	MAY		[1098-7263](#)	urn:oid:2.16.840.1.113883.1.11.14914 (Race)
ethnicGroupCode	1..1	SHALL		[1098-5323](#)	urn:oid:2.16.840.1.114222.4.11.837 (Ethnicity)
sdtc:ethnicGroupCode	0..*	MAY		[1098-32901](#)	urn:oid:2.16.840.1.114222.4.11.877 (Detailed Ethnicity)
guardian	0..*	MAY		[1098-5325](#)	
code	0..1	SHOULD		[1098-5326](#)	urn:oid: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.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
telecom	0..*	SHOULD		[1098-5382](#)	
@use	0..1	SHOULD		[1098-7993](#)	urn:oid: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.FIELDED) (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	urn:oid:2.16.840.1.113883.3.88.12.80.63 (Country)
postalCode	0..1	MAY		1098-5403	urn:oid:2.16.840.1.113883.3.88.12.80.2 (PostalCode)
languageCommunication	1..*	SHALL		1098-5406	
languageCode	1..1	SHALL		1098-5407	urn:oid:2.16.840.1.113883.11.20.9.64 (PatientLanguage)
modeCode	0..1	MAY		1098-5409	urn:oid:2.16.840.1.113883.1.11.12249 (LanguageAbilityMode)
proficiencyLevelCode	0..1	SHOULD		1098-9965	urn:oid: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	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
addr	1..*	SHALL		1098-5422	US Realm Address (AD.US.FIELDED) (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.FIELDED) (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](#)	urn:oid: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](#)	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		[1098-5452](#)	US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
telecom	1..*	SHALL		[1098-5428](#)	
@use	0..1	SHOULD		[1098-7995](#)	urn:oid: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.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1
assignedAuthoringDevice	0..1	SHOULD		[1098-16783](#)	
manufacturerModelName	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](#)	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		[1098-5460](#)	US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
telecom	1..*	SHALL		[1098-5466](#)	

@use	0..1	SHOULD		1098-7996	urn:oid: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.FIELDED) (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	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1098-8220	US Realm Address (AD.US.FIELDED) (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.FIELDED) (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	
representedCustodianOrganization	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	urn:oid: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.FIELDED) (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.FIELDED) (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.FIELDED) (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](#)	urn:oid: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](#)	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		[1098-5589](#)	[US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2](#)
telecom	1..*	SHALL		[1098-5595](#)	
@use	0..1	SHOULD		[1098-7999](#)	urn:oid: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.FIELDED) (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.FIELDED) (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	urn:oid: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	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1098-5616	US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
telecom	1..*	SHALL		1098-5622	
@use	0..1	SHOULD		1098-8000	urn:oid: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.FIELDED) (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	urn:oid:2.16.840.1.113883.1.11.19601 (x_ServiceEventPerformer)
functionCode	0..1	MAY		1098-16818	
@code	0..1	SHOULD		1098-32889	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = completed
componentOf	0..1	MAY		1098-9955	
encompassingEncounter	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.FIELDED)** (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** urn:oid: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** urn:oid: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.FIELDED)** (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)** urn:oid: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.FIELDED)** (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)** urn:oid: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** urn:oid: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** urn:oid: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** urn:oid: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** urn:oid: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 **Ethnicity** urn:oid:2.16.840.1.114222.4.11.837 **DYNAMIC** (CONF:1098-5323).

9. This patient **MAY** contain zero or more [0..*] **sdtc:ethnicGroupCode**, which **SHALL** be selected from ValueSet **Detailed Ethnicity** urn:oid:2.16.840.1.114222.4.11.877 **DYNAMIC** (CONF:1098-32901).

10. 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** urn:oid: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.FIELDED)** (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)** urn:oid: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.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1098-5386).

11. 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** urn:oid: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** urn:oid: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).

12. 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** urn:oid: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
urn:oid: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**
urn:oid: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)** urn:oid: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.FIELDED) (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>
```

```
                    <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="1.1.1.1.1.1.1.1.2" />
            <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.FIELDED)** (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 urn:oid: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)** urn:oid: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.FIELDED)** (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)** urn:oid: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.FIELDED)** (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)** urn:oid: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.FIELDED)** (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)** urn:oid: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.FIELDED)** (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)** urn:oid: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.FIELDED)** (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.FIELDED)** (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="2.16.840.1.11.19563"
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)** urn:oid: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.FIELDED)** (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.FIELDED)** (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.FIELDED)** (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 urn:oid: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)**
       urn:oid: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.FIELDED)** (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)**
         urn:oid: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.FIELDED)** (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

    a. **SHALL** contain exactly one [1..1] **US Realm Date and Time (DTM.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:1098-5608).

    b. **SHALL** contain exactly one [1..1] **signatureCode** (CONF:1098-5610).

        i. This signatureCode **SHALL** contain exactly one [1..1] **@code**="S" (CodeSystem: Participationsignature urn:oid: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.

    c. **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:
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.

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)** urn:oid: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.FIELDED)** (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)** urn:oid: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.FIELDED)** (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
    a. **MAY** contain zero or one [0..1] **time** (CONF:1098-10004).
    b. **SHALL** contain associatedEntity/associatedPerson **AND/OR** associatedEntity/scopingOrganization (CONF:1098-10006).
    c. 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** urn:oid: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** urn:oid: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)** urn:oid: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="1.1.1.1.1.1.1.1.2" />
            <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

```xml
<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 urn:oid:2.16.840.1.113883.5.6) (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 urn:oid:2.16.840.1.113883.1.11.16926 A value set of HL7 Code indication the level of confidentiality an act. Value Set Source: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
N	ConfidentialityCode	urn:oid:2.16.840.1.113883.5.25	normal
R	ConfidentialityCode	urn:oid:2.16.840.1.113883.5.25	restricted
V	ConfidentialityCode	urn:oid:2.16.840.1.113883.5.25	very restricted

Table 4: Language

Value Set: Language urn:oid: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.loc.gov/standards/iso639-2/php/code_list.php**

Code	Code System	Code System OID	Print Name
aa	Language	urn:oid:2.16.840.1.113883.6.121	Afar
ab	Language	urn:oid:2.16.840.1.113883.6.121	Abkhazian
ace	Language	urn:oid:2.16.840.1.113883.6.121	Achinese
ach	Language	urn:oid:2.16.840.1.113883.6.121	Acoli
ada	Language	urn:oid:2.16.840.1.113883.6.121	Adangme
ady	Language	urn:oid:2.16.840.1.113883.6.121	Adyghe; Adygei
ae	Language	urn:oid:2.16.840.1.113883.6.121	Avestan
af	Language	urn:oid:2.16.840.1.113883.6.121	Afrikaans
afa	Language	urn:oid:2.16.840.1.113883.6.121	Afro-Asiatic (Other)
afh	Language	urn:oid:2.16.840.1.113883.6.121	Afrihili
...			

Table 5: Telecom Use (US Realm Header)

Value Set: Telecom Use (US Realm Header) urn:oid:2.16.840.1.113883.11.20.9.20
Value Set Source: **https://vsac.nlm.nih.gov/**

Code	Code System	Code System OID	Print Name
HP	AddressUse	urn:oid:2.16.840.1.113883.5.1119	Primary home
HV	AddressUse	urn:oid:2.16.840.1.113883.5.1119	Vacation home
WP	AddressUse	urn:oid:2.16.840.1.113883.5.1119	Work place
MC	AddressUse	urn:oid:2.16.840.1.113883.5.1119	Mobile contact

Table 6: Administrative Gender (HL7 V3)

Value Set: Administrative Gender (HL7 V3) urn:oid: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: **https://vsac.nlm.nih.gov/**

Code	Code System	Code System OID	Print Name
F	AdministrativeGender	urn:oid:2.16.840.1.113883.5.1	Female
M	AdministrativeGender	urn:oid:2.16.840.1.113883.5.1	Male
UN	AdministrativeGender	urn:oid:2.16.840.1.113883.5.1	Undifferentiated

Table 7: Marital Status

Value Set: Marital Status urn:oid:2.16.840.1.113883.1.11.12212

Marital Status is the domestic partnership status of a person.

Value Set Source: **https://vsac.nlm.nih.gov/**

Code	Code System	Code System OID	Print Name
A	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Annulled
D	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Divorced
T	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Domestic partner
I	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Interlocutory
L	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Legally Separated
M	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Married
S	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Never Married
P	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Polygamous
W	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Widowed

Table 8: Religious Affiliation

Value Set: Religious Affiliation urn:oid:2.16.840.1.113883.1.11.19185			
A value set of codes that reflect spiritual faith affiliation.			
Value Set Source: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
1001	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Adventist
1002	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	African Religions
1003	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Afro-Caribbean Religions
1004	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Agnosticism
1005	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Anglican
1006	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Animism
1007	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Atheism
1008	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Babi & Baha'I faiths
1009	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Baptist
1010	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Bon
...			

Table 9: Race Category Excluding Nulls

Value Set: Race Category Excluding Nulls urn:oid:2.16.840.1.113883.3.2074.1.1.3			
Value Set Source: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
1002-5	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	American Indian or Alaska Native
2028-9	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Asian
2054-5	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Black or African American
2076-8	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Native Hawaiian or Other Pacific Islander
2106-3	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	White

Table 10: Ethnicity

Value Set: Ethnicity urn:oid:2.16.840.1.114222.4.11.837
Code System: Race & Ethnicity - CDC 2.16.840.1.113883.6.238
Value Set Source: **https://vsac.nlm.nih.gov/**

Code	Code System	Code System OID	Print Name
2135-2	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Hispanic or Latino
2186-5	Race & Ethnicity - CDC	urn:oid: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 urn:oid: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:
https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.11.20.12.1

Code	Code System	Code System OID	Print Name
SELF	RoleCode	urn:oid:2.16.840.1.113883.5.111	self
MTH	RoleCode	urn:oid:2.16.840.1.113883.5.111	mother
FTH	RoleCode	urn:oid:2.16.840.1.113883.5.111	father
DAU	RoleCode	urn:oid:2.16.840.1.113883.5.111	natural daughter
SON	RoleCode	urn:oid:2.16.840.1.113883.5.111	natural son
DAUINLAW	RoleCode	urn:oid:2.16.840.1.113883.5.111	daughter in-law
SONINLAW	RoleCode	urn:oid:2.16.840.1.113883.5.111	son in-law
GUARD	RoleCode	urn:oid:2.16.840.1.113883.5.111	guardian
HPOWATT	RoleCode	urn:oid:2.16.840.1.113883.5.111	healthcare power of attorney
…			

Table 12: Country

Value Set: Country urn:oid: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	urn:oid:2.16.840.1.113883.3.88.12.80.63	Aruba
IL	Country	urn:oid:2.16.840.1.113883.3.88.12.80.63	Israel
...			

Table 13: PostalCode

Value Set: PostalCode urn:oid: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	urn:oid:2.16.840.1.113883.6.231	Bryn Athyn
92869-1736	USPostalCodes	urn:oid:2.16.840.1.113883.6.231	Orange, CA
32830-8413	USPostalCodes	urn:oid:2.16.840.1.113883.6.231	Lake Buena Vista, FL
...			

Table 14: PatientLanguage

Value Set: PatientLanguage urn:oid: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	urn:oid:2.16.840.1.113883.6.121	Afar
abk	Language	urn:oid:2.16.840.1.113883.6.121	Abkhazian
afr	Language	urn:oid:2.16.840.1.113883.6.121	Afrikaans
aka	Language	urn:oid:2.16.840.1.113883.6.121	Akan
sqi	Language	urn:oid:2.16.840.1.113883.6.121	Albanian
amh	Language	urn:oid:2.16.840.1.113883.6.121	Amharic
ara	Language	urn:oid:2.16.840.1.113883.6.121	Arabic
arg	Language	urn:oid:2.16.840.1.113883.6.121	Aragonese
hye	Language	urn:oid:2.16.840.1.113883.6.121	Armenian
asm	Language	urn:oid:2.16.840.1.113883.6.121	Assamese
…			

Table 15: LanguageAbilityMode

Value Set: LanguageAbilityMode urn:oid: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: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
ESGN	LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Expressed signed
ESP	LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Expressed spoken
EWR	LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Expressed written
RSGN	LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Received signed
RSP	LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Received spoken
RWR	LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Received written

Table 16: LanguageAbilityProficiency

Value Set: LanguageAbilityProficiency urn:oid:2.16.840.1.113883.1.11.12199			
Value Set Source: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
E	LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.5.61	Excellent
F	LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.5.61	Fair
G	LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.5.61	Good
P	LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.5.61	Poor

Table 17: Race

Value Set: Race urn:oid: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: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
1002-5	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	American Indian or Alaska Native
2028-9	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Asian
2054-5	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Black or African American
2076-8	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Native Hawaiian or Other Pacific Islander
2106-3	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	White
1006-6	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Abenaki
1579-2	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Absentee Shawnee
1490-2	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Acoma
2126-1	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Afghanistani
1740-0	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Ahtna
...			

Table 18: Healthcare Provider Taxonomy (HIPAA)

Value Set: Healthcare Provider Taxonomy (HIPAA) urn:oid:2.16.840.1.114222.4.11.1066

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.

Value Set Source:
https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.1066

Code	Code System	Code System OID	Print Name
171100000X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Acupuncturist
363LA2100X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Nurse Practitioner - Acute Care
364SA2100X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Clinical Nurse Specialist - Acute Care
101YA0400X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Counselor - Addiction (Substance Use Disorder)
103TA0400X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Psychologist - Addiction (Substance Use Disorder)
163WA0400X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Registered Nurse - Addiction (Substance Use Disorder)
207LA0401X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Anesthesiology - Addiction Medicine
207QA0401X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Family Medicine - Addiction Medicine
207RA0401X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Internal Medicine - Addiction Medicine
2084A0401X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Psychiatry & Neurology - Addiction Medicine
...			

Table 19: INDRoleclassCodes

Value Set: INDRoleclassCodes urn:oid:2.16.840.1.113883.11.20.9.33			
Value Set Source: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
PRS	RoleClass	urn:oid:2.16.840.1.113883.5.110	personal relationship
NOK	RoleClass	urn:oid:2.16.840.1.113883.5.110	next of kin
CAREGIVER	RoleClass	urn:oid:2.16.840.1.113883.5.110	caregiver
AGNT	RoleClass	urn:oid:2.16.840.1.113883.5.110	agent
GUAR	RoleClass	urn:oid:2.16.840.1.113883.5.110	guarantor
ECON	RoleClass	urn:oid:2.16.840.1.113883.5.110	emergency contact

Table 20: x_ServiceEventPerformer

Value Set: x_ServiceEventPerformer urn:oid:2.16.840.1.113883.1.11.19601			
Value Set Source: **http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html**			
Code	**Code System**	**Code System OID**	**Print Name**
PRF	HL7ParticipationType	urn:oid:2.16.840.1.113883.5.90	performer
SPRF	HL7ParticipationType	urn:oid:2.16.840.1.113883.5.90	secondary performer
PPRF	HL7ParticipationType	urn:oid:2.16.840.1.113883.5.90	primary performer

Table 21: ParticipationFunction

Value Set: ParticipationFunction urn:oid: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: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
SNRS	participationFunction	urn:oid:2.16.840.1.113883.5.88	Scrub nurse
SASST	participationFunction	urn:oid:2.16.840.1.113883.5.88	Second assistant surgeon
...			

Table 22: Detailed Ethnicity

Value Set: Detailed Ethnicity urn:oid:2.16.840.1.114222.4.11.877			
List of detailed ethnicity codes reported on a limited basis			
Value Set Source: **http://phinvads.cdc.gov/vads/ViewValueSet.action?id=34D34BBC-617F-DD11-B38D-00188B398520#**			
Code	**Code System**	**Code System OID**	**Print Name**
2138-6	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Andalusian
2166-7	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Argentinean
2139-4	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Asturian
2142-8	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Belearic Islander
2167-5	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Bolivian
2163-4	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Canal Zone
2145-1	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Canarian
2140-2	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Castillian
2141-0	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Catalonian
2155-0	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Central American
…			

1.1.2 National Health Care Surveys (V2)

```
[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.1.1:2015-
04-01 (open)]
```

```
Published as part of National Health Care Surveys, Release 1, DSTU 1.1 - US
Realm
```

This document-level template describes constraints that apply to three National Health Care Surveys conducted by the Center for Disease Control and Prevention (CDC) National Center for Health Statistics (NCHS): the National Ambulatory Medical Care Survey (NAMCS), the National Hospital Ambulatory Medical Care Survey (NHAMCS) and the National Hospital Care Survey (NHCS) These surveys collect data from physicians, ambulatory care centers, and hospitals about visits to inpatient (IP), outpatient (OP), and emergency department (ED) settings. The data collected is analyzed to produce nationally representative statistics to answer key questions about health care utilization, quality, and disparities that are of interest to public health professionals, researchers, and health care policy makers. Data captured include information on patient demographics, symptoms, diagnoses, medications, therapeutic and diagnostic procedures, patient management, and planned future treatments. Given the

similarities of data collected across the surveys, the structured documents specified in this guide are organized by setting of visit rather than by survey. This template is applicable for all three surveys (NAMCS, NHAMCS, and NHCS) and all care settings (ED, IP, and OP).

Table 23: National Health Care Surveys (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.1.1:2015-04-01)					
templateId	1..1	SHALL		1184-1	
@root	1..1	SHALL		1184-2	2.16.840.1.113883.10.20.34.1.1
@extension	1..1	SHALL		1184-877	2015-04-01
code	1..1	SHALL		1184-3	
@code	1..1	SHALL		1184-4	75619-7
@codeSystem	1..1	SHALL		1184-5	2.16.840.1.113883.6.1
recordTarget	1..*	SHALL		1184-6	
patientRole	1..1	SHALL		1184-7	
id	0..1	SHOULD		1184-1164	
id	0..1	SHOULD		1184-1162	
@root	1..1	SHALL		1184-1165	2.16.840.1.113883.4.572
@extension	1..1	SHOULD		1184-1166	
id	0..1	SHOULD		1184-1163	
@root	1..1	SHALL		1184-1167	2.16.840.1.113883.4.1
@extension	1..1	SHOULD		1184-1168	
patient	1..1	SHALL		1184-11	
administrativeGenderCode	1..1	SHALL		1184-12	
@nullFlavor	0..1	MAY		1184-643	OTH
@code	0..1	SHOULD		1184-644	
birthTime	1..1	SHALL		1184-13	
documentationOf	0..*	MAY		1184-20	
serviceEvent	1..1	SHALL		1184-21	
performer	0..*	SHOULD		1184-22	
assignedEntity	1..1	SHALL		1184-53	

code	1..1	SHALL		[1184-56](#)	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
componentOf	0..1	MAY		[1184-17](#)	
encompassingEncounter	1..1	SHALL		[1184-18](#)	
id	0..1	SHOULD		[1184-361](#)	
effectiveTime	1..1	SHALL		[1184-23](#)	
low	1..1	SHALL		[1184-198](#)	
high	1..1	SHALL		[1184-1169](#)	
component	1..1	SHALL		[1184-24](#)	
structuredBody	1..1	SHALL		[1184-25](#)	

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:1184-1) such that it

    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.1.1" (CONF:1184-2).

    b. **SHALL** contain exactly one [1..1] **@extension**="2015-04-01" (CONF:1184-877).

Figure 17: National Health Care Surveys (V2) 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 Surveys (V2) Document requirements -->
    <templateId root="2.16.840.1.113883.10.20.34.1.1" extension="2015-04-01" />
    ...
</ClinicalDocument>
```

3. **SHALL** contain exactly one [1..1] **code** (CONF:1184-3).

    a. This code **SHALL** contain exactly one [1..1] **@code**="75619-7" National healthcare survey panel NAMCS (CONF:1184-4).

b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CONF:1184-5).

1.1.3.2 recordTarget

4. **SHALL** contain at least one [1..*] **recordTarget** (CONF:1184-6).

    a. Such recordTargets **SHALL** contain exactly one [1..1] **patientRole** (CONF:1184-7).

        i. This patientRole **SHOULD** contain zero or one [0..1] **id** (CONF:1184-1164). Note: Patient's Medical Record Number

        ii. This patientRole **SHOULD** contain zero or one [0..1] **id** (CONF:1184-1162) such that it

            1. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.4.572" Medicare HIC number (CONF:1184-1165).

            2. **SHOULD** contain exactly one [1..1] **@extension** (CONF:1184-1166). Note: Patient's Medicare Number

        iii. This patientRole **SHOULD** contain zero or one [0..1] **id** (CONF:1184-1163) such that it

            1. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.4.1" SSN (CONF:1184-1167).

            2. **SHOULD** contain exactly one [1..1] **@extension** (CONF:1184-1168). Note: Patient's SSN

        iv. This patientRole **SHALL** contain exactly one [1..1] **patient** (CONF:1184-11).

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

            1. This patient **SHALL** contain exactly one [1..1] **administrativeGenderCode** (CONF:1184-12). Note: Form Element: Sex

                a. This administrativeGenderCode **MAY** contain zero or one [0..1] **@nullFlavor**="OTH" (CONF:1184-643).

                b. This administrativeGenderCode **SHOULD** contain zero or one [0..1] **@code** (CONF:1184-644).

                    i. Where code is used it **SHALL** be either M (male) or F (female) (CONF:1184-645).

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

            2. This patient **SHALL** contain exactly one [1..1] **birthTime** (CONF:1184-13). Note: Form Element: Date of Birth

                a. SHOULD be precise to month if day is not available (CONF:1184-773).

Figure 18: recordTarget Example

```
<recordTarget>
  <patientRole>
    <!-- The extension is patient-specific whereas the root is organization-specific. -->
    <!-- Patient Medical Record Number -->
    <id root="dc67750c-4926-4c83-af35-9102a8ffc2c0" />
    <!-- Patient's SSN -->
    <id root="2.16.840.1.113883.4.1" extension="444-22-2222" />
    <!-- Patient's Medicare HIC Number -->
    <id root="2.16.840.1.113883.4.572" extension="123456789" />
    <!-- Addr HP is "primary home" from codeSystem 2.16.840.1.113883.5.1119 -->
    <addr use="HP">
      <streetAddressLine>124 Any Street</streetAddressLine>
      <city>Anyville</city>
      <state>CA</state>
      <!-- Form Element: ZIP Code -->
      <postalCode>97812</postalCode>
      <country>US</country>
    </addr>
    <telecom use="HP" value="5551231234" />
    <patient>
      <name>
        <given>Samantha</given>
        <family>Smith</family>
      </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 &amp;
        Ethnicity - CDC" />
      <!-- Form Element: Ethnicity -->
      <ethnicGroupCode code="2186-5" displayName="Not Hispanic or Latino"
        codeSystem="2.16.840.1.113883.6.238" codeSystemName="Race &amp;
        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:1184-20).

1.1.3.3 serviceEvent

      a. The documentationOf, if present, **SHALL** contain exactly one [1..1] `serviceEvent` (CONF:1184-21).

1.1.3.4 performer

    i.   This serviceEvent **SHOULD** contain zero or more [0..*] **performer** (CONF:1184-22) such that it

       Note: Type of Care Providers Seen

        1. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1184-53).

            a. This assignedEntity **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet **Healthcare Provider Taxonomy (HIPAA)** urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1184-56).

Figure 19: performer Example

```
<performer typeCode="PRF">
    <assignedEntity>
        <!-- Provider's NPI -->
        <id root="2.16.840.1.113883.4.6" extension="123456789" />
        <!-- Provider -->
        <code code="405277009"
            displayName="Resident physician"
            codeSystem="2.16.840.1.113883.6.96"
            codeSystemName="SNOMED CT" />
    </assignedEntity>
</performer>
<performer typeCode="PRF">
    <assignedEntity>
        <id root="2.16.840.1.113883.4.6" extension="777777777" />
        <!-- Providers (seen at this visit) -->
        <code code="449161006"
            displayName="Physician Assistant"
            codeSystem="2.16.840.1.113883.6.96"
            codeSystemName="SNOMED CT" />
    </assignedEntity>
</performer>
```

    6. **MAY** contain zero or one [0..1] **componentOf** (CONF:1184-17).

1.1.3.5 encompassingEncounter

    a. The componentOf, if present, **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:1184-18).

       i.   This encompassingEncounter **SHOULD** contain zero or one [0..1] **id** (CONF:1184-361).

          Note: Encounter Number

       ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1184-23).

            1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1184-198).

               Note: Date/Time of admission/visit/arrival

2. This effectiveTime **SHALL** contain exactly one [1..1] **high** (CONF:1184-1169).

Note: Date/Time of departure/discharge

Figure 20: encompassingEncounter Example

```
<encompassingEncounter>
    <!-- Encounter Id -->
    <id root="57edf80c-7114-4dc3-b3f4-abf515d18c90" />
    ...
    <effectiveTime>
        <!-- Date/Time of admission/visit/arrival -->
        <low value="201308150730" />
        <!-- Date/Time of departure/discharge -->
        <high value="201308160920" />
    </effectiveTime>
    ...
</encompassingEncounter>
```

7. **SHALL** contain exactly one [1..1] **component** (CONF:1184-24).

1.1.3.6 structuredBody

a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:1184-25).

1.1.4 Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.1.4:2016-07-01 (open)]

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Table 24: Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3) Contexts

Contained By:	Contains:
	Emergency Department Encounters Section (V2)
	Immunizations Section
	Medications Section
	Patient Information Section (V3)
	Payment Sources Section
	Problems Section (V3)
	Reasons for Visit Section (V2)
	Results Section (entries optional) (V2)
	Services and Procedures Section
	Triage Section
	Vital Signs Section (entries required) (V2)

This template describes constraints that are specific to the emergency department encounter surveys (NHCS-ED, NHAMCS-ED).

Table 25: Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.1.4:2016-07-01)					
templateId	1..1	SHALL		3256-570	
@root	1..1	SHALL		3256-583	2.16.840.1.113883.10.20.34.1.4
@extension	1..1	SHALL		3256-866	2016-07-01
documentationOf	0..*	MAY		3256-667	
serviceEvent	1..1	SHALL		3256-668	
performer	0..*	SHOULD		3256-669	
time	1..1	SHALL		3256-670	
low	1..1	SHALL		3256-1170	
assignedEntity	1..1	SHALL		3256-857	
code	1..1	SHALL		3256-858	urn:oid:2.16.840.1.114222.4.11.7 419 (Provider ED (NCHS))
@nullFlavor	0..1	MAY		3256-865	OTH
componentOf	1..1	SHALL		3256-671	
encompassingEncounter	1..1	SHALL		3256-672	
code	1..1	SHALL		3256-1057	
@code	1..1	SHALL		3256-1058	EMER
@codeSystem	1..1	SHALL		3256-1059	urn:oid:2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
dischargeDispositionCode	1..1	SHALL		3256-863	urn:oid:2.16.840.1.114222.4.11.7 437 (Disposition ED (NCHS))
@nullFlavor	0..1	MAY		3256-864	urn:oid:2.16.840.1.113883.5.100 8 (HL7NullFlavor) = OTH
component	1..1	SHALL		3256-571	
structuredBody	1..1	SHALL		3256-572	
component	1..1	SHALL		3256-573	

section	1..1	SHALL		3256-582	Payment Sources Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.4
component	1..1	SHALL		3256-574	
section	1..1	SHALL		3256-584	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		3256-575	
section	1..1	SHALL		3256-585	Reasons for Visit Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.14:2016-07-01
component	1..1	SHALL		3256-576	
section	1..1	SHALL		3256-586	Problems Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.2:2016-07-01
component	1..1	SHALL		3256-577	
section	1..1	SHALL		3256-587	Services and Procedures Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.3
component	1..1	SHALL		3256-578	
section	1..1	SHALL		3256-588	Medications Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.1
component	1..1	SHALL		3256-579	
section	1..1	SHALL		3256-589	Immunizations Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.7
component	1..1	SHALL		3256-581	
section	1..1	SHALL		3256-591	Triage Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.10
component	1..1	SHALL		3256-759	
section	1..1	SHALL		3256-760	Emergency Department Encounters Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.13:2016-07-01
component	1..1	SHALL		3256-	

				809	
section	1..1	SHALL		3256-810	Patient Information Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.5:2016-07-01
component	1..1	SHALL		3256-1104	
section	1..1	SHALL		3256-1105	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 (V2)** template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.1.1:2015-04-01).

1.1.5.1 templateId

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3256-570) such that it

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.1.4" (CONF:3256-583).

   b. **SHALL** contain exactly one [1..1] **@extension**="2016-07-01" (CONF:3256-866).

Figure 21: Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3) Example

```
<ClinicalDocument>
  <realmCode code="US" />
  <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040" />
  <!-- [C-CDA R2] US Realm Header Template -->
  <templateId root="2.16.840.1.113883.10.20.22.1.1" extension="2014-06-09" />
  <!-- [NHCS R1D1.1] National Health Care Surveys Document (V2) requirements -->
  <templateId root="2.16.840.1.113883.10.20.34.1.1" extension="2015-04-01" />
  <!-- [NHCS R1SDU1.2] Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3)
requirements -->
  <templateId root="2.16.840.1.113883.10.20.34.1.4" extension="2016-07-01" />
  <!-- ID shall be a globally unique identifier -->
  ...
</ClinicalDocument>
```

1.1.5.2 documentationOf

3. **MAY** contain zero or more [0..*] **documentationOf** (CONF:3256-667).

   a. The documentationOf, if present, **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:3256-668).

1.1.5.3 performer

See National Health Care Surveys template for other performer elements.

      i.   This serviceEvent **SHOULD** contain zero or more [0..*] **performer** (CONF:3256-669) such that it

           Note: Type of care provider seen

           1. **SHALL** contain exactly one [1..1] **time** (CONF:3256-670).

                a. This time **SHALL** contain exactly one [1..1] **low** (CONF:3256-1170).

                    Note: Date/Time of provider contact

           2. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:3256-857).

                a. This assignedEntity **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet **Provider ED (NCHS)** urn:oid:2.16.840.1.114222.4.11.7419 **DYNAMIC** (CONF:3256-858).

                    i.   This code **MAY** contain zero or one [0..1] **@nullFlavor**="OTH" (CONF:3256-865).

Figure 22: performer Example

```xml
<performer typeCode="PRF">
  <!-- Date time of provider contact -->
  <time>
    <low value="201308151030" />
  </time>
  <assignedEntity>
    <!-- Provider's NPI -->
    <id root="2.16.840.1.113883.4.6" extension="123456789" />
    <!-- Provider -->
    <code code="405277009"
      displayName="Resident physician"
      codeSystem="2.16.840.1.113883.6.96"
      codeSystemName="SNOMED CT" />
  </assignedEntity>
</performer>
<performer typeCode="PRF">
  <!-- Date time of provider contact -->
  <time>
    <low value="201308151045" />
  </time>
  <assignedEntity>
    <!-- Provider's NPI -->
    <id root="2.16.840.1.113883.4.6" extension="22222222" />
    <!-- Providers (seen at this visit) -->
    <code code="449161006"
      displayName="Physician Assistant"
      codeSystem="2.16.840.1.113883.6.96"
      codeSystemName="SNOMED CT" />
  </assignedEntity>
</performer>
```

1.1.5.4 componentOf

    4. **SHALL** contain exactly one [1..1] **componentOf** (CONF:3256-671).

See National Health Care Surveys template for other encompassingEncounter elements.

    a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:3256-672).

        i. This encompassingEncounter **SHALL** contain exactly one [1..1] **code** (CONF:3256-1057).

            1. This code **SHALL** contain exactly one [1..1] **@code**="EMER" Emergency (CONF:3256-1058).

            2. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3256-1059).

        ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **dischargeDispositionCode**, which **SHOULD** be selected from ValueSet **Disposition ED (NCHS)** urn:oid:2.16.840.1.114222.4.11.7437 **DYNAMIC** (CONF:3256-863).

            1. This dischargeDispositionCode **MAY** contain zero or one [0..1] **@nullFlavor**="OTH" Other (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:3256-864).

Figure 23: componentOf/encompassingEncounter Example

```
<componentOf>
  <encompassingEncounter>
    <!-- Encounter Id -->
    <id root="57edf80c-7114-4dc3-b3f4-abf515d18c90" />
    <code code="EMER"
      codeSystem="2.16.840.1.113883.5.4"
      displayName="Emergency"
      codeSystemName="ActCode" />
    <effectiveTime>
      <!-- Date/Time of admission/visit/arrival -->
      <low value="201308150730" />
      <!-- Date/Time of departure/discharge -->
      <high value="201308160920" />
    </effectiveTime>
    <!-- Discharge Disposition -->
    <dischargeDispositionCode code="183664005"
      displayName="Return/refer to physician/clinic for follow-up"
      codeSystem="2.16.840.1.113883.6.96"
      codeSystemName="SNOMED CT" />
  </encompassingEncounter>
</componentOf>
```

1.1.5.5 component

    5. **SHALL** contain exactly one [1..1] **component** (CONF:3256-571).

        a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:3256-572).

            i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-573) 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:3256-582).

ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-574) 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:3256-584).

iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-575) such that it

1. **SHALL** contain exactly one [1..1] **Reasons for Visit Section (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.14:2016-07-01) (CONF:3256-585).

iv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-576) such that it

1. **SHALL** contain exactly one [1..1] **Problems Section (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.2:2016-07-01) (CONF:3256-586).

v. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-577) 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:3256-587).

vi. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-578) 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:3256-588).

vii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-579) 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:3256-589).

viii.This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-581) 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:3256-591).

ix. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-759) such that it

1. **SHALL** contain exactly one [1..1] **Emergency Department Encounters Section (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.13:2016-07-01) (CONF:3256-760).

x. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-809) such that it

1. **SHALL** contain exactly one [1..1] **Patient Information Section (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.5:2016-07-01) (CONF:3256-810).

xi. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-1104) 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:3256-1105).

Table 26: Provider ED (NCHS)

Value Set: Provider ED (NCHS) urn:oid:2.16.840.1.114222.4.11.7419			
Provider types			
Value Set Source: **https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7419**			
Code	**Code System**	**Code System OID**	**Print Name**
405279007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Attending physician
405277009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Resident physician
309343006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Physician
442251000124100	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Licensed Practical Nurse
224535009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Registered nurse
224571005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Nurse practitioner
449161006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Physician assistant
397897005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Paramedic
310191001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Clinical psychologist
310190000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Mental health counselor
...			

Table 27: Disposition ED (NCHS)

Value Set: Disposition ED (NCHS) urn:oid:2.16.840.1.114222.4.11.7437

The final arrangement or transfer of care made when a patient completes and emergency department encounter.

Value Set Source:
https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7437

Code	Code System	Code System OID	Print Name
442291000124106	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Discharge from observation unit
63238001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Dead on arrival
445060000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Left against medical advice
3780001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	No follow-up planned
442271000124105	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Patient transfer to psychiatric hospital
25675004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Patient transfer to skilled nursing facility (SNF)
223446004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Return to ED
306227000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Return/refer to physician/clinic for outpatient mental health treatment
396150002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Return/refer to physician/clinic for substance abuse treatment
183664005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Return/refer to physician/clinic for follow-up
...			

1.1.6 Inpatient Encounter (NHCS-IP) (V3)

```
[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.1.2:2016-
07-01 (open)]

Draft as part of National Health Care Surveys Release 1, DSTU Release 1.2 -
US Realm
```

Table 28: Inpatient Encounter (NHCS-IP) (V3) Contexts

Contained By:	Contains:
	Immunizations Section Inpatient Encounters Section (V2) Medications Section

Contained By:	Contains:
	Patient Information Section (V3)
	Payment Sources Section
	Problems Section (V3)
	Results Section (entries optional) (V2)
	Services and Procedures Section
	Vital Signs Section (entries required) (V2)

This template describes constraints that are specific to the Inpatient Encounter Surveys.

Table 29: Inpatient Encounter (NHCS-IP) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.1.2:2016-07-01)					
templateId	1..1	SHALL		3256-304	
@root	1..1	SHALL		3256-305	2.16.840.1.113883.10.20.34.1.2
@extension	1..1	SHALL		3256-767	2016-07-01
documentationOf	0..*	MAY		3256-422	
serviceEvent	1..1	SHALL		3256-423	
componentOf	1..1	SHALL		3256-250	
encompassingEncounter	1..1	SHALL		3256-251	
code	1..1	SHALL		3256-1040	
@code	1..1	SHALL		3256-1041	IMP
@codeSystem	1..1	SHALL		3256-1042	urn:oid:2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
dischargeDispositionCode	1..1	SHALL		3256-1173	urn:oid:2.16.840.1.114222.4.11.7360 (Discharge Disposition IP (NCHS))
@nullFlavor	0..1	MAY		3256-1174	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = OTH
component	1..1	SHALL		3256-244	
structuredBody	1..1	SHALL		3256-245	
component	1..1	SHALL		3256-246	
section	1..1	SHALL		3256-247	Patient Information Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.5:2016-07-01)
component	1..1	SHALL		3256-248	
section	1..1	SHALL		3256-249	Payment Sources Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.4
component	1..1	SHALL		3256-254	

section	1..1	SHALL		3256-255	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		3256-258	
section	1..1	SHALL		3256-259	Inpatient Encounters Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.12:2016-07-01
component	1..1	SHALL		3256-260	
section	1..1	SHALL		3256-261	Problems Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.2:2016-07-01
component	1..1	SHALL		3256-262	
section	1..1	SHALL		3256-263	Services and Procedures Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.3
component	1..1	SHALL		3256-264	
section	1..1	SHALL		3256-265	Medications Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.1
component	1..1	SHALL		3256-505	
section	1..1	SHALL		3256-506	Immunizations Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.7
component	1..1	SHALL	Component3	3256-765	
section	1..1	SHALL		3256-766	Results Section (entries optional) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2014-06-09

1.1.7 Properties

1. Conforms to **National Health Care Surveys (V2)** template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.1.1:2015-04-01).

1.1.7.1 templateId

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3256-304) such that it

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.1.2" (CONF:3256-305).

   b. **SHALL** contain exactly one [1..1] **@extension**="2016-07-01" (CONF:3256-767).

Figure 24: In-Patient Encounter (NHCS-IP) (V3) Example

```
<ClinicalDocument>
  <realmCode code="US" />
  <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040" />
  <!-- [C-CDA R2] US Realm Header Template -->
  <templateId root="2.16.840.1.113883.10.20.22.1.1" extension="2014-06-09" />
  <!-- [NHCS R1D1.1] National Health Care Surveys Document (V2) requirements -->
  <templateId root="2.16.840.1.113883.10.20.34.1.1" extension="2015-04-01" />
  <!-- [NHCS R1SDU1.2] In-Patient Encounter (NHCS-IP) (V3) requirements -->
  <templateId root="2.16.840.1.113883.10.20.34.1.2" extension="2016-07-01" />
  ...
</ClinicalDocument>
```

1.1.7.2 documentationOf

3. **MAY** contain zero or more [0..*] **documentationOf** (CONF:3256-422).

See National Health Care Surveys template for other serviceEvent elements.

     a. The documentationOf, if present, **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:3256-423).

1.1.7.3 componentOf

4. **SHALL** contain exactly one [1..1] **componentOf** (CONF:3256-250).

See National Health Care Surveys template for other encompassingEncounter elements.

     a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:3256-251).

         i. This encompassingEncounter **SHALL** contain exactly one [1..1] **code** (CONF:3256-1040).

            1. This code **SHALL** contain exactly one [1..1] **@code**="IMP" Inpatient (CONF:3256-1041).

            2. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3256-1042).

        ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **dischargeDispositionCode**, which **SHOULD** be selected from ValueSet **Discharge Disposition IP (NCHS)** urn:oid:2.16.840.1.114222.4.11.7360 **DYNAMIC** (CONF:3256-1173).

            1. This dischargeDispositionCode **MAY** contain zero or one [0..1] **@nullFlavor**="OTH" Other (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:3256-1174).

Figure 25: componentOf/encompassingEncounter Example

```
<componentOf>
  <encompassingEncounter>
    <!-- Encounter Id -->
    <id root="57edf80c-7114-4dc3-b3f4-abf515d18c90" />
    <code code="IMP"
      codeSystem="2.16.840.1.113883.5.4"
      displayName="Inpatient"
      codeSystemName="ActCode" />
    <effectiveTime>
      <!-- Date/Time of admission/visit/arrival -->
      <low value="201308150730" />
      <!-- Date/Time of departure/discharge -->
      <high value="201308160920" />
    </effectiveTime>
    <!-- Discharge Disposition -->
    <dischargeDispositionCode code="02"
      displayName="Discharged/transferred to a short-term General Hospital for Inpatient
Care"
      codeSystem="2.16.840.1.114222.4.11.915"
      codeSystemName="HL7 Discharge Disposition" />
  </encompassingEncounter>
</componentOf>
```

5. **SHALL** contain exactly one [1..1] **component** (CONF:3256-244).

1.1.7.4 structuredBody

a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:3256-245).

  i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-246) such that it

   1. **SHALL** contain exactly one [1..1] **Patient Information Section (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.5:2016-07-01) (CONF:3256-247).

  ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-248) 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:3256-249).

  iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-254) 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:3256-255).

  iv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-258) such that it

1. **SHALL** contain exactly one [1..1] **Inpatient Encounters Section (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.12:2016-07-01) (CONF:3256-259).

v. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-260) such that it

1. **SHALL** contain exactly one [1..1] **Problems Section (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.2:2016-07-01) (CONF:3256-261).

vi. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-262) 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:3256-263).

vii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-264) 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:3256-265).

viii.This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-505) 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:3256-506).

ix. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-765) 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:3256-766).

Table 30: Discharge Disposition IP (NCHS)

Value Set: Discharge Disposition IP (NCHS) urn:oid:2.16.840.1.114222.4.11.7360

The final arrangement or transfer of care made when a patient is released from an inpatient admission.

Value Set Source:
https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7360

Code	Code System	Code System OID	Print Name
01	HL7 Discharge disposition	urn:oid:2.16.840.1.113883.12.112	Discharged to home or self care
02	HL7 Discharge disposition	urn:oid:2.16.840.1.113883.12.112	Discharged/transferred to a short-term General Hospital for Inpatient Care
03	HL7 Discharge disposition	urn:oid:2.16.840.1.113883.12.112	Discharged /transferred to Skilled Nursing Facility with Medicare Certification in anticipation of skilled care
04	HL7 Discharge disposition	urn:oid:2.16.840.1.113883.12.112	Discharged/transferred to a Facility that provides custodial or supportive care
05	HL7 Discharge disposition	urn:oid:2.16.840.1.113883.12.112	Discharged to a Designated Cancer Center or Children's Hospital
06	HL7 Discharge disposition	urn:oid:2.16.840.1.113883.12.112	Discharged/transferred to home under care of an organized Home Health Service Organization in anticipation of covered skilled care
07	HL7 Discharge disposition	urn:oid:2.16.840.1.113883.12.112	Left against Medical advice or discontinued care
20	HL7 Discharge disposition	urn:oid:2.16.840.1.113883.12.112	Expired
21	HL7 Discharge disposition	urn:oid:2.16.840.1.113883.12.112	Discharged/transferred to Court/Law Enforcement
43	HL7 Discharge disposition	urn:oid:2.16.840.1.113883.12.112	Discharged/Transferred to a Federal Healthcare Facility
...			

1.1.8 Outpatient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.1.3:2016-07-01 (open)]

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Table 31: Outpatient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V3) Contexts

Contained By:	Contains:
	Immunizations Section
	Medications Section
	Outpatient Encounters Section (V3)
	Patient Information Section (V3)
	Payment Sources Section
	Problems Section (V3)
	Reasons for Visit Section (V2)
	Results Section (entries optional) (V2)
	Services and Procedures Section
	Vital Signs Section (entries required) (V2)

This template describes constraints that are specific to the outpatient encounter surveys (NHCS-OPD, NAMCS, NHAMCS-OPD).

Table 32: Outpatient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.1.3:2016-07-01)					
templateId	1..1	SHALL		3256-306	
@root	1..1	SHALL		3256-307	2.16.840.1.113883.10.20.34.1.3
@extension	1..1	SHALL		3256-768	2016-07-01
documentationOf	0..*	MAY		3256-455	
serviceEvent	1..1	SHALL		3256-456	
performer	0..1	SHOULD		3256-457	
functionCode	1..1	SHALL		3256-458	
@code	1..1	SHALL		3256-459	PP
@codeSystem	1..1	SHALL		3256-460	2.16.840.1.113883.3.88.12.3221.4
componentOf	0..1	MAY		3256-917	
encompassingEncounter	1..1	SHALL		3256-918	
code	1..1	SHALL		3256-1060	
@code	1..1	SHALL		3256-1061	AMB
@codeSystem	1..1	SHALL		3256-1062	urn:oid:2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
dischargeDispositionCode	1..1	SHALL		3256-1171	urn:oid:2.16.840.1.114222.4.11.7361 (Disposition OPD (NCHS))
@nullFlavor	0..1	MAY		3256-1172	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = OTH
location	0..1	MAY		3256-919	
healthCareFacility	1..1	SHALL		3256-920	
code	1..1	SHALL		3256-921	urn:oid:2.16.840.1.114222.4.11.7364 (Type of clinic/location (NCHS))
component	1..1	SHALL		3256-284	
structuredBody	1..1	SHALL		3256-	

				285	
component	1..1	SHALL		3256-286	
section	1..1	SHALL		3256-287	Patient Information Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.5:2016-07-01
component	1..1	SHALL		3256-288	
section	1..1	SHALL		3256-289	Payment Sources Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.4
component	1..1	SHALL		3256-290	
section	1..1	SHALL		3256-291	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		3256-292	
section	1..1	SHALL		3256-293	Reasons for Visit Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.14:2016-07-01
component	1..1	SHALL		3256-294	
section	1..1	SHALL		3256-295	Outpatient Encounters Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.8:2016-07-01
component	1..1	SHALL		3256-296	
section	1..1	SHALL		3256-297	Problems Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.2:2016-07-01
component	1..1	SHALL		3256-298	
section	1..1	SHALL		3256-299	Services and Procedures Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.3
component	1..1	SHALL		3256-300	
section	1..1	SHALL		3256-301	Medications Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.1
component	1..1	SHALL		3256-507	

section	1..1	SHALL		3256-508	Immunizations Section (identifier: urn:oid:2.16.840.1.113883.10.20.34.2.7
component	1..1	SHALL		3256-763	
section	1..1	SHALL		3256-764	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 (V2)** template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.1.1:2015-04-01).

1.1.9.1 templateId

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3256-306) such that it

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.1.3" (CONF:3256-307).

   b. **SHALL** contain exactly one [1..1] **@extension**="2016-07-01" (CONF:3256-768).

Figure 26: Out-Patient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V3) Example

```
<ClinicalDocument>
  <realmCode code="US" />
  <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040" />
  <!-- [C-CDA R2] US Realm Header Template -->
  <templateId root="2.16.840.1.113883.10.20.22.1.1" extension="2014-06-09" />
  <!-- [NHCS R1D1.1] National Health Care Surveys Document (V2) -->
  <templateId root="2.16.840.1.113883.10.20.34.1.1" extension="2015-04-01" />
  <!-- [NHCS R1SDU1.2] Out-Patient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V3) -->
  <templateId root="2.16.840.1.113883.10.20.34.1.3" extension="2016-07-01" />
  ...
</ClinicalDocument>
```

1.1.9.2 documentationOf

3. **MAY** contain zero or more [0..*] **documentationOf** (CONF:3256-455).

   See National Health Care Surveys template for other serviceEvent elements.

   a. The documentationOf, if present, **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:3256-456).

1.1.9.3 performer

   i. This serviceEvent **SHOULD** contain zero or one [0..1] **performer** (CONF:3256-457) such that it
   Note: Patient's Primary Care Provider

1. **SHALL** contain exactly one [1..1] **functionCode** (CONF:3256-458).
   Note: Form Element: Patient's Primary Care Provider
   a. This functionCode **SHALL** contain exactly one [1..1]
      @code="PP" Primary Care Provider (CONF:3256-459).
   b. This functionCode **SHALL** contain exactly one [1..1]
      @codeSystem="2.16.840.1.113883.3.88.12.3221.4"
      (CONF:3256-460).

Figure 27: performer Example

```
<performer typeCode="PRF">
  <!-- Patient's Primary Care Provider -->
  <functionCode code="PP"
    displayName="Primary Care Provider"
    codeSystem="2.16.840.1.113883.12.443"
    codeSystemName="Provider Role" />
  <assignedEntity>
    <!-- Provider's NPI -->
    <id root="2.16.840.1.113883.4.6" extension="111111111" />
  </assignedEntity>
</performer>
```

1.1.9.4 componentOf

4. **MAY** contain zero or one [0..1] **componentOf** (CONF:3256-917).
   a. The componentOf, if present, **SHALL** contain exactly one [1..1]
      encompassingEncounter (CONF:3256-918).
      i. This encompassingEncounter **SHALL** contain exactly one [1..1] **code**
         (CONF:3256-1060).
         1. This code **SHALL** contain exactly one [1..1] **@code**="AMB" Ambulatory
            (outpatient) (CONF:3256-1061).
         2. This code **SHALL** contain exactly one [1..1]
            @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: ActCode
            urn:oid:2.16.840.1.113883.5.4) (CONF:3256-1062).
      ii. This encompassingEncounter **SHALL** contain exactly one [1..1]
          dischargeDispositionCode, which **SHOULD** be selected from ValueSet
          Disposition OPD (NCHS) urn:oid:2.16.840.1.114222.4.11.7361
          DYNAMIC (CONF:3256-1171).
          1. This dischargeDispositionCode **MAY** contain zero or one [0..1]
             @nullFlavor="OTH" Other (CodeSystem: HL7NullFlavor
             urn:oid:2.16.840.1.113883.5.1008) (CONF:3256-1172).
      iii. This encompassingEncounter **MAY** contain zero or one [0..1] **location**
           (CONF:3256-919).
           Note: Type of clinic/location where visit occurred
           1. The location, if present, **SHALL** contain exactly one [1..1]
              healthCareFacility (CONF:3256-920).
              a. This healthCareFacility **SHALL** contain exactly one [1..1] **code**,
                 which **SHOULD** be selected from ValueSet **Type of**

clinic/location (NCHS)
urn:oid:2.16.840.1.114222.4.11.7364 **DYNAMIC**
(CONF:3256-921).

Figure 28: componentOf/encompassingEncounter Example

```
<componentOf>
  <encompassingEncounter>
    <!-- Encounter Id -->
    <id root="57edf80c-7114-4dc3-b3f4-abf515d18c90" />
    <code code="AMB"
      displayName="Ambulatory (outpatient)"
      codeSystem="2.16.840.1.113883.5.4"
      codeSystemName="ActCode" />
    <effectiveTime>
      <!-- Date/Time of admission/visit/arrival -->
      <low value="201308150730" />
      <!-- Date/Time of departure/discharge -->
      <high value="201308160920" />
    </effectiveTime>
    <!-- Discharge Disposition -->
    <dischargeDispositionCode code="449221000124102"
      displayName="Refer to other physician/provider"
      codeSystem="2.16.840.1.113883.6.96"
      codeSystemName="SNOMED CT" />
    <!-- Type of clinic/location where visit occurred -->
    <location>
      <healthCareFacility>
        <code code="1113-0"
          displayName="Cardiology clinic"
          codeSystem="2.16.840.1.113883.6.259"
          codeSystemName="HL7 HealthcareServiceLocation" />
      </healthCareFacility>
    </location>
  </encompassingEncounter>
</componentOf>
```

1.1.9.5 component

5. **SHALL** contain exactly one [1..1] **component** (CONF:3256-284).

   a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:3256-285).

      i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-286) such that it

         1. **SHALL** contain exactly one [1..1] **Patient Information Section (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.5:2016-07-01) (CONF:3256-287).

      ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-288) 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:3256-289).

iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-290) 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:3256-291).

iv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-292) such that it

    1. **SHALL** contain exactly one [1..1] **Reasons for Visit Section (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.14:2016-07-01) (CONF:3256-293).

v. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-294) such that it

    1. **SHALL** contain exactly one [1..1] **Outpatient Encounters Section (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.8:2016-07-01) (CONF:3256-295).

vi. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-296) such that it

    1. **SHALL** contain exactly one [1..1] **Problems Section (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.2:2016-07-01) (CONF:3256-297).

vii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-298) 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:3256-299).

viii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-300) 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:3256-301).

ix. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-507) 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:3256-508).

x. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3256-763) 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:3256-764).

Table 33: Disposition OPD (NCHS)

Value Set: Disposition OPD (NCHS) urn:oid:2.16.840.1.114222.4.11.7361			
The final arrangement or transfer of care made when a patient completes an outpatient visit.			
Value Set Source: **https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7361**			
Code	**Code System**	**Code System OID**	**Print Name**
PHC1395	PHIN VADS code system	urn:oid:2.16.840.1.114222.4.5.274	Return to referring physician/provider
449221000124102	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Refer to other physician/provider
PHC1396	PHIN VADS code system	urn:oid:2.16.840.1.114222.4.5.274	Return in less than 1 week
PHC1397	PHIN VADS code system	urn:oid:2.16.840.1.114222.4.5.274	Return in 1 week to less than 2 months
PHC1398	PHIN VADS code system	urn:oid:2.16.840.1.114222.4.5.274	Return in 2 months or greater
PHC1406	PHIN VADS code system	urn:oid:2.16.840.1.114222.4.5.274	Return at unspecified time
91310009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Return as needed (p.r.n.)
183452005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Refer to E.R./Admit to hospital
65537008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Routine discharge to customary residence
PHC1399	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Discharge to observation status
...			

Table 34: Type of clinic/location (NCHS)

Value Set: Type of clinic/location (NCHS) urn:oid:2.16.840.1.114222.4.11.7364

The kind of place or hospital department where a procedure, treatment, or service may be performed or provided.

Value Set Source:
https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7364

Code	Code System	Code System OID	Print Name
1162-7	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	24-Hour Observation Area
1210-4	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Adult Mixed Acuity Unit
1099-1	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Adult Step Down Unit (post-critical care)
1110-6	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Allergy Clinic
1166-8	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Ambulatory Surgery Center
1212-0	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Any Age Mixed Acuity Unit
1106-4	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Assisted Living Area
1145-2	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Behavioral Health Clinic
1022-3	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Bone Marrow Transplant SCA
1026-4	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Burn Critical Care
…			

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)]
```

```
Published as part of Consolidated CDA Templates for Clinical Notes (US Realm)
DSTU R1.1
```

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 35: 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	urn:oid: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 urn:oid: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>
```

2.1.1 Reasons for Visit Section (V2)

```
[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.2.14:2016-07-01
(open)]

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US Realm
```

Table 36: Reasons for Visit Section (V2) Contexts

Contained By:	Contains:
Outpatient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V3) (required) Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3) (required)	Patient's Reason for Visit Observation

This section records the patient's chief complaint (the NHCS calls this the "patient's reason for visit") in the patient's own words and/or the reason for the patient's visit in the provider's words. It can also contain a coded reason for visit in the contained Patient's Reason for Visit Observation.

Table 37: Reasons for Visit Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.14:2016-07-01)					
templateId	1..1	SHALL		3256-1066	
@root	1..1	SHALL		3256-1068	2.16.840.1.113883.10.20.34.2.14
@extension	0..1	MAY		3256-1161	2016-07-01
entry	0..*	MAY		3256-1085	
observation	1..1	SHALL		3256-1086	Patient's Reason for Visit Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.41:2015-04-01

1. Conforms to **Chief Complaint and Reason for Visit Section** template (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.13).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3256-1066) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.2.14" (CONF:3256-1068).
   b. **MAY** contain zero or one [0..1] **@extension**="2016-07-01" (CONF:3256-1161).
3. **MAY** contain zero or more [0..*] **entry** (CONF:3256-1085).
   a. The entry, if present, **SHALL** contain exactly one [1..1] **Patient's Reason for Visit Observation** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.41:2015-04-01) (CONF:3256-1086).

Figure 30: Reasons for Visit Section (V2) Example

```
<section>
  <!-- [NHCS R1D1.2] Reasons for Visit Section (V2) -->
  <templateId root="2.16.840.1.113883.10.20.34.2.14" extension="2016-07-01" />
  <code code="46239-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Chief Complaint and Reason for Visit" />
  <title>Reasons for Visit</title>
  <text>
    <table border="1" width="100%">
      <thead>
        <tr>
          <th>Patient's Reason for Visit (Chief Complaint)</th>
          <th>Providers Reason for Visit</th>
        </tr>
      </thead>
      <tbody>
        <tr>
          <td>Having trouble breathing</td>
          <td>Dyspnea</td>
        </tr>
      </tbody>
    </table>
  </text>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- [C-CDA R2] R2 Problem Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
      <!-- [NHCS R1D1.1] Patient's Reason for Visit -->
      <templateId root="2.16.840.1.113883.10.20.34.3.41" extension="2015-04-01" />
      ...
    </observation>
  </entry>
</section>
```

2.2   *Encounters Section (entries optional) (V2)*

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

```
Published as part of Consolidated CDA Templates for Clinical Notes (US Realm)
DSTU R2
```

Table 38: 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 39: 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	urn:oid: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 urn:oid: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).

2.2.1 Emergency Department Encounters Section (V2)

```
[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.2.13:2016-07-01
(open)]
```

```
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US Realm
```

Table 40: Emergency Department Encounters Section (V2) Contexts

Contained By:	Contains:
Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3) (required)	Current Emergency Department Visit (V2) Hospital Admission Encounter Observation Unit Stay Encounter

This section contains emergency department encounter information such as the current encounter, and any hospital admission or observation unit stays that might occur.

Table 41: Emergency Department Encounters Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.13:2016-07-01)					
templateId	1..1	SHALL		3256-1050	
@root	1..1	SHALL		3256-1052	2.16.840.1.113883.10.20.34.2.13
@extension	1..1	SHALL		3256-1053	2016-07-01
entry	1..1	SHALL		3256-1049	
encounter	1..1	SHALL		3256-1051	Current Emergency Department Visit (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.40:2016-07-01
entry	0..*	MAY		3256-1111	
encounter	1..1	SHALL		3256-1113	Hospital Admission Encounter (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.18
entry	0..*	MAY		3256-1112	
encounter	1..1	SHALL		3256-1114	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:3256-1050) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.2.13" (CONF:3256-1052).
   b. **SHALL** contain exactly one [1..1] **@extension**="2016-07-01" (CONF:3256-1053).
3. **SHALL** contain exactly one [1..1] **entry** (CONF:3256-1049) such that it
   a. **SHALL** contain exactly one [1..1] **Current Emergency Department Visit (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.40:2016-07-01) (CONF:3256-1051).
4. **MAY** contain zero or more [0..*] **entry** (CONF:3256-1111) such that it
   a. **SHALL** contain exactly one [1..1] **Hospital Admission Encounter** (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.18) (CONF:3256-1113).
5. **MAY** contain zero or more [0..*] **entry** (CONF:3256-1112) such that it
   a. **SHALL** contain exactly one [1..1] **Observation Unit Stay Encounter** (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.33) (CONF:3256-1114).

Figure 31: Emergency Department Encounters Section (V2) Example

```
<section>
  <!-- [C-CDA R2] Encounters Section (entries optional) (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.2.22" extension="2014-06-09" />
  <!-- [NHCS R1D1.2] Emergency Department Encounters Section (V2) -->
  <templateId root="2.16.840.1.113883.10.20.34.2.13" extension="2016-07-01" />
  <code code="46240-8"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="History of encounters" />
  <title>Emergency Department Encounters</title>
  <text>...</text>
  <!-- Current Emergency Department Visit -->
  <entry>
    <encounter classCode="ENC" moodCode="EVN">
      <!-- [C-CDA R2] R2 Encounter Activity (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.49" extension="2014-06-09" />
      <!-- [NHCS R1D1.2] Current Emergency Department Visit (V2) -->
      <templateId root="2.16.840.1.113883.10.20.34.3.40" extension="2016-07-01" />
      ...
    </encounter>
  </entry>
</section>
```

2.2.2 Inpatient Encounters Section (V2)

```
[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.2.12:2016-07-01
(open)]
```

```
Draft as part of National Health Care Surveys Release 1, DSTU Release 1.2 -
US Realm
```

Table 42: Inpatient Encounters Section (V2) Contexts

Contained By:	Contains:
Inpatient Encounter (NHCS-IP) (V3) (required)	Current Inpatient Visit Specialty Unit Stay Encounter

This section contains information about the inpatient encounter such as current visit and any specialty unit stay encounters.

Table 43: Inpatient Encounters Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.12:2016-07-01)					
templateId	1..1	SHALL		3256-1044	
@root	1..1	SHALL		3256-1046	2.16.840.1.113883.10.20.34.2.12
@extension	1..1	SHALL		3256-1047	2016-07-01
entry	0..1	SHOULD		3256-1043	
encounter	1..1	SHALL		3256-1045	Current Inpatient Visit (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.39:2015-04-01
entry	0..*	MAY		3256-1064	
encounter	1..1	SHALL		3256-1065	Specialty Unit Stay Encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.38:2015-04-01

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:3256-1044) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.2.12" (CONF:3256-1046).
   b. **SHALL** contain exactly one [1..1] **@extension**="2016-07-01" (CONF:3256-1047).
3. **SHOULD** contain zero or one [0..1] **entry** (CONF:3256-1043) such that it

> a. **SHALL** contain exactly one [1..1] **Current Inpatient Visit** (identifier:
>   urn:hl7ii:2.16.840.1.113883.10.20.34.3.39:2015-04-01) (CONF:3256-
>   1045).
4. **MAY** contain zero or more [0..*] **entry** (CONF:3256-1064) such that it
> a. **SHALL** contain exactly one [1..1] **Specialty Unit Stay Encounter** (identifier:
>   urn:hl7ii:2.16.840.1.113883.10.20.34.3.38:2015-04-01) (CONF:3256-
>   1065).

Figure 32: Inpatient Encounters Section (V2) Example

```
<section>
  <!-- [C-CDA R2] Encounters Section (entries optional) (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.2.22" extension="2014-06-09" />
  <!-- [NHCS R1D1.2] Inpatient Encounters Section (V2) -->
  <templateId root="2.16.840.1.113883.10.20.34.2.12" extension="2016-07-01" />
  <code code="46240-8"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="History of encounters" />
  <title>Inpatient Encounters Section</title>
  <text>...</text>
  <!-- Current Inpatient Visit -->
  <entry>
    <encounter classCode="ENC" moodCode="EVN">
      <!-- [C-CDA R2] R2 Encounter Activity (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.49" extension="2014-06-09" />
      <!-- [NHCS R1D1.1] Current Inpatient Visit -->
      <templateId root="2.16.840.1.113883.10.20.34.3.39" extension="2015-04-01" />
      ...
    </encounter>
  </entry>
  <entry>
    <encounter classCode="ENC" moodCode="EVN">
      <!-- [C-CDA R2] R2 Encounter Activity (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.49" extension="2014-06-09" />
      <!-- [NHCS R1D1.1] Specialty Unit Stay Encounter -->
      <templateId root="2.16.840.1.113883.10.20.34.3.38" extension="2015-04-01" />
      ...
    </encounter>
  </entry>
  <entry>
    <encounter classCode="ENC" moodCode="EVN">
      <!-- [C-CDA R2] R2 Encounter Activity (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.49" extension="2014-06-09" />
      <!-- [NHCS R1D1.1] Specialty Unit Stay Encounter -->
      <templateId root="2.16.840.1.113883.10.20.34.3.38" extension="2015-04-01" />
      ...
    </encounter>
    ...
  </entry>
</section>
```

2.2.3 Outpatient Encounters Section (V3)

```
[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.2.8:2016-07-01
(open)]
```

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Table 44: Outpatient Encounters Section (V3) Contexts

Contained By:	Contains:
Outpatient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V3) (required)	Current Outpatient Visit (V3)

This section contains information about the current outpatient encounter.

Table 45: Outpatient Encounters Section (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.8:2016-07-01)					
templateId	1..1	SHALL		3256-431	
@root	1..1	SHALL		3256-432	2.16.840.1.113883.10.20.34.2.8
@extension	1..1	SHALL		3256-1048	2016-07-01
entry	1..1	SHALL		3256-439	
encounter	1..1	SHALL		3256-440	Current Outpatient Visit (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.10:2016-07-01

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:3256-431) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.2.8" (CONF:3256-432).
   b. **SHALL** contain exactly one [1..1] **@extension**="2016-07-01" (CONF:3256-1048).
3. **SHALL** contain exactly one [1..1] **entry** (CONF:3256-439) such that it
   a. **SHALL** contain exactly one [1..1] **Current Outpatient Visit (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.10:2016-07-01) (CONF:3256-440).

Figure 33: Outpatient Encounters Section (V3)

```
<section>
  <!-- [C-CDA R2] Encounters Section (entries optional) (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.2.22" extension="2014-06-09" />
  <!-- [NHCS R1D1.2] Outpatient Encounters Section (V3) -->
  <templateId root="2.16.840.1.113883.10.20.34.2.8" extension="2016-07-01" />
  <code code="46240-8"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="History of encounters" />
  <title>Outpatient Encounters</title>
  <text>...</text>
  <!-- Current Outpatient Visit -->
  <entry>
    <encounter classCode="ENC" moodCode="EVN">
      <!-- [C-CDA R2] R2 Encounter Activity (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.49" extension="2014-06-09" />
      <!-- [NHCS R1D1.2] Current Outpatient Visit (V3) -->
      <templateId root="2.16.840.1.113883.10.20.34.3.10" extension="2016-07-01" />
      ...
    </encounter>
  </entry>
</section>
```

2.3   Medications Section (entries optional) (V2)

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

```
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DSTU R2
```

Table 46: 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 47: 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	urn:oid: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 urn:oid: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).

2.3.1 Immunizations Section

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

```
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```

Table 48: Immunizations Section Contexts

Contained By:	Contains:
Inpatient Encounter (NHCS-IP) (V3) (required) Outpatient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V3) (required) Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3) (required)	Immunization Activity (V2) Planned Immunization Activity

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

A continued immunization has an effectiveTime/low that is less than the encompassingEncounter/effectiveTime/low (date/time of admission/visit/arrival) and a new immunization has an effectiveTime/low that is equal to or greater than the encompassingEncounter/effectiveTime/low.

When recording Immunization Medication Information contained in the Planned Immunization Activity template, if the lot number is not known, use lotNumberText/@nullFlavor="NA".

Table 49: 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:2.16.840.1.113883.10.20.22.4.52:2014-06-09
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>
```

2.3.2 Medications Section

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

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Table 50: Medications Section Contexts

Contained By:	Contains:
Inpatient Encounter (NHCS-IP) (V3) (required) Outpatient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V3) (required) Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3) (required)	Medication Activity (V2) Planned Medication Activity (V2)

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.**

A continued medication has an effectiveTime/low that is less than the encompassingEncounter/effectiveTime/low (date/time of admission/visit/arrival) and a new medication has an effectiveTime/low that is equal to or greater than the encompassingEncounter/effectiveTime/low.

Table 51: 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:2.16.840.1.113883.10.20.22.4.16:2014-06-09
entry	0..*	SHOULD		1106-350	
substanceAdministration	1..1	SHALL		1106-351	Planned Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09

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>
```

2.4 Payers Section (V2)

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

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Table 52: 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 53: 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	urn:oid: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 urn:oid: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>
```

2.4.1 Payment Sources Section

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

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```

Table 54: Payment Sources Section Contexts

Contained By:	Contains:
Inpatient Encounter (NHCS-IP) (V3) (required) Outpatient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V3) (required) Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3) (required)	Planned Coverage

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

Table 55: 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>
```

2.5   Problems Section (V3)

```
[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.2.2:2016-07-01
(open)]
```

```
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US Realm
```

Table 56: Problems Section (V3) Contexts

Contained By:	Contains:
Inpatient Encounter (NHCS-IP) (V3) (required)	Admission Diagnosis Observation
Outpatient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V3) (required)	Adverse Effect of Medical Treatment
Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3) (required)	Injury or Poisoning Observation (V2)
	Primary Diagnosis Observation (V2)
	Problem/Diagnosis/Symptom/Condition Observation (V2)

This section contains problems, including current diagnoses, chronic conditions and symptoms.

Table 57: Problems Section (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.2:2016-07-01)					
templateId	1..1	SHALL		3256-67	
@root	1..1	SHALL		3256-68	2.16.840.1.113883.10.20.34.2.2
@extension	0..1	MAY		3256-1175	2016-07-01
code	1..1	SHALL		3256-509	
@code	1..1	SHALL		3256-510	11450-4
@codeSystem	1..1	SHALL		3256-511	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		3256-512	
text	1..1	SHALL		3256-513	
entry	1..1	SHALL		3256-74	
observation	1..1	SHALL		3256-75	Primary Diagnosis Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.6:2015-04-01
entry	0..1	MAY		3256-875	
observation	1..1	SHALL		3256-876	Admission Diagnosis Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.34:2015-04-01
entry	0..*	SHOULD		3256-332	
observation	1..1	SHALL		3256-333	Problem/Diagnosis/Symptom/Condition Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.1:2015-04-01
entry	0..*	MAY		3256-415	
observation	1..1	SHALL		3256-416	Injury or Poisoning Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.17:2015-04-01
entry	0..1	MAY		3256-497	
observation	1..1	SHALL		3256-	Adverse Effect of Medical

				498	Treatment (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.14

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:3256-67) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.2.2" (CONF:3256-68).
   b. **MAY** contain zero or one [0..1] **@extension**="2016-07-01" (CONF:3256-1175).
2. **SHALL** contain exactly one [1..1] **code** (CONF:3256-509).
   a. This code **SHALL** contain exactly one [1..1] **@code**="11450-4" Problem List (CONF:3256-510).
   b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3256-511).
3. **SHALL** contain exactly one [1..1] **title** (CONF:3256-512).
4. **SHALL** contain exactly one [1..1] **text** (CONF:3256-513).

If no other means of determination is possible, use first listed diagnosis as the primary diagnosis.

5. **SHALL** contain exactly one [1..1] **entry** (CONF:3256-74) such that it
   a. **SHALL** contain exactly one [1..1] **Primary Diagnosis Observation (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.6:2015-04-01) (CONF:3256-75).
6. **MAY** contain zero or one [0..1] **entry** (CONF:3256-875) such that it
   a. **SHALL** contain exactly one [1..1] **Admission Diagnosis Observation** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.34:2015-04-01) (CONF:3256-876).
   b. If the document is an Inpatient Encounter then this entry **SHALL** be present (CONF:3256-887).
7. **SHOULD** contain zero or more [0..*] **entry** (CONF:3256-332) such that it
   a. **SHALL** contain exactly one [1..1] **Problem/Diagnosis/Symptom/Condition Observation (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.1:2015-04-01) (CONF:3256-333).
8. **MAY** contain zero or more [0..*] **entry** (CONF:3256-415) such that it
   a. **SHALL** contain exactly one [1..1] **Injury or Poisoning Observation (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.17:2015-04-01) (CONF:3256-416).
      i. If this is an Outpatient Observation then this entry **MAY** be present (CONF:3256-1110).
9. **MAY** contain zero or one [0..1] **entry** (CONF:3256-497) 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:3256-498).

Figure 38: Problems Section (V3) Example

```
<section>
  <!-- [NHCS R1STU1.2] Problems Section (V3) -->
  <templateId root="2.16.840.1.113883.10.20.34.2.2" extension="2016-07-01" />
  <code code="11450-4"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="PROBLEM LIST" />
  <title>Problems</title>
  <text>...</text>
  <entry>
    <!-- This observation represents the primary diagnosis -->
    <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" />
      <!-- [NHCS R1D1] Primary Diagnosis Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.34.3.6" extension="2015-04-01" />
      ...
    </observation>
  </entry>
  <entry>
    <!-- This observation represents a diagnosis -->
    <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" />
      <!-- [NHCS R1D1] Problem/Diagnosis/Symptom/Condition Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.34.3.1" extension="2015-04-01" />
      ...
    </observation>
  </entry>
  <entry>
    <!-- This observation represents a comorbid condition - comorbid
         conditions are now represented in the Problem/Diagnosis/Symptom/Condition
         Observation as the Co-Morbid Condition Observation has been retired-->
    <observation classCode="OBS" moodCode="EVN">
      <!-- [C-CDA R2] R2 Problem Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
      <!-- [NHCS R1D1] Problem/Diagnosis/Symptom/Condition Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.34.3.1" extension="2015-04-01" />
      ...
    </observation>
  </entry>
  <entry>
    <!-- This observation represents an asthma diagnosis - asthma
         diagnoses are now represented in the Problem/Diagnosis/Symptom/Condition
         Observation as the Asthma Diagnsis Observation has been retired -->
    <observation classCode="OBS" moodCode="EVN">
      <!-- [C-CDA R2] R2 Problem Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
      <!-- [NHCS R1D1] Problem/Diagnosis/Symptom/Condition Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.34.3.1" extension="2015-04-01" />
      ...
    </observation>
  </entry>
  <!-- This entry represents whether the visit was related to adverse
       effect of medical treatment -->
```

```
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- [C-CDA R2] R2 Problem Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
      <!-- [NHCS R1D1] Adverse Effect of Medical Treatment -->
      <templateId root="2.16.840.1.113883.10.20.34.3.14" />
      ...
    </observation>
  </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)]
```

```
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DSTU R2
```

Table 58: Results Section (entries optional) (V2) Contexts

Contained By:	Contains:
Inpatient Encounter (NHCS-IP) (V3) (required)	Result Organizer (V2)
Outpatient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V3) (required)	
Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3) (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 59: 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	urn:oid: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 urn:oid: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)]
```

```
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```

Table 60: Services and Procedures Section Contexts

Contained By:	Contains:
Inpatient Encounter (NHCS-IP) (V3) (required) Outpatient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V3) (required) Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3) (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 61: 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 39: 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">
      <!-- Conforms 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">
      <!-- Conforms 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">
      <!-- Conforms 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">
      <!-- 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 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:hl7ii:2.16.840.1.113883.10.20.22.2.17:2014-06-09
(open)]
```

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Table 62: 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 63: 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	urn:oid: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 urn:oid: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] <u>Cultural and Religious Observation</u> (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] <u>Characteristics of Home Environment</u> (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.109) (CONF:1098-28826).

Figure 40: Social History Section (V2) Example

```
<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>
```

2.8.1 Patient Information Section (V3)

```
[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.2.5:2016-07-01
(open)]
```

```
Draft as part of National Health Care Surveys Release 1, DSTU Release 1.2 -
US Realm
```

Table 64: Patient Information Section (V3) Contexts

Contained By:	Contains:
Inpatient Encounter (NHCS-IP) (V3) (required)	Patient Residence Observation
Outpatient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V3) (required)	Pregnancy Observation
Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3) (required)	Smoking Status - Meaningful Use (V2)
	Tobacco Use (V2)

This section contains patient information such as tobacco use, pregnancy status, and type of patient residence.

Table 65: Patient Information Section (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.5:2016-07-01)					
templateId	1..1	SHALL		3256-203	
@root	1..1	SHALL		3256-204	2.16.840.1.113883.10.20.34.2.5
@extension	1..1	SHALL		3256-1108	2016-07-01
entry	0..*	MAY		3256-205	
observation	1..1	SHALL		3256-206	Tobacco Use (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09
entry	0..1	MAY		3256-1106	
observation	1..1	SHALL		3256-1107	Smoking Status - Meaningful Use (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09
entry	0..1	MAY		3256-207	
observation	1..1	SHALL		3256-208	Pregnancy Observation (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.8
entry	0..1	MAY		3256-676	
observation	1..1	SHALL		3256-677	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:3256-203) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.2.5" (CONF:3256-204).
   b. **SHALL** contain exactly one [1..1] **@extension**="2016-07-01" (CONF:3256-1108).
3. **MAY** contain zero or more [0..*] **entry** (CONF:3256-205) 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:3256-206).
   b. If the document is an Outpatient Encounter then at least one of this entry **SHALL** be present (CONF:3256-663).
4. **MAY** contain zero or one [0..1] **entry** (CONF:3256-1106) such that it

a. **SHALL** contain exactly one [1..1] <u>**Smoking Status - Meaningful Use (V2)**</u> (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09) (CONF:3256-1107).

   i. If the document is an Outpatient Encounter then this entry **SHALL** be present (CONF:3256-1109).

5. **MAY** contain zero or one [0..1] **entry** (CONF:3256-207) such that it

   a. **SHALL** contain exactly one [1..1] <u>**Pregnancy Observation**</u> (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.8) (CONF:3256-208).

   b. If the patient is male, then this section **SHALL NOT** contain this entry.
   If the document is an Inpatient Encounter or an Outpatient Encounter then this entry **MAY** be present (CONF:3256-514).

6. **MAY** contain zero or one [0..1] **entry** (CONF:3256-676) such that it

   a. **SHALL** contain exactly one [1..1] <u>**Patient Residence Observation**</u> (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.25) (CONF:3256-677).

Figure 41: Patient Information Section (V2) Example

```
<section>
  <!-- [C-CDA R2] Social History Section (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.2.17" extension="2014-06-09" />
  <!-- [NHCS R1D1.2] Patient Information Section (V3) -->
  <templateId root="2.16.840.1.113883.10.20.34.2.5" extension="2016-07-01" />
  <code code="29762-2" codeSystem="2.16.840.1.113883.6.1" displayName="Social History" />
  <title>Patient Information</title>
  <text>..</text>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- [NHCS R1D1] Patient Residence Observation -->
      <templateId root="2.16.840.1.113883.10.20.34.3.25" />
      ...
    </observation>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- [C-CDA R2] Tobacco Use (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.85" extension="2014-06-09" />
      ...
    </observation>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- [C-CDA R2] Tobacco Use (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.85" extension="2014-06-09" />
      ...
    </observation>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- [C-CDA R2] Tobacco Use (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.85" extension="2014-06-09" />
      ...
    </observation>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- [C-CDA R2] Smoking Status - Meaningful Use (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.78" extension="2014-06-09" />
      ...
    </observation>
  </entry>
  <entry>
    <!-- Is Female Patient Pregnant -->
    <observation classCode="OBS" moodCode="EVN">
      <!-- [C-CDA R1.1] Pregnancy Observation -->
      <templateId root="2.16.840.1.113883.10.20.15.3.8" />
      ...
    </observation>
  </entry>
</section>
```

2.9   Triage Section

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

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Table 66: Triage Section Contexts

Contained By:	Contains:
Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3) (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 67: 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

```xml
<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)]
```

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Table 68: 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 69: 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	urn:oid: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 urn:oid: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)]
```

```
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DSTU R2
```

Table 70: Vital Signs Section (entries required) (V2) Contexts

Contained By:	Contains:
Inpatient Encounter (NHCS-IP) (V3) (required) Outpatient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V3) (required) Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3) (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 71: 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	urn:oid: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	urn:oid: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 urn:oid: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 urn:oid: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 Admission Priority Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.3.35:2015-04-01 (open)]

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Table 72: Admission Priority Observation Contexts

Contained By:	Contains:
Current Inpatient Visit (optional)	

This template represents the priority of this admission or visit.

Table 73: Admission Priority Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.35:2015-04-01)					
@classCode	1..1	SHALL		1184-884	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1184-885	urn:oid:2.16.840.1.113883.5.100 1 (ActMood) = EVN
templateId	1..1	SHALL		1184-878	
@root	1..1	SHALL		1184-880	2.16.840.1.113883.10.20.34.3.35
@extension	1..1	SHALL		1184-881	2015-04-01
code	1..1	SHALL		1184-879	
@code	1..1	SHALL		1184-882	78020-5
@codeSystem	1..1	SHALL		1184-883	2.16.840.1.113883.6.1
value	1..1	SHALL	CD	1184-886	urn:oid:2.16.840.1.114222.4.11.7 365 (Priority (Type) of Admission or Visit (NCHS))

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1184-884).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1184-885).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1184-878) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.35" (CONF:1184-880).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-04-01" (CONF:1184-881).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1184-879).
    a. This code **SHALL** contain exactly one [1..1] **@code**="78020-5" Admission priority (CONF:1184-882).
    b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CONF:1184-883).
5. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD", where the code **SHALL** be selected from ValueSet **Priority (Type) of Admission or Visit (NCHS)** urn:oid:2.16.840.1.114222.4.11.7365 **DYNAMIC** (CONF:1184-886).

Table 74: Priority (Type) of Admission or Visit (NCHS)

Value Set: Priority (Type) of Admission or Visit (NCHS) urn:oid:2.16.840.1.114222.4.11.7365
The kind or importance of the process which resulted in the patient's being admitted as an inpatient.
Value Set Source:
https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7365

Code	Code System	Code System OID	Print Name
183452005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Emergency
448381000124100	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Urgent hospital admission
8715000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Elective
447941000124106	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Hospital admission of newborn
183497001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Non-urgent Trauma Admission
183463008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Admit Trauma Emergency
...			

Figure 44: Admission Priority Observation Example

```
<observation classCode="OBS" moodCode="EVN">
    <!-- Admission Priority Observation -->
    <templateId root="2.16.840.1.113883.10.20.34.3.35"
        extension="2015-04-01" />
    <id root="cd691b5e-2464-4fb4-936d-0d9d67ebb8fd" />
    <code code="78020-5"
        displayName="Admission Priority"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC" />
    <statusCode code="completed" />
    <value xsi:type="CD"
        code="183452005"
        displayName="Emergency"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT" />
</observation>
```

3.2   *Age Observation*

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

```
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DSTU R1.1
```

Table 75: 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 76: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-7614	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	PQ	81-7617	
@unit	1..1	SHALL	CS	81-7618	urn:oid:2.16.840.1.113883.11.20.9.21 (AgePQ_UCUM)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-7613).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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 urn:oid: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 urn:oid: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** urn:oid:2.16.840.1.113883.11.20.9.21 **DYNAMIC** (CONF:81-7618).

Table 77: AgePQ_UCUM

Value Set: AgePQ_UCUM urn:oid:2.16.840.1.113883.11.20.9.21
A value set 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	urn:oid:2.16.840.1.113883.6.8	Minute
h	UCUM	urn:oid:2.16.840.1.113883.6.8	Hour
d	UCUM	urn:oid:2.16.840.1.113883.6.8	Day
wk	UCUM	urn:oid:2.16.840.1.113883.6.8	Week
mo	UCUM	urn:oid:2.16.840.1.113883.6.8	Month
a	UCUM	urn:oid:2.16.840.1.113883.6.8	Year

Figure 45: Age Observation Example

```
<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>
```

3.3   Assessment Scale Observation

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

```
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```

Table 78: 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 79: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-14435	urn:oid: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	urn:oid: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	SHOUL		81-	

		D		16802	
@value	0..1	MAY		81-16803	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-14434).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid: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 urn:oid: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 46: 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"/>

        . . .

    </entryRelationship>
</observation>
```

3.3.1 Pain Assessment Scale Observation

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

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Table 80: 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 81: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-599	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1106-598).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid: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 47: Pain Assessment Scale Observation Example

```xml
<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>
```

3.3.2 Triage Level Assigned Observation

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

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Table 82: 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 83: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-621	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1106-620).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid: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)** urn:oid: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 84: Triage System (NCHS)

Value Set: Triage System (NCHS) urn:oid:2.16.840.1.114222.4.11.7401
These values describe different types of triage systems.
Value Set Source: **https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7401**

Code	Code System	Code System OID	Print Name
75614-8	LOINC	urn:oid:2.16.840.1.113883.6.1	Three level triage system
75615-5	LOINC	urn:oid:2.16.840.1.113883.6.1	Four level triage system
75616-3	LOINC	urn:oid:2.16.840.1.113883.6.1	Five level triage system
75910-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Canadian triage and acuity scale CTAS
75636-1	LOINC	urn:oid:2.16.840.1.113883.6.1	Emergency severity index
...			

Figure 48: Triage Level Assigned 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" />
  <!-- 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>
```

3.4   Assessment Scale Supporting Observation

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

```
Published as part of Consolidated CDA Templates for Clinical Notes (US Realm)
DSTU R1.1
```

Table 85: 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 86: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-16716	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-16715).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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 urn:oid: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 49: 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>
```

3.5   Asthma Diagnosis Observation (RETIRED)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.3.5:2016-07-01 (open)]

Draft as part of National Health Care Surveys Release 1, DSTU Release 1.2 - US Realm

This template represents a diagnosis of Asthma.

Retired as per STU Comment: http://www.hl7.org/dstucomments/showdetail_comment.cfm?commentid=925

Asthma Diagnoses are now represented using the Problem/Diagnosis/Symptom/Condition Observation.

Table 87: Asthma Diagnosis Observation (RETIRED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.5:2016-07-01)					

Figure 50: Asthma Diagnosis Observation (V2) Example

```
<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 (V2) -->
    <templateId root="2.16.840.1.113883.10.20.34.3.5"
        extension="2015-04-01" />
    <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>
    <!-- This entryRelationship represents whether or not the
        diagnosis was present on admission -->
    <entryRelationship typeCode="SUBJ" inversionInd="true">
        <observation classCode="OBS" moodCode="EVN">
            <!-- Present on Admission Observation -->
            <templateId root="2.16.840.1.113883.10.20.34.3.37"
                extension="2015-04-01" />
            ...
        </observation>
    </entryRelationship>
</observation>
```

3.6   *Caregiver Characteristics*

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

```
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DSTU R1.1
```

Table 88: 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 89: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-14220	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-14219).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid: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 urn:oid: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 51: 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>
```

3.7   Cause of Injury, Poisoning, or Adverse Effect

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

```
Published as part of National Health Care Surveys, Release 1, DSTU 1 - US
Realm
```

Table 90: Cause of Injury, Poisoning, or Adverse Effect Contexts

Contained By:	Contains:
Adverse Effect of Medical Treatment (optional) Injury or Poisoning Observation (V2) (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 91: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-627	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1106-636	urn:oid: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 urn:oid:2.16.840.1.113883.5.6) (CONF:1106-626).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid: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 urn:oid: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 urn:oid: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 (urn:oid: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 52: 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="b1eae324-7c21-4ef8-8618-0b4478c65721"/>
    <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 53: 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="b1eae324-7c21-4ef8-8618-0b4478c65721"/>
    <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>
```

3.8   Characteristics of Home Environment

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

Published as part of Consolidated CDA Templates for Clinical Notes (US Realm) DSTU R2

Table 92: 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 93: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-27891	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1098-28823	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-27890).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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 urn:oid: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 urn:oid: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** urn:oid:2.16.840.1.113883.11.20.9.49 **DYNAMIC** (CONF:1098-28823).

Table 94: Residence and Accommodation Type

Value Set: Residence and Accommodation Type urn:oid: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://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.11.20.9.49

Code	Code System	Code System OID	Print Name
424661000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	cluttered living space (finding)
160708008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	stairs in house (finding)
160751007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	eviction from dwelling (finding)
423859003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	crowded living space (finding)
160720000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	harassment by landlord (finding)
105529008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	lives alone (finding)
60585007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	slum area living (finding)
365508006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	unsatisfactory living conditions (finding)
422491004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	housing contains exposed wiring (finding)
...			

Figure 54: Characteristics of Home Environment Example

```
<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>
```

3.9   Clinical Note and External Document Reference

```
[externalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.3.44:2016-
07-01 (open)]

Draft as part of National Health Care Surveys Release 1, DSTU Release 1.2 -
US Realm
```

Table 95: Clinical Note and External Document Reference Contexts

Contained By:	Contains:
Current Outpatient Visit (V3) (optional) Current Emergency Department Visit (V2) (optional)	

This template represents relevant clinical (e.g., physicians', nurses', P.A.s', N.P.s' and C.N.M.s') notes for this visit, such as Triage, Intake, History of Present Illness, Clinical Impression and Discharge. If the current visit is the result of a referral, the referral document can be referenced using this template.

These notes or documents can be CDA documents or they can be other types of documents such as PDF.

The following (non-exhaustive) table lists some LOINC code examples for relevant document types:

Document type	LOINC code
History of Present Illness Narrative	10164-2
Evaluation and Plan Note	51847-2
Evaluation Note	51848-0
Hospital Discharge Dx Narrative	11535-2
Reason for Visit Narrative	29299-5
Referral Note	57113-1

Table 96: Clinical Note and External Document Reference Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
externalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.44:2016-07-01)					
@classCode	1..1	SHALL		3256-1189	
@moodCode	1..1	SHALL		3256-1178	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		3256-1176	
@root	1..1	SHALL		3256-1180	2.16.840.1.113883.10.20.34.3.44
@extension	1..1	SHALL		3256-1181	2016-07-01
id	1..*	SHALL		3256-1182	
code	0..1	MAY		3256-1179	
text	0..1	MAY		3256-1185	
@mediaType	1..1	SHALL		3256-1187	
reference	0..1	MAY		3256-1186	
@value	1..1	SHALL		3256-1188	
setId	0..1	MAY		3256-1183	
versionNumber	0..1	MAY		3256-1184	

If referencing a CDA document use DOCCLIN, otherwise use DOC.

1. **SHALL** contain exactly one [1..1] **@classCode** (CONF:3256-1189).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3256-1178).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3256-1176) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.44" (CONF:3256-1180).
   b. **SHALL** contain exactly one [1..1] **@extension**="2016-07-01" (CONF:3256-1181).
4. **SHALL** contain at least one [1..*] **id** (CONF:3256-1182).

The code represents the type of document. Either a code and/or text description should be used to describe the external document.

5. **MAY** contain zero or one [0..1] **code** (CONF:3256-1179).
6. **MAY** contain zero or one [0..1] **text** (CONF:3256-1185).

a. The text, if present, **SHALL** contain exactly one [1..1] **@mediaType** (CONF:3256-1187).

b. The text, if present, **MAY** contain zero or one [0..1] **reference** (CONF:3256-1186).

    i. The reference, if present, **SHALL** contain exactly one [1..1] **@value** (CONF:3256-1188).

7. **MAY** contain zero or one [0..1] **setId** (CONF:3256-1183).

8. **MAY** contain zero or one [0..1] **versionNumber** (CONF:3256-1184).

Figure 55: Clinical Note and External Document Reference - Non-CDA Example

```
<!-- Not a CDA document so use classCode="DOC" -->
<externalDocument classCode="DOC" moodCode="EVN">
  <!-- [NHCS R1D1.2] Clinical Note and External Document Reference -->
  <templateId root="2.16.840.1.113883.10.20.34.3.44" extension="2016-07-01" />
  <id root="10021d19-5b29-4771-bce4-236109943dd4" />
  <code codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    code="51848-0"
    displayName="Evaluation Note" />
  <!-- The media type is pdf -->
  <text mediaType="application/pdf">
    <reference value="EvaluationNote_10021d19-5b29-4771-bce4-236109943dd4.pdf" />
  </text>
</externalDocument>
```

Figure 56: Clinical Note and External Document Reference - CDA Document (Referral) Example

```
<!-- This is a reference to a CDA document so use classCode="DOCCLIN" -->
<externalDocument classCode="DOCCLIN" moodCode="EVN">
  <!-- [NHCS R1D1.2] Clinical Note and External Document Reference -->
  <templateId root="2.16.840.1.113883.10.20.34.3.44" extension="2016-07-01" />
  <id root="6f1bd58b-c58f-40b7-b314-caf1294ed98b" />
  <code codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    code="57113-1"
    displayName="Referral Note" />
  <setId extension="sTT988" root="2.16.840.1.113883.19.5.99999.19" />
  <versionNumber value="1" />
</externalDocument>
```

3.10 Co-morbid Condition Observation (RETIRED)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.3.4:2016-07-01 (open)]

Draft as part of National Health Care Surveys Release 1, DSTU Release 1.2 - US Realm

This template represents a co-morbid condition.

Retired as per STU Comment: http://www.hl7.org/dstucomments/showdetail_comment.cfm?commentid=921

Co-morbid conditions are now represented using the Problem/Diagnosis/Symptom/Condition Observation.

Table 97: Co-morbid Condition Observation (RETIRED) Constraints Overview

X P a t h	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.4:2016-07-01)					

Figure 57: Co-morbid Condition Observation (V2) Example

```xml
<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"
        extension="2015-04-01" />
    <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" />
    <!-- This entryRelationship represents whether or not the diagnosis was present on
admission -->
    <entryRelationship typeCode="SUBJ" inversionInd="true">
        <observation classCode="OBS" moodCode="EVN">
            <!-- Present on Admission Observation -->
            <templateId root="2.16.840.1.113883.10.20.34.3.37"
                extension="2015-04-01" />
            ...
        </observation>
    </entryRelationship>
</observation>
```

3.11 Condition Control Observation

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

```
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Realm
```

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 98: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-235	urn:oid: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	urn:oid:2.16.840.1.113883.5.4 (ActCode) = ASSERTION
statusCode	1..1	SHALL		1106-241	
@code	1..1	SHALL		1106-242	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1106-243	
@code	1..1	SHALL		1106-389	urn:oid:2.16.840.1.114222.4.11.7433 (Condition Control (NCHS))

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1106-234).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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 urn:oid: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 urn:oid: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)** urn:oid:2.16.840.1.114222.4.11.7433 **DYNAMIC** (CONF:1106-389).

Table 99: Condition Control (NCHS)

Value Set: Condition Control (NCHS) urn:oid:2.16.840.1.114222.4.11.7433
Descendants of Disease Condition Finding (371314008) in SNOMED CT
Value Set Source:
https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7433

Code	Code System	Code System OID	Print Name
67106002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Condition determination, moderately controlled
12650007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Condition determination, fairly well controlled
39431006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Condition determination, slightly controlled
28876000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Condition determination, uncontrolled
1194003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Condition determination, well controlled
2761002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Condition determination, arrested
51231003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Condition determination, cured

Figure 58: 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="a1fe8200-4925-4679-80c7-11c7d406593d" />
  <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>
```

3.12 Coverage Activity (V2)

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

```
Published as part of Consolidated CDA Templates for Clinical Notes (US Realm)
DSTU R2
```

Table 100: 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 101: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-8873	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
entryRelationship	1..*	SHALL		1098-8878	
@typeCode	1..1	SHALL		1098-8879	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8872).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 59: 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>
```

3.13 Cultural and Religious Observation

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

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Table 102: 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 103: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-27925	urn:oid: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	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-27924).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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 urn:oid: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 urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-27937).

7. **SHALL** contain exactly one [1..1] **value** (CONF:1098-28442).

        a. If xsi:type is CD, **SHALL** contain exactly one 1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED-CT urn:oid:2.16.840.1.113883.6.96 STATIC) (CONF:1098-32487).

Figure 60: 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>
```

3.14 Discharge Status Observation

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

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Table 104: 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 105: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-686	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1106-695	urn:oid: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 urn:oid:2.16.840.1.113883.5.6) (CONF:1106-685).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid: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
urn:oid: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 urn:oid: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)**
urn:oid: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 106: Hospital Discharge Status (NCHS)

Value Set: Hospital Discharge Status (NCHS) urn:oid: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/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7440**			
Code	**Code System**	**Code System OID**	**Print Name**
371827001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Patient discharged alive
371828006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Patient deceased during stay (discharge status = dead)
...			

Figure 61: Discharge Status Observation Example

```
<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>
```

3.15 Drug Monitoring Act

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

```
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DSTU R2
```

Table 107: Drug Monitoring Act Contexts

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

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 108: 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	urn:oid: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	urn:oid: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	urn:oid: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.FIELDED) (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 urn:oid: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 urn:oid: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** urn:oid: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.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1) (CONF:1098-28669).

Table 109: ActStatus

Value Set: ActStatus urn:oid: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: **https://phinvads.cdc.gov/vads/ViewValueSet.action?oid= 2.16.840.1.113883.1.11.15933**			
Code	**Code System**	**Code System OID**	**Print Name**
normal	ActStatus	urn:oid:2.16.840.1.113883.5.14	normal
aborted	ActStatus	urn:oid:2.16.840.1.113883.5.14	aborted
active	ActStatus	urn:oid:2.16.840.1.113883.5.14	active
cancelled	ActStatus	urn:oid:2.16.840.1.113883.5.14	cancelled
completed	ActStatus	urn:oid:2.16.840.1.113883.5.14	completed
held	ActStatus	urn:oid:2.16.840.1.113883.5.14	held
new	ActStatus	urn:oid:2.16.840.1.113883.5.14	new
suspended	ActStatus	urn:oid:2.16.840.1.113883.5.14	suspended
nullified	ActStatus	urn:oid:2.16.840.1.113883.5.14	nullified
obsolete	ActStatus	urn:oid:2.16.840.1.113883.5.14	obsolete

Figure 62: 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>
```

3.16 Drug Vehicle

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

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Table 110: 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 111: 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	urn:oid: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	urn:oid: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 urn:oid: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 urn:oid: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 63: 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>
```

3.17 Encounter Activity (V2)

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

```
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```

Table 112: 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 113: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1098-8711	urn:oid: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	urn:oid: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:dischargeDispositionCode	0..1	MAY		1098-32176	
performer	0..*	MAY		1098-8725	
assignedEntity	1..1	SHALL		1098-8726	
code	0..1	MAY		1098-8727	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
participant	0..*	SHOULD		1098-8738	
@typeCode	1..1	SHALL		1098-8740	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8710).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid: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** urn:oid: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] **sdtc:dischargeDispositionCode** (CONF:1098-32176). Note: 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 dischargeDispositionCode element

      a. This sdtc:dischargeDispositionCode **SHOULD** contain exactly [1..1] **@code**, which **SHOULD** 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 sdtc:dischargeDispositionCode **SHOULD** contain exactly [1..1] **@codeSystem**, which **SHOULD** 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)** urn:oid: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 urn:oid: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 urn:oid: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 114: EncounterTypeCode

Value Set: EncounterTypeCode urn:oid: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: **https://vsac.nlm.nih.gov/**

Code	Code System	Code System OID	Print Name
99201	CPT4	urn:oid:2.16.840.1.113883.6.12	Office or other outpatient visit (problem focused)
99202	CPT4	urn:oid:2.16.840.1.113883.6.12	Office or other outpatient visit (expanded problem (expanded)
99203	CPT4	urn:oid:2.16.840.1.113883.6.12	Office or other outpatient visit (detailed)
99204	CPT4	urn:oid:2.16.840.1.113883.6.12	Office or other outpatient visit (comprehensive, (comprehensive - moderate)
99205	CPT4	urn:oid:2.16.840.1.113883.6.12	Office or other outpatient visit (comprehensive, comprehensive-high)
19681004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Nursing evaluation of patient and report (procedure)
207195004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	History and physical examination with evaluation and management of nursing facility patient (procedure)
209099002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	History and physical examination with management of domiciliary or rest home patient (procedure)
210098006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Domiciliary or rest home patient evaluation and management (procedure)
225929007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Joint home visit (procedure)
...			

Figure 64: Encounter Activity (V2) Example

```xml
<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>
```

3.17.1 Current Emergency Department Visit (V2)

```
[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.3.40:2016-07-01
(open)]
```

```
Draft as part of National Health Care Surveys Release 1, DSTU Release 1.2 -
US Realm
```

Table 115: Current Emergency Department Visit (V2) Contexts

Contained By:	Contains:
Emergency Department Encounters Section (V2) (required)	Clinical Note and External Document Reference Episode of Care Observation (V2) Major Reason for Visit Patient Seen in this ED in last 72 Hours and Discharged Point of Origin Observation Transport Mode to Hospital Observation

This template represents the patient's current emergency department visit. The major reason for this visit is represented by the Major Reason for this Visit template. To indicate whether this is an initial or follow-up visit use the Episode of Care template. The method of transport to the hospital is recorded in the Transport Mode to Hospital Observation. The point of origin of the patient is entered in the Point of Origin Observation template. The Clinical Note and External Document Reference template is used to record clinician notes (e.g., physicians', nurses', P.A.s', N.P.s' and C.N.M.s' notes) such as Triage, Intake, History of Present Illness, Clinical Impression and Discharge.

Table 116: Current Emergency Department Visit (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.40:2016-07-01)					
@classCode	1..1	SHALL		3256-1036	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		3256-1037	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		3256-997	
@root	1..1	SHALL		3256-1010	2.16.840.1.113883.10.20.34.3.40
@extension	1..1	SHALL		3256-1011	2016-07-01
code	1..1	SHALL		3256-1006	
@code	1..1	SHALL		3256-1038	EMER
@codeSystem	1..1	SHALL		3256-1039	urn:oid:2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
entryRelationship	0..1	MAY		3256-999	
@typeCode	1..1	SHALL		3256-1016	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		3256-1015	Major Reason for Visit (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.7
entryRelationship	0..1	MAY		3256-1001	
@typeCode	1..1	SHALL		3256-1021	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		3256-1115	Episode of Care Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.32:2015-04-01
entryRelationship	0..1	MAY		3256-1002	
@typeCode	1..1	SHALL		3256-1024	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		3256-1025	Transport Mode to Hospital Observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.24
entryRelationship	0..1	MAY		3256-	

				1003	
@typeCode	1..1	SHALL		3256-1027	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		3256-1028	Patient Seen in this ED in last 72 Hours and Discharged (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.31
entryRelationship	0..1	MAY		3256-1005	
@typeCode	1..1	SHALL		3256-1033	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		3256-1034	Point of Origin Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.36:2015-04-01
reference	0..*	MAY		3256-1155	
@typeCode	1..1	SHALL		3256-1156	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
externalDocument	1..1	SHALL		3256-1157	Clinical Note and External Document Reference (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.44:2016-07-01

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 urn:oid:2.16.840.1.113883.5.6) (CONF:3256-1036).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3256-1037).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3256-997) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.40" (CONF:3256-1010).
    b. **SHALL** contain exactly one [1..1] **@extension**="2016-07-01" (CONF:3256-1011).
5. **SHALL** contain exactly one [1..1] **code** (CONF:3256-1006).
    a. This code **SHALL** contain exactly one [1..1] **@code**="EMER" Emergency (CONF:3256-1038).
    b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3256-1039).
6. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:3256-999) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3256-1016).

b. **SHALL** contain exactly one [1..1] <u>**Major Reason for Visit**</u> (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.7) (CONF:3256-1015).
Note: Major Reason for This Visit

7. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:3256-1001) such that it

a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3256-1021).

b. **SHALL** contain exactly one [1..1] <u>**Episode of Care Observation (V2)**</u> (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.32:2015-04-01) (CONF:3256-1115).

8. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:3256-1002) such that it

a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3256-1024).

b. **SHALL** contain exactly one [1..1] <u>**Transport Mode to Hospital Observation**</u> (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.24) (CONF:3256-1025).
Note: Mode of arrival

9. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:3256-1003) such that it

a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3256-1027).

b. **SHALL** contain exactly one [1..1] <u>**Patient Seen in this ED in last 72 Hours and Discharged**</u> (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.31) (CONF:3256-1028).
Note: Was this patient seen in this ED and discharged in the prior 72 hours?

10. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:3256-1005) such that it

a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3256-1033).

b. **SHALL** contain exactly one [1..1] <u>**Point of Origin Observation**</u> (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.36:2015-04-01) (CONF:3256-1034).
Note: Point of Origin

11. **MAY** contain zero or more [0..*] **reference** (CONF:3256-1155).

a. The reference, if present, **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3256-1156).

b. The reference, if present, **SHALL** contain exactly one [1..1] <u>**Clinical Note and External Document Reference**</u> (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.44:2016-07-01) (CONF:3256-1157).

Figure 65: Current Emergency Department Visit (V2) Example

```
<encounter classCode="ENC" moodCode="EVN">
  <!-- [C-CDA R2] R2 Encounter Activity (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.49" extension="2014-06-09" />
  <!-- [NHCS R1D1.2] Current Outpatient Visit (V3) -->
  <templateId root="2.16.840.1.113883.10.20.34.3.10" extension="2016-07-01" />
  <!-- This id is the same as the encompassingEncounter id -->
  <id root="57edf80c-7114-4dc3-b3f4-abf515d18c90" />
  <code code="AMB"
    displayName="Ambulatory (outpatient)"
    codeSystem="2.16.840.1.113883.5.4"
    codeSystemName="ActCode" />
  <effectiveTime>
    <!-- Date of Visit -->
    <low value="20130815" />
  </effectiveTime>
  <entryRelationship typeCode="RSON">
    <!-- Major Reason for Visit -->
    <observation classCode="OBS" moodCode="EVN">
      <!-- [C-CDA R2] R2 Indication (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09" />
      <!-- [NHCS R1D1] Major Reason for Visit -->
      <templateId root="2.16.840.1.113883.10.20.34.3.7" />
      ...
    </observation>
  </entryRelationship>
  <!-- New Patient -->
  <entryRelationship typeCode="COMP">
    <act classCode="ACT" moodCode="EVN">
      <!-- [NHCS R1D1] New Patient Act -->
      <templateId root="2.16.840.1.113883.10.20.34.3.9" />
      ...
    </act>
  </entryRelationship>
  <!-- Clearly a patient can't both be new and have visits in the past
       12 months. This is for XML sample file illustration purposes only -->
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <!-- [NHCS R1D1] 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" />
      ...
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <!-- [NHCS R1D1.1] Episode of Care Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.34.3.32" extension="2015-04-01" />
      <id root="ecbec7b7-7fc0-47b2-85b5-39778319b8fb" />
      ...
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <!-- [NHCS R1D1.1] Procedure Follow-Up Attempt -->
      <templateId root="2.16.840.1.113883.10.20.34.3.42" extension="2015-04-01" />
```

```
        <id root="ecbec7b7-7fc0-47b2-85b5-39778319b8fb" />
        ...
      </observation>
    </entryRelationship>
    <!-- Was patient referred for this visit -->
    <reference typeCode="REFR">
      <!-- This is a reference to a CDA document so use classCode="DOCCLIN" -->
      <externalDocument classCode="DOCCLIN" moodCode="EVN">
        <!-- [NHCS R1D1.2] Clinical Note and External Document Reference -->
        <templateId root="2.16.840.1.113883.10.20.34.3.44" extension="2016-07-01" />
        ...
      </externalDocument>
    </reference>
</encounter>
```

3.17.2 Current Inpatient Visit

```
[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.3.39:2015-04-01
(open)]
```

```
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Table 117: Current Inpatient Visit Contexts

Contained By:	Contains:
Inpatient Encounters Section (V2) (optional)	Admission Priority Observation Point of Origin Observation

This template represents the patient's current inpatient visit to the facility. The priority level of the admission is indicated using the Admission Priority Observation template and the point of origin of the patient is entered in the Point of Origin Observation template.

Table 118: Current Inpatient Visit Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.39:2015-04-01)					
@classCode	1..1	SHALL		1184-983	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1184-984	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1184-949	
@root	1..1	SHALL		1184-961	2.16.840.1.113883.10.20.34.3.39
@extension	1..1	SHALL		1184-989	2015-04-01
code	1..1	SHALL		1184-988	
@code	1..1	SHALL		1184-990	IMP
@codeSystem	1..1	SHALL		1184-991	urn:oid:2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
entryRelationship	0..1	MAY		1184-956	
@typeCode	1..1	SHALL		1184-980	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1184-981	Admission Priority Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.35:2015-04-01
entryRelationship	0..1	MAY		1184-957	
@typeCode	1..1	SHALL		1184-985	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1184-986	Point of Origin Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.36:2015-04-01

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 urn:oid:2.16.840.1.113883.5.6) (CONF:1184-983).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1184-984).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1184-949) such that it

        a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.39" (CONF:1184-961).

        b. **SHALL** contain exactly one [1..1] **@extension**="2015-04-01" (CONF:1184-989).

5. **SHALL** contain exactly one [1..1] **code** (CONF:1184-988).

        a. This code **SHALL** contain exactly one [1..1] **@code**="IMP" Inpatient (CONF:1184-990).

        b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1184-991).

6. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1184-956) such that it

        a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1184-980).

        b. **SHALL** contain exactly one [1..1] **Admission Priority Observation** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.35:2015-04-01) (CONF:1184-981).
        Note: Admission priority

7. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1184-957) such that it

        a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1184-985).

        b. **SHALL** contain exactly one [1..1] **Point of Origin Observation** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.36:2015-04-01) (CONF:1184-986).
        Note: Point of Origin

Figure 66: Current Inpatient Visit Example

```
<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 Inpatient Visit -->
    <templateId root="2.16.840.1.113883.10.20.34.3.39"
        extension="2015-04-01" />
    <!-- This id is the same as the encompassingEncounter id -->
    <id root="57edf80c-7114-4dc3-b3f4-abf515d18c90" />
    <code code="IMP"
        displayName="Inpatient"
        codeSystem="2.16.840.1.113883.5.4"
        codeSystemName="ActCode" />
    <effectiveTime>
        <!-- Date of Visit -->
        <low value="20130815" />
    </effectiveTime>
    <!-- Admission Priority -->
    <entryRelationship typeCode="REFR">
        <observation classCode="OBS" moodCode="EVN">
            <!-- Admission Priority Observation -->
            <templateId root="2.16.840.1.113883.10.20.34.3.35"
                extension="2015-04-01" />
            ...
        </observation>
    </entryRelationship>
    <!-- Point of Origin -->
    <entryRelationship typeCode="REFR">
        <observation classCode="OBS" moodCode="EVN">
            <!-- Point of Origin Observation -->
            <templateId root="2.16.840.1.113883.10.20.34.3.36"
                extension="2015-04-01" />
            ...
        </observation>
    </entryRelationship>
</encounter>
```

3.17.3 Current Outpatient Visit (V3)

```
[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.3.10:2016-07-01
(open)]
```

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Table 119: Current Outpatient Visit (V3) Contexts

Contained By:	Contains:
Outpatient Encounters Section (V3) (required)	Clinical Note and External Document Reference Episode of Care Observation (V2) Major Reason for Visit New Patient Act Number of Visits in the Last 12 Months Procedure Follow-Up Attempt Observation

This template represents the patient's current outpatient visit to the facility. If the current visit is the result of a referral, the referral document is referenced through the Clinical Note and 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. To indicate whether this is an initial or follow-up visit use the Episode of Care template. Information about follow-up after surgery is contained in the Procedure Follow-up Attempt Observation template.

Table 120: Current Outpatient Visit (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.10:2016-07-01)					
@classCode	1..1	SHALL		3256-463	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		3256-464	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		3256-465	
@root	1..1	SHALL		3256-466	2.16.840.1.113883.10.20.34.3.10
@extension	1..1	SHALL		3256-993	2016-07-01
code	1..1	SHALL		3256-992	
@code	1..1	SHALL		3256-994	AMB
@codeSystem	1..1	SHALL		3256-995	urn:oid:2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
entryRelationship	0..1	MAY		3256-469	
@typeCode	1..1	SHALL		3256-474	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		3256-470	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		3256-471	
@typeCode	1..1	SHALL		3256-475	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		3256-472	Major Reason for Visit (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.7
entryRelationship	0..1	MAY		3256-484	
@typeCode	1..1	SHALL		3256-485	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		3256-486	New Patient Act (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.9
entryRelationship	0..1	MAY		3256-747	

@typeCode	1..1	SHALL		3256-748	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		3256-1063	Episode of Care Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.32:2015-04-01
entryRelationship	0..1	MAY		3256-1152	
@typeCode	1..1	SHALL		3256-1153	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		3256-1154	Procedure Follow-Up Attempt Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.42:2015-04-01
reference	0..*	MAY		3256-1158	
@typeCode	1..1	SHALL		3256-1159	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
externalDocument	1..1	SHALL		3256-1160	Clinical Note and External Document Reference (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.44:2016-07-01

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 urn:oid:2.16.840.1.113883.5.6) (CONF:3256-463).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3256-464).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3256-465) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.10" (CONF:3256-466).
   b. **SHALL** contain exactly one [1..1] **@extension**="2016-07-01" (CONF:3256-993).
5. **SHALL** contain exactly one [1..1] **code** (CONF:3256-992).
   a. This code **SHALL** contain exactly one [1..1] **@code**="AMB" Ambulatory (outpatient) (CONF:3256-994).
   b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3256-995).
6. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:3256-469) such that it
   a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3256-474).

    b. **SHALL** contain exactly one [1..1] **<u>Number of Visits in the Last 12 Months</u>** (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.26) (CONF:3256-470). Note: Number of Past Visits in the Last 12 Months

7. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:3256-471) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3256-475).
    b. **SHALL** contain exactly one [1..1] **<u>Major Reason for Visit</u>** (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.7) (CONF:3256-472). Note: Major Reason for This Visit

8. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:3256-484) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3256-485).
    b. **SHALL** contain exactly one [1..1] **<u>New Patient Act</u>** (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.9) (CONF:3256-486). Note: Has patient been seen in clinic/location before

9. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:3256-747) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3256-748).
    b. **SHALL** contain exactly one [1..1] **<u>Episode of Care Observation (V2)</u>** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.32:2015-04-01) (CONF:3256-1063). Note: Initial or follow-up visit

10. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:3256-1152) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3256-1153).
    b. **SHALL** contain exactly one [1..1] **<u>Procedure Follow-Up Attempt Observation</u>** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.42:2015-04-01) (CONF:3256-1154).

11. **MAY** contain zero or more [0..*] **reference** (CONF:3256-1158).
    a. The reference, if present, **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3256-1159).
    b. The reference, if present, **SHALL** contain exactly one [1..1] **<u>Clinical Note and External Document Reference</u>** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.44:2016-07-01) (CONF:3256-1160).

Figure 67: Current Outpatient Visit (V3) Example

```xml
<encounter classCode="ENC" moodCode="EVN">
  <!-- [C-CDA R2] R2 Encounter Activity (V2) -->
  <templateId root="2.16.840.1.113883.10.20.22.4.49" extension="2014-06-09" />
  <!-- [NHCS R1D1.2] Current Outpatient Visit (V3) -->
  <templateId root="2.16.840.1.113883.10.20.34.3.10" extension="2016-07-01" />
  <!-- This id is the same as the encompassingEncounter id -->
  <id root="57edf80c-7114-4dc3-b3f4-abf515d18c90" />
  <code code="AMB"
    displayName="Ambulatory (outpatient)"
    codeSystem="2.16.840.1.113883.5.4"
    codeSystemName="ActCode" />
  <effectiveTime>
    <!-- Date of Visit -->
    <low value="20130815" />
  </effectiveTime>
  <entryRelationship typeCode="RSON">
    <!-- Major Reason for Visit -->
    <observation classCode="OBS" moodCode="EVN">
      <!-- [C-CDA R2] R2 Indication (V2) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09" />
      <!-- [NHCS R1D1] Major Reason for Visit -->
      ...
    </observation>
  </entryRelationship>
  <!-- New Patient -->
  <entryRelationship typeCode="COMP">
    <act classCode="ACT" moodCode="EVN">
      <!-- [NHCS R1D1] New Patient Act -->
      <templateId root="2.16.840.1.113883.10.20.34.3.9" />
      ...
    </act>
  </entryRelationship>
  <!-- Clearly a patient can't both be new and have visits in the past
       12 months. This is for XML sample file illustration purposes only -->
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <!-- [NHCS R1D1] Number of Visits in the Last 12 Months -->
      <templateId root="2.16.840.1.113883.10.20.34.3.26" />
      ...
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <!-- [NHCS R1D1.1] Episode of Care Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.34.3.32" extension="2015-04-01" />
      ...
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN">
      <!-- [NHCS R1D1.1] Procedure Follow-Up Attempt -->
      <templateId root="2.16.840.1.113883.10.20.34.3.42" extension="2015-04-01" />
      <id root="ecbec7b7-7fc0-47b2-85b5-39778319b8fb" />
      ...
    </observation>
```

```
  </entryRelationship>
  <!-- Was patient referred for this visit -->
  <reference typeCode="REFR">
    <!-- This is a reference to a CDA document so use classCode="DOCCLIN" -->
    <externalDocument classCode="DOCCLIN" moodCode="EVN">
      <!-- [NHCS R1D1.2] Clinical Note and External Document Reference -->
      <templateId root="2.16.840.1.113883.10.20.34.3.44" extension="2016-07-01" />
      ...
    </externalDocument>
  </reference>
</encounter>
```

3.17.4 Hospital Admission Encounter

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

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Table 121: Hospital Admission Encounter Contexts

Contained By:	Contains:
Emergency Department Encounters Section (V2) (optional)	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 122: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1106-541	urn:oid: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	urn:oid: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:dischargeDispositionCode	0..1	SHOULD		1106-548	urn:oid:2.16.840.1.114222.4.11.7436 (Disposition (NCHS))
participant	1..1	SHALL		1106-531	
@typeCode	1..1	SHALL		1106-547	urn:oid: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	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = ADM
participantRole	1..1	SHALL		1106-537	
@classCode	0..1	MAY		1106-552	urn:oid:2.16.840.1.113883.5.110 (RoleClass) = ASSIGNED
code	1..1	SHALL		1106-553	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))

entryRelationship	1..1	SHALL		1106-535	
@typeCode	1..1	SHALL		1106-550	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
act	1..1	SHALL		1106-549	Hospital Discharge Diagnosis (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.33:2014-06-09
entryRelationship	1..1	SHALL	EntryRelationship	1106-697	
@typeCode	1..1	SHALL		1106-698	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6) (CONF:1106-540).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid: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 urn:oid: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] **sdtc:dischargeDispositionCode**, which **SHALL** be selected from ValueSet **Disposition (NCHS)** urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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)** urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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

Table 123: Disposition (NCHS)

Value Set: Disposition (NCHS) urn:oid:2.16.840.1.114222.4.11.7436

This value set describes visit disposition concepts.

Value Set Source:
https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7436

Code	Code System	Code System OID	Print Name
PHC1270	PHIN VADS code system	urn:oid:2.16.840.1.114222.4.5.274	Refer to other physician
PHC1271	PHIN VADS code system	urn:oid:2.16.840.1.114222.4.5.274	Return at specified time
PHC1272	PHIN VADS code system	urn:oid:2.16.840.1.114222.4.5.274	Refer to ER/Admit to hospital
PHC1273	PHIN VADS code system	urn:oid:2.16.840.1.114222.4.5.274	Other
...			

Figure 68: Hospital Admission Encounter Example

```xml
<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 sdtc:dischargeDispositionCode will fail Schematron validation
       as, in the implied C-CDA Encounter Activity (V2) template,
       sdtc: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 -->
  <sdtc: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>
```

3.17.5 Observation Unit Stay Encounter

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

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Table 124: Observation Unit Stay Encounter Contexts

Contained By:	Contains:
Emergency Department Encounters Section (V2) (optional)	

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 125: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1106-798	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6) (CONF:1106-797).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid: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 urn:oid: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 69: 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>
```

3.17.6 Specialty Unit Stay Encounter

```
[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.3.38:2015-04-01
(open)]
```

```
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```

Table 126: Specialty Unit Stay Encounter Contexts

Contained By:	Contains:
Inpatient Encounters Section (V2) (optional)	

This template represents a specialty unit (such as ICU, NICU or CCU) stay.

Table 127: Specialty Unit Stay Encounter Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.38:2015-04-01)					
@classCode	1..1	SHALL		1184-945	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1184-946	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1184-923	
@root	1..1	SHALL		1184-933	2.16.840.1.113883.10.20.34.3.38
@extension	1..1	SHALL		1184-947	2015-04-01
code	1..1	SHALL		1184-924	urn:oid:2.16.840.1.114222.4.11.7363 (Specialty Unit Type (NCHS))
effectiveTime	1..1	SHALL		1184-925	
low	1..1	SHALL		1184-936	
high	1..1	SHALL		1184-937	

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 urn:oid:2.16.840.1.113883.5.6) (CONF:1184-945).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1184-946).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1184-923) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.38" (CONF:1184-933).
   b. **SHALL** contain exactly one [1..1] **@extension**="2015-04-01" (CONF:1184-947).
5. **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet **Specialty Unit Type (NCHS)** urn:oid:2.16.840.1.114222.4.11.7363 **DYNAMIC** (CONF:1184-924).
6. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1184-925).
   a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1184-936).
   Note: Date patient entered the unit.
   b. This effectiveTime **SHALL** contain exactly one [1..1] **high** (CONF:1184-937).
   Note: Date patient left the unit.

Table 128: Specialty Unit Type (NCHS)

Value Set: Specialty Unit Type (NCHS) urn:oid:2.16.840.1.114222.4.11.7363

The kind of hospital unit having any necessary specialized equipment and/or personnel for handling critically ill or injured patients.

Value Set Source:
https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7363

Code	Code System	Code System OID	Print Name
1026-4	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Burn critical care unit
1028-0	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Medical cardiac critical care unit
1027-2	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Medical critical care unit
1029-8	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Medical/Surgical critical care unit
1039-7	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Neonatal critical care unit [Level II/III]
1040-5	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Neonatal critical care unit [Level III]
1035-5	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Neurology critical care and stroke unit
1031-4	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Neurosurgical critical care unit
1042-1	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Pediatric burn critical care unit
1044-7	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Pediatric medical critical care unit
...			

Figure 70: Special Unit Stay Encounter Example

```
<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" />
    <!-- Specialty Unit Stay Encounter -->
    <templateId root="2.16.840.1.113883.10.20.34.3.38"
        extension="2015-04-01" />
    <id root="57edf80c-7114-4dc3-b3f4-abf515d18c92" />
    <code code="1027-2"
        displayName="Medical critical care unit"
        codeSystem="2.16.840.1.113883.6.259"
        codeSystemName="HL7 HealthcareServiceLocation" />
    <effectiveTime>
        <!-- Date patient entered the unit -->
        <low value="20130815" />
        <!-- Date patient left the unit -->
        <high value="20130819" />
    </effectiveTime>
</encounter>
```

3.18 Encounter Diagnosis (V2)

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

```
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Table 129: 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 130: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-14890	urn:oid: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	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-14889).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid: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 urn:oid: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 urn:oid: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 71: 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>
```

3.19 *Episode of Care Observation (V2)*

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.3.32:2015-04-01
(open)]
```

```
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```

Table 131: Episode of Care Observation (V2) Contexts

Contained By:	Contains:
Current Outpatient Visit (V3) (optional) Current Emergency Department Visit (V2) (optional)	

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

Table 132: Episode of Care Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.32:2015-04-01)					
@classCode	1..1	SHALL		1184-846	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1184-847	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1184-842	
@root	1..1	SHALL		1184-844	2.16.840.1.113883.10.20.34.3.32
id	1..*	SHALL		1184-848	
code	1..1	SHALL		1184-849	
@code	1..1	SHALL		1184-851	78030-4
@codeSystem	1..1	SHALL		1184-852	2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1184-843	
@code	1..1	SHALL		1184-845	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1184-850	urn:oid:2.16.840.1.114222.4.11.7439 (Episode of Care (NCHS))
@nullFlavor	0..1	MAY		1184-853	UNK

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1184-846).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1184-847).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1184-842) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.32" (CONF:1184-844).
4. **SHALL** contain at least one [1..*] **id** (CONF:1184-848).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1184-849).
    a. This code **SHALL** contain exactly one [1..1] **@code**="78030-4" Episode of Care (CONF:1184-851).
    b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CONF:1184-852).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1184-843).
    a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1184-845).

7. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD", where the code **SHOULD** be selected from ValueSet **Episode of Care (NCHS)** urn:oid:2.16.840.1.114222.4.11.7439 **DYNAMIC** (CONF:1184-850).

    a. This value **MAY** contain zero or one [0..1] @**nullFlavor**="UNK" (CONF:1184-853).

Table 133: Episode of Care (NCHS)

Value Set: Episode of Care (NCHS) urn:oid:2.16.840.1.114222.4.11.7439
These values specify the type of visit.
Value Set Source:
https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7439

Code	Code System	Code System OID	Print Name
315639002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Initial patient assessment
185389009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Follow-up visit
...			

Figure 72: Episode of Care Observation (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.34.3.32" extension="2015-04-01" />
  <id root="ecbec7b7-7fc0-47b2-85b5-39778319b8fb" />
  <!-- Form Element: Episode of Care -->
  <code code="78030-4"
        displayName="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>
```

3.20 Estimated Date of Delivery

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

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```

Table 134: 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 135: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-445	urn:oid: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	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-444).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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 urn:oid: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 urn:oid: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 73: Estimated Date of Delivery Example

```
<observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.15.3.1"/>
    <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>
```

3.21 Follow-up Attempt Outcome Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.3.43:2015-04-01 (open)]

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Table 136: Follow-up Attempt Outcome Observation Contexts

Contained By:	Contains:
Procedure Follow-Up Attempt Observation (optional)	

This template represents the outcome of a follow-up attempt made within 24 hours of surgery.

Table 137: Follow-up Attempt Outcome Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.43:2015-04-01)					
@classCode	1..1	SHALL		1184-1145	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1184-1146	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1184-1135	
@root	1..1	SHALL		1184-1139	2.16.840.1.113883.10.20.34.3.43
@extension	1..1	SHALL		1184-1140	2015-04-01
id	1..*	SHALL		1184-1147	
code	1..1	SHALL		1184-1136	
@code	1..1	SHALL		1184-1141	78028-8
@codeSystem	1..1	SHALL		1184-1142	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1184-1138	
@code	1..1	SHALL		1184-1144	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1184-1137	urn:oid:2.16.840.1.114222.4.11.7362 (Follow-up Attempt Outcome (NCHS))
@nullFlavor	0..1	MAY		1184-1143	urn:oid:2.16.840.1.113883.10.20.5.9.1 (NullValues_UNK_OTH)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1184-1145).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1184-1146).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1184-1135) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.43" (CONF:1184-1139).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-04-01" (CONF:1184-1140).
4. **SHALL** contain at least one [1..*] **id** (CONF:1184-1147).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1184-1136).
    a. This code **SHALL** contain exactly one [1..1] **@code**="78028-8" Follow-up attempt outcome (CONF:1184-1141).

      b. This code **SHALL** contain exactly one [1..1]
      @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC
      urn:oid:2.16.840.1.113883.6.1) (CONF:1184-1142).

6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1184-1138).

      a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed
      (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1184-1144).

7. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD", where the code **SHALL** be
selected from ValueSet **Follow-up Attempt Outcome (NCHS)**
urn:oid:2.16.840.1.114222.4.11.7362 **DYNAMIC** (CONF:1184-1137).

      a. This value **MAY** contain zero or one [0..1] **@nullFlavor**, which **SHALL** be selected
      from ValueSet **NullValues UNK OTH** urn:oid:2.16.840.1.113883.10.20.5.9.1
      (CONF:1184-1143).

Table 138: Follow-up Attempt Outcome (NCHS)

Value Set: Follow-up Attempt Outcome (NCHS) urn:oid:2.16.840.1.114222.4.11.7362			
The finding(s) or result(s) of contact made by healthcare staff with a patient after an outpatient surgical procedure.			
Value Set Source: **https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7362**			
Code	**Code System**	**Code System OID**	**Print Name**
398090008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Unable to reach Patient
160245001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Patient reported no problems
PHC1392	PHIN VADS code system	urn:oid:2.16.840.1.114222.4.5.274	Patient reported problems and sought medical care
PHC1393	PHIN VADS code system	urn:oid:2.16.840.1.114222.4.5.274	Patient reported problems and was advised by ambulatory surgical staff to seek medical care
PHC1394	PHIN VADS code system	urn:oid:2.16.840.1.114222.4.5.274	Patient reported problems, but no follow-up medical care was needed
...			

Table 139: NullValues_UNK_OTH

Value Set: NullValues_UNK_OTH urn:oid:2.16.840.1.113883.10.20.5.9.1			
Null values of unknown and other.			
Code	**Code System**	**Code System OID**	**Print Name**
UNK	HL7NullFlavor	urn:oid:2.16.840.1.113883.5.1008	Unknown
OTH	HL7NullFlavor	urn:oid:2.16.840.1.113883.5.1008	Other

Figure 74: Follow-up Attempt Outcome Observation

```
<observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.34.3.43"
        extension="2015-04-01" />
    <id root="ecbec7b7-7fc0-47b2-85b5-39778319b8g4" />
    <!-- Follow-up outcome -->
    <code code="78028-8"
        displayName="Follow-up Attempt Outcome"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC" />
    <statusCode code="completed" />
    <value xsi:type="CD" code="248264000"
        displayName="No complaints"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT" />
</observation>
```

3.22 *Hospital Discharge Diagnosis (V2)*

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

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Table 140: 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 141: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-7664	urn:oid: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	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7663).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid: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 urn:oid: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 urn:oid: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 75: 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>
```

3.23 *Immunization Activity (V2)*

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

```
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```

Table 142: 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 143: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM
@moodCode	1..1	SHALL		1098-8827	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.3.88.12.3221.8.7 (Medication Route FDA)
approachSiteCode	0..1	MAY	SET<CD>	1098-8840	urn:oid: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	urn:oid:2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive)
administrationUnitCode	0..1	MAY		1098-8846	urn:oid:2.16.840.1.113762.1.4.1021.30 (AdministrationUnitDoseForm)
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	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid: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 urn:oid: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** urn:oid: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** urn:oid: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** urn:oid: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** urn:oid: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** urn:oid: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 **AdministrationUnitDoseForm** urn:oid:2.16.840.1.113762.1.4.1021.30 **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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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

a. **SHALL** contain exactly one [1..1] **@typeCode**="CAUS" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8867).

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:1098-15541).

23. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-8988) such that it

a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8989).

b. **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

    a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31511).

    b. **SHALL** contain exactly one [1..1] **@inversionInd**="true" (CONF:1098-31512).

    c. **MAY** contain zero or one [0..1] **sequenceNumber** (CONF:1098-31513).

    d. **SHALL** contain exactly one [1..1] **Substance Administered Act** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.118) (CONF:1098-31514).

25. **MAY** contain zero or more [0..*] **precondition** (CONF:1098-8869) such that it

    a. **SHALL** contain exactly one [1..1] **@typeCode**="PRCN" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8870).

    b. **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 144: MoodCodeEvnInt

Value Set: MoodCodeEvnInt urn:oid:2.16.840.1.113883.11.20.9.18
Contains moodCode EVN and INT
Value Set Source: **https://vsac.nlm.nih.gov/**

Code	Code System	Code System OID	Print Name
EVN	ActMood	urn:oid:2.16.840.1.113883.5.1001	Event
INT	ActMood	urn:oid:2.16.840.1.113883.5.1001	Intent

Table 145: Medication Route FDA

Value Set: Medication Route FDA urn:oid: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:
https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.3221.8.7

Code	Code System	Code System OID	Print Name
C38192	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	AURICULAR (OTIC)
C38193	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	BUCCAL
C38194	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	CONJUNCTIVAL
C38675	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	CUTANEOUS
C38197	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	DENTAL
C38633	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	ELECTRO-OSMOSIS
C38205	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	ENDOCERVICAL
C38206	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	ENDOSINUSIAL
C38208	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	ENDOTRACHEAL
C38209	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	ENTERAL
…			

Table 146: Body Site

Value Set: Body Site urn:oid: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	urn:oid:2.16.840.1.113883.6.96	entire medial surface of lower extremity (body structure)
302539009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	entire hand (body structure)
287679003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	left hip region structure (body structure)
3341006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	right lung structure (body structure)
87878005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	left ventricular structure (body structure)
49848007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	structure of myocardium of left ventricle (body structure)
38033009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	amputation stump (body structure)
305005006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	6/7 interchondral joint (body structure)
28726007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	corneal structure (body structure)
75324005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	70 to 79 percent of body surface (body structure)
...			

Table 147: UnitsOfMeasureCaseSensitive

Value Set: UnitsOfMeasureCaseSensitive urn:oid: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	urn:oid:2.16.840.1.113883.6.8	minute
hour	UCUM	urn:oid:2.16.840.1.113883.6.8	hr
%	UCUM	urn:oid:2.16.840.1.113883.6.8	percent
cm	UCUM	urn:oid:2.16.840.1.113883.6.8	centimeter
g	UCUM	urn:oid:2.16.840.1.113883.6.8	gram
g/(12.h)	UCUM	urn:oid:2.16.840.1.113883.6.8	gram per 12 hour
g/L	UCUM	urn:oid:2.16.840.1.113883.6.8	gram per liter
mol	UCUM	urn:oid:2.16.840.1.113883.6.8	mole
[IU]	UCUM	urn:oid:2.16.840.1.113883.6.8	international unit
Hz	UCUM	urn:oid:2.16.840.1.113883.6.8	Hertz
...			

Table 148: AdministrationUnitDoseForm

Value Set: AdministrationUnitDoseForm urn:oid:2.16.840.1.113762.1.4.1021.30
Codes that are similar to a drug "form" but limited to those used as units when describing drug administration when the drug item is a physical form that is continuous and therefore not administered as an "each" of the physical form, or is not using standard measurement units (inch, ounce, gram, etc.) This set does not include unit concepts that mimic "physical form" concepts that can be counted using "each", such as tablet, bar, lozenge, packet, etc.

Code	Code System	Code System OID	Print Name
C122629	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	Actuation Dosing Unit
C25397	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	Application Unit
C102405	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	Capful Dosing Unit
C122631	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	Dropperful Dosing Unit
C48501	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	Inhalation Dosing Unit
C48491	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	Metric Drop
C71204	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	Nebule Dosing Unit
C65060	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	Puff Dosing Unit
C48536	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	Scoopful Dosing Unit
C48537	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	Spray Dosing Unit
...			

Figure 76: 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="2.16.840.1.113883.12.292"
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>
```

3.24 Immunization Medication Information (V2)

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

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Table 149: 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 150: 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	urn:oid: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	urn:oid:2.16.840.1.113762.1.4.1010.6 (CVX Vaccines Administered - Vaccine Set)
translation	0..*	MAY		1098-31543	urn:oid:2.16.840.1.113762.1.4.1010.8 (Vaccine Clinical Drug)
translation	0..*	MAY		1098-31881	urn:oid: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 urn:oid: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** urn:oid: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** urn:oid: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** urn:oid: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 151: CVX Vaccines Administered - Vaccine Set

Value Set: CVX Vaccines Administered - Vaccine Set urn:oid: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: **http://www2a.cdc.gov/vaccines/iis/iisstandards/vaccines.asp?rpt=cvx**

Code	Code System	Code System OID	Print Name
19	CDC Vaccine Code (CVX)	urn:oid:2.16.840.1.113883.12.292	BCG
26	CDC Vaccine Code (CVX)	urn:oid:2.16.840.1.113883.12.292	Cholera
24	CDC Vaccine Code (CVX)	urn:oid:2.16.840.1.113883.12.292	Anthrax
27	CDC Vaccine Code (CVX)	urn:oid:2.16.840.1.113883.12.292	Botulinum antitoxin
...			

Table 152: Vaccine Clinical Drug

Value Set: Vaccine Clinical Drug urn:oid: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	urn:oid:2.16.840.1.113883.6.88	0.17 ML Rho(D) Immune Globulin 0.3 MG/ML Prefilled Syringe [HyperRHO]
807276	RxNorm	urn:oid: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	urn:oid:2.16.840.1.113883.6.88	0.5 ML Hepatitis A Vaccine (Inactivated) Strain HM175 1440 UNT/ML Prefilled Syringe [Havrix]
836636	RxNorm	urn:oid:2.16.840.1.113883.6.88	0.5 ML Hepatitis A Vaccine, Inactivated 50 UNT/ML Prefilled Syringe [Vaqta]
...			

Table 153: Specific Vaccine Clinical Drug

Value Set: Specific Vaccine Clinical Drug urn:oid: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	urn:oid:2.16.840.1.113883.6.88	At the time of Consolidated CDA R2 publication, the value set has no members
...			

Figure 77: 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="2.16.840.1.113883.12.292" 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>
```

3.25 Immunization Refusal Reason

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

```
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DSTU R1.1
```

Table 154: 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 155: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-8992	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-8991).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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** urn:oid: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 urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:81-19104).

Table 156: No Immunization Reason Value Set

Value Set: No Immunization Reason Value Set urn:oid:2.16.840.1.113883.1.11.19717			
Value Set Source: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
IMMUNE	ActReason	urn:oid:2.16.840.1.113883.5.8	Immunity
MEDPREC	ActReason	urn:oid:2.16.840.1.113883.5.8	Medical precaution
OSTOCK	ActReason	urn:oid:2.16.840.1.113883.5.8	Out of stock
PATOBJ	ActReason	urn:oid:2.16.840.1.113883.5.8	Patient objection
PHILISOP	ActReason	urn:oid:2.16.840.1.113883.5.8	Philosophical objection
RELIG	ActReason	urn:oid:2.16.840.1.113883.5.8	Religious objection
VACEFF	ActReason	urn:oid:2.16.840.1.113883.5.8	Vaccine efficacy concerns
VACSAF	ActReason	urn:oid:2.16.840.1.113883.5.8	Vaccine safety concerns

Figure 78: 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>
```

3.26 *Indication (V2)*

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

```
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DSTU R2
```

Table 157: 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 sited (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 158: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-7481	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	0..1	SHOULD		1098-7488	
value	0..1	MAY	CD	1098-7489	urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 (Problem)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7480).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid: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** urn:oid: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 urn:oid: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** urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:1098-7489).

Table 159: Problem

Value Set: Problem urn:oid: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:
http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.3221.7.4

Code	Code System	Code System OID	Print Name
46635009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	diabetes mellitus type 1
234422006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	acute intermittent porphyria
31712002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	primary biliary cirrhosis
302002000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	difficulty moving
15188001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	hearing loss
129851009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	alteration in bowel elimination
247472004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	hives
39579001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	anaphylaxis
274945004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	AA amyloidosis (disorder)
129851009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	alteration in comfort: pain
...			

Table 160: Problem Type

Value Set: Problem Type urn:oid: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	urn:oid:2.16.840.1.113883.6.1	Problem HL7.CCDAR2
75325-1	LOINC	urn:oid:2.16.840.1.113883.6.1	Symptom HL7.CCDAR2
75324-4	LOINC	urn:oid:2.16.840.1.113883.6.1	Diagnosis
75321-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Clinical finding HL7.CCDAR2
75323-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Condition HL7.CCDAR2
29308-4	LOINC	urn:oid:2.16.840.1.113883.6.1	Complaint HL7.CCDAR2
75322-8	LOINC	urn:oid:2.16.840.1.113883.6.1	Functional performance HL7.CCDAR2
75275-8	LOINC	urn:oid:2.16.840.1.113883.6.1	Cognitive Function HL7.CCDAR2
75318-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Problem family member HL7.CCDAR2
75319-4	LOINC	urn:oid:2.16.840.1.113883.6.1	Symptom family member HL7.CCDAR2
...			

Figure 79: 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"/> -->
```

3.26.1 Major Reason for Visit

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

```
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```

Table 161: Major Reason for Visit Contexts

Contained By:	Contains:
Current Outpatient Visit (V3) (optional) Current Emergency Department Visit (V2) (optional)	

This template represents the major reason for this visit.

Table 162: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-406	urn:oid: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	urn:oid:2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
value	1..1	SHALL	CD	1106-412	urn:oid: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 urn:oid:2.16.840.1.113883.5.6) (CONF:1106-405).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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 urn:oid: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)** urn:oid:2.16.840.1.114222.4.11.7404 **DYNAMIC** (CONF:1106-412).

Table 163: Major Reason for Visit (NCHS)

Value Set: Major Reason for Visit (NCHS) urn:oid:2.16.840.1.114222.4.11.7404

These codes describe the major reason for the visit.

Value Set Source:
https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7404

Code	Code System	Code System OID	Print Name
PHC1268	PHIN VADS code system	urn:oid:2.16.840.1.114222.4.5.274	Chronic problem, flare-up
PHC1267	PHIN VADS code system	urn:oid:2.16.840.1.114222.4.5.274	Chronic problem, routine
PHC1265	PHIN VADS code system	urn:oid:2.16.840.1.114222.4.5.274	New problem (<3 mos. onset)
PHC1269	PHIN VADS code system	urn:oid:2.16.840.1.114222.4.5.274	Pre/Post surgery
PHC1266	PHIN VADS code system	urn:oid:2.16.840.1.114222.4.5.274	Preventive care (e.g., routine prenatal, well-baby, screening, insurance, general exams)
...			

Figure 80: Major Reason for Visit Example

```
<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>
```

3.27 Instruction (V2)

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

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Table 164: 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 165: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-7392	urn:oid: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	urn:oid:2.16.840.1.113883.11.20.9.34 (Patient Education)
statusCode	1..1	SHALL		1098-7396	
@code	1..1	SHALL		1098-19106	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7391).
2. **SHALL** contain exactly one [1..1] **@moodCode**="INT" (CodeSystem: ActMood urn:oid: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** urn:oid: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 urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-19106).

Table 166: Patient Education

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

Figure 81: Instruction (V2) Example

```
<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>
```

3.28 Listed for Admission to Hospital Act

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

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Table 167: 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 168: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1106-701	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6) (CONF:1106-700).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid: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 urn:oid: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 82: 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>
```

3.29 Medication Activity (V2)

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

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Table 169: 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 Free Text Sig 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 170: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM
@moodCode	1..1	SHALL		1098-7497	urn:oid: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	urn:oid:2.16.840.1.113883.1.11.159331 (ActStatus)
effectiveTime	1..1	SHALL	IVL_TS	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	urn:oid:2.16.840.1.113883.3.88.12.3221.8.7 (Medication Route FDA)
approachSiteCode	0..1	MAY	SET<CD>	1098-7515	urn:oid: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	urn:oid:2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive)
rateQuantity	0..1	MAY		1098-	

				[7517](#)	
@unit	1..1	SHALL		[1098-7525](#)	urn:oid:2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive)
maxDoseQuantity	0..1	MAY	RTO<PQ, PQ>	[1098-7518](#)	
administrationUnitCode	0..1	MAY		[1098-7519](#)	urn:oid:2.16.840.1.113762.1.4.1021.30 (AdministrationUnitDoseForm)
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](#)	urn:oid: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](#)	urn:oid: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](#)	urn:oid: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](#)	urn:oid: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	urn:oid: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..*	MAY		1098-7552	
@typeCode	1..1	SHALL		1098-7544	urn:oid: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	urn:oid: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
entryRelationship	0..*	MAY		1098-32907	
@typeCode	1..1	SHALL		1098-32908	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
substanceAdministration	1..1	SHALL		1098-	Medication Free Text Sig (identifier:

				32909	urn:oid:2.16.840.1.113883.10.20.22.4.147
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 `urn:oid: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** `urn:oid: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** `urn:oid: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: This 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 urn:oid: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** urn:oid: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**
urn:oid: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**
urn:oid:2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-7525).

14. **MAY** contain zero or one [0..1] **maxDoseQuantity** (CONF:1098-7518).

administrationUnitCode@code describes the units of medication administration for an item
using a code that is pre-coordinated to include a physical unit form (ointment, powder,
solution, etc.) which differs from the units used in administering the consumable (capful,
spray, drop, etc.). For example when recording medication administrations, "metric drop

(C48491)" would be appropriate to accompany the RxNorm code of 198283 (Timolol 0.25% Ophthalmic Solution) where the number of drops would be specified in doseQuantity@value.

15. **MAY** contain zero or one [0..1] **administrationUnitCode**, which **SHALL** be selected from ValueSet **AdministrationUnitDoseForm** urn:oid:2.16.840.1.113762.1.4.1021.30 **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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 more [0..*] **entryRelationship** (CONF:1098-7552) such that it

    a. **SHALL** contain exactly one [1..1] **@typeCode**="CAUS" (CodeSystem: HL7ActRelationshipType urn:oid: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 urn:oid: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..*] **entryRelationship** (CONF:1098-32907) such that it

    a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32908).

    b. **SHALL** contain exactly one [1..1] **Medication Free Text Sig** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.147) (CONF:1098-32909).

28. **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).

29. Medication Activity **SHOULD** include doseQuantity **OR** rateQuantity (CONF:1098-30800).

Figure 83: Medication Activity (V2) Example

```xml
<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 84: 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>
```

3.30 Medication Dispense (V2)

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

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```

Table 171: Medication Dispense (V2) Contexts

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

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

Table 172: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SPLY
@moodCode	1..1	SHALL		1098-7452	urn:oid: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	urn:oid: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.FIELDED) (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](#)	urn:oid: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 `urn:oid:2.16.840.1.113883.5.6` **STATIC**) (CONF:1098-7451).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood `urn:oid: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** `urn:oid: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.FIELDED)** (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.FIELDED) (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 urn:oid: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 173: Medication Fill Status

Value Set: Medication Fill Status urn:oid:2.16.840.1.113883.3.88.12.80.64			
Value Set Source: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
aborted	ActStatus	urn:oid:2.16.840.1.113883.5.14	Aborted
completed	ActStatus	urn:oid:2.16.840.1.113883.5.14	Completed

Figure 85: Medication Dispense (V2) Example

```
<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>
```

3.31 Medication Free Text Sig

```
[substanceAdministration: identifier urn:oid:2.16.840.1.113883.10.20.22.4.147
(closed)]
```

```
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```

Table 174: Medication Free Text Sig Contexts

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

The template is available to explicitly identify the free text Sig within each medication.

An example free text sig: Thyroxin 150 ug, take one tab by mouth every morning.

Table 175: Medication Free Text Sig Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
substanceAdministration (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.147)					
@classCode	1..1	SHALL		1198-32770	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM
@moodCode	1..1	SHALL		1198-32771	urn:oid:2.16.840.1.113883.11.20.9.18 (MoodCodeEvnInt)
templateId	1..1	SHALL		1198-32753	
@root	1..1	SHALL		1198-32772	2.16.840.1.113883.10.20.22.4.147
code	1..1	SHALL		1198-32775	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		1198-32780	76662-6
@codeSystem	1..1	SHALL		1198-32781	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
text	1..1	SHALL		1198-32754	
reference	1..1	SHALL		1198-32755	
@value	0..1	SHOULD		1198-32756	
consumable	1..1	SHALL		1198-32776	
manufacturedProduct	1..1	SHALL		1198-32777	
manufacturedLabeledDrug	1..1	SHALL		1198-32778	
@nullFlavor	1..1	SHALL		1198-32779	NA

1. **SHALL** contain exactly one [1..1] **@classCode**="SBADM" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-32770).
2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet **MoodCodeEvnInt** urn:oid:2.16.840.1.113883.11.20.9.18 **STATIC** 2011-04-03 (CONF:1198-32771).
   Note: moodCode must match the parent substanceAdministration EVN or INT
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-32753) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.147" (CONF:1198-32772).
4. **SHALL** contain exactly one [1..1] **code** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1198-32775).
   a. This code **SHALL** contain exactly one [1..1] **@code**="76662-6" Instructions Medication (CONF:1198-32780).

        b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1 **STATIC**) (CONF:1198-32781).

5. **SHALL** contain exactly one [1..1] **text** (CONF:1198-32754).

Reference into the section/text to a tag that only contains free text sig.

        a. This text **SHALL** contain exactly one [1..1] **reference** (CONF:1198-32755).

            i. This reference **SHOULD** contain zero or one [0..1] **@value** (CONF:1198-32756).

                1. 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:1198-32774).

6. **SHALL** contain exactly one [1..1] **consumable** (CONF:1198-32776).

        a. This consumable **SHALL** contain exactly one [1..1] **manufacturedProduct** (CONF:1198-32777).

            i. This manufacturedProduct **SHALL** contain exactly one [1..1] **manufacturedLabeledDrug** (CONF:1198-32778).

                1. This manufacturedLabeledDrug **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" Not Applicable (CONF:1198-32779).

Figure 86: Medication Free Text Sig Example

```
<!-- moodCode matches the parent substanceAdministration EVN or INT -->
<substanceAdministration classCode="SBADM" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.147"/>
    <code code="76662-6"
          codeSystem="2.16.840.1.113883.6.1"
          codeSystemName="LOINC"
          displayName="Medication Instructions"/>
    <text>
        <!-- Reference into the section.text to a tag that ONLY contains free text SIG -->
        <reference value="#AD1"/>
    </text>
    <consumable>
        <manufacturedProduct>
            <manufacturedLabeledDrug nullFlavor="NA"/>
        </manufacturedProduct>
    </consumable>
</substanceAdministration>
```

3.32 *Medication Information (V2)*

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

```
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DSTU R2
```

Table 176: 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 177: 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	urn:oid: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	urn:oid:2.16.840.1.113762.1.4.10 10.4 (Medication Clinical Drug)
translation	0..*	MAY		1098-31884	urn:oid:2.16.840.1.113762.1.4.10 10.2 (Clinical Substance)
manufacturerOrganization	0..1	MAY		1098-7416	

1. **SHALL** contain exactly one [1..1] **@classCode**="MANU" (CodeSystem: RoleClass urn:oid: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** urn:oid: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** urn:oid: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 178: Medication Clinical Drug

Value Set: Medication Clinical Drug urn:oid:2.16.840.1.113762.1.4.1010.4
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).
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).
Value Set Source: **http://phinvads.cdc.gov/vads/ViewValueSet.action?id=239BEF3E-971C-DF11-B334-0015173D1785**

Code	Code System	Code System OID	Print Name
978727	RxNorm	urn:oid:2.16.840.1.113883.6.88	0.2 ML Dalteparin Sodium 12500 UNT/ML Prefilled Syringe [Fragmin]
827318	RxNorm	urn:oid:2.16.840.1.113883.6.88	Acetaminophen 250 MG / Aspirin 250 MG / Caffeine 65 MG Oral Capsule
199274	RxNorm	urn:oid:2.16.840.1.113883.6.88	Aspirin 300 MG Oral Capsule
362867	RxNorm	urn:oid:2.16.840.1.113883.6.88	Cefotetan Injectable Solution [Cefotan]
...			

Table 179: Clinical Substance

Value Set: Clinical Substance urn:oid:2.16.840.1.113762.1.4.1010.2

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.

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).

Value Set Source: **https://vsac.nlm.nih.gov/**

Code	Code System	Code System OID	Print Name
369436	RxNorm	urn:oid:2.16.840.1.113883.6.88	6-Aminocaproic Acid Oral Tablet [Amicar]
1116447	RxNorm	urn:oid:2.16.840.1.113883.6.88	Acepromazine Oral Tablet
9042592173	Unique Ingredient Identifier (UNII)	urn:oid:2.16.840.1.113883.4.9	ATROMEPINE
7673326042	Unique Ingredient Identifier (UNII)	urn:oid:2.16.840.1.113883.4.9	IRINOTECAN
413480003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Almond product (substance)
256915001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Aluminum hydroxide absorbed plasma (substance)
10020007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Biperiden hydrochloride (substance)
10133003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Cyclizine lactate (substance)
10174003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Procarbazine hydrochloride (substance)
102259006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Citrus fruit (substance)
...			

Figure 87: Medication Information (V2) Example

```
<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>
```

3.33 *Medication Supply Order (V2)*

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

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```

Table 180: 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 181: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SPLY
@moodCode	1..1	SHALL		1098-7428	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ

@inversionInd	1..1	SHALL		<u>1098-7445</u>	true
act	1..1	SHALL		<u>1098-31391</u>	<u>Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09</u>

1. **SHALL** contain exactly one [1..1] **@classCode**="SPLY" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7427).
2. **SHALL** contain exactly one [1..1] **@moodCode**="INT" (CodeSystem: ActMood urn:oid: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 **<u>ActStatus</u>** urn:oid: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] **<u>Medication Information (V2)</u>** (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] **<u>Immunization Medication Information (V2)</u>** (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 urn:oid: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 88: 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>
```

3.34 New Patient Act

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

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Table 182: New Patient Act Contexts

Contained By:	Contains:
Current Outpatient Visit (V3) (optional)	

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

Table 183: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1106-477	urn:oid: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	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
statusCode	1..1	SHALL		1106-741	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1106-476).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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 urn:oid:2.16.840.1.113883.6.96) (CONF:1106-483).
6. **SHALL** contain exactly one [1..1] **statusCode**="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1106-741).

Figure 89: 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>
```

3.35 Number of Visits in the Last 12 Months

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

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Table 184: Number of Visits in the Last 12 Months Contexts

Contained By:	Contains:
Current Outpatient Visit (V3) (optional)	

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

Table 185: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-522	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6) (CONF:1106-521).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid: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 urn:oid: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 90: 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>
```

3.36 On Oxygen on Arrival Observation

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

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Table 186: 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 187: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-705	urn:oid: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	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6) (CONF:1106-704).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid: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 urn:oid: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 urn:oid: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 91: 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="dea1df8b-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>
```

3.37 *Patient Residence Observation*

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

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Table 188: Patient Residence Observation Contexts

Contained By:	Contains:
Patient Information Section (V3) (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 189: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-607	urn:oid: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	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1106-608	urn:oid:2.16.840.1.114222.4.11.7402 (Patient Residence (NCHS))
@nullFlavor	0..1	MAY		1106-675	urn:oid:2.16.840.1.113883.10.20.5.9.1 (NullValues_UNK_OTH)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1106-606).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid: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 urn:oid: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)** urn:oid:2.16.840.1.114222.4.11.7402 **DYNAMIC** (CONF:1106-608).

    a. This value **MAY** contain zero or one [0..1] **@nullFlavor**, which **SHALL** be selected from ValueSet **NullValues UNK OTH** urn:oid:2.16.840.1.113883.10.20.5.9.1 **STATIC** 2014-01-01 (CONF:1106-675).

Table 190: Patient Residence (NCHS)

Value Set: Patient Residence (NCHS) urn:oid:2.16.840.1.114222.4.11.7402				
These codes describe the patient's residence type.				
Value Set Source:				
https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7402				
Code	**Code System**	**Code System OID**	**Print Name**
394778007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Client's or patient's home
42665001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Nursing home
32911000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Homeless
...			

Figure 92: Patient Residence Example

```
<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>
```

3.38 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)]

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Table 191: Patient Seen in this ED in last 72 Hours and Discharged Contexts

Contained By:	Contains:
Current Emergency Department Visit (V2) (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 192: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-723	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6) (CONF:1106-722).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid: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 urn:oid: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 93: 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>
```

3.39 *Planned Act (V2)*

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

```
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DSTU R2
```

Table 193: 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 194: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-8539	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid: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](#)	urn:oid: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 urn:oid: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)** urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 195: Planned moodCode (Act/Encounter/Procedure)

Value Set: Planned moodCode (Act/Encounter/Procedure) urn:oid: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: **https://vsac.nlm.nih.gov/**

Code	Code System	Code System OID	Print Name
INT	ActMood	urn:oid:2.16.840.1.113883.5.1001	Intent
ARQ	ActMood	urn:oid:2.16.840.1.113883.5.1001	Appointment Request
PRMS	ActMood	urn:oid:2.16.840.1.113883.5.1001	Promise
PRP	ActMood	urn:oid:2.16.840.1.113883.5.1001	Proposal
RQO	ActMood	urn:oid:2.16.840.1.113883.5.1001	Request
APT	ActMood	urn:oid:2.16.840.1.113883.5.1001	Appointment

Figure 94: 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>
```

3.39.1 Ordered Service Act

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

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Table 196: 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 197: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1106-222	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6) (CONF:1106-221).
3. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request (CodeSystem: ActMood urn:oid: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 urn:oid:2.16.840.1.113883.6.12) (CONF:1106-378).

Figure 95: 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>
```

3.40 *Planned Coverage*

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

```
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```

Table 198: 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 199: 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	urn:oid:2.16.840.1.113883.5.4 (ActCode) = ACT
@moodCode	1..1	SHALL		1098-31946	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
act	1..1	SHALL		1098-31969	
@classCode	1..1	SHALL		1098-31970	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-31971	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = INT
id	1..*	SHALL		1098-31972	
code	1..1	SHALL		1098-31973	urn:oid:2.16.840.1.114222.4.11.3591 (Payer)
statusCode	1..1	SHALL		1098-31974	
@code	1..1	SHALL		1098-31975	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = active

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" act (CodeSystem: ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1098-31945).
2. **SHALL** contain exactly one [1..1] **@moodCode**="INT" Intent (CodeSystem: ActMood urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid:2.16.840.1.113883.5.6) (CONF:1098-31970).
      ii. This act **SHALL** contain exactly one [1..1] **@moodCode**="INT" intent (CodeSystem: ActMood urn:oid: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 **Payer** urn:oid: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 urn:oid:2.16.840.1.113883.5.14) (CONF:1098-31975).

Table 200: Payer

Value Set: Payer urn:oid: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: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
1	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.11388 3.3.221.5	Medicare
2	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.11388 3.3.221.5	Medicaid
311	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.11388 3.3.221.5	Tricare (CHAMPUS)
33	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.11388 3.3.221.5	Indian Health Service or Tribe
62	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.11388 3.3.221.5	BC Indemnity
61	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.11388 3.3.221.5	BC Managed Care
611	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.11388 3.3.221.5	BC Managed Care - HMO
619	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.11388 3.3.221.5	BC Managed Care - Other
613	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.11388 3.3.221.5	BC Managed Care - POS
612	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.11388 3.3.221.5	BC Managed Care - PPO
...			

Figure 96: 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>
```

3.41 *Planned Immunization Activity*

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

```
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```

Table 201: 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 202: 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	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.3.88.12.3221.8.7 (Medication Route FDA)
approachSiteCode	0..*	MAY		1098-32128	urn:oid: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	urn:oid: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:2.16.840.1.113883.10.20.22.4.54:2014-06-09
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-	urn:oid:2.16.840.1.113883.5.100

				32109	2 (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	urn:oid:2.16.840.1.113883.5.100 2 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-32116	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2 0.22.4.19:2014-06-09
entryRelationship	0..*	MAY		1098-32117	
@typeCode	1..1	SHALL		1098-32118	urn:oid:2.16.840.1.113883.5.100 2 (HL7ActRelationshipType) = SUBJ
act	1..1	SHALL		1098-32119	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2 0.22.4.20:2014-06-09
precondition	0..*	MAY		1098-32123	
@typeCode	1..1	SHALL		1098-32124	urn:oid:2.16.840.1.113883.5.100 2 (HL7ActRelationshipType) = PRCN
criterion	1..1	SHALL		1098-32125	Precondition for Substance Administration (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2 0.22.4.25:2014-06-09

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)** urn:oid: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 urn:oid: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** urn:oid: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** urn:oid: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** urn:oid: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

    a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32109).

    b. **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

    a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32115).

    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:1098-32116).

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
    a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" Has Subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32118).
    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:1098-32119).

17. **MAY** contain zero or more [0..*] **precondition** (CONF:1098-32123) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="PRCN" Precondition (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32124).
    b. **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 203: Planned moodCode (SubstanceAdministration/Supply)

Value Set: Planned moodCode (SubstanceAdministration/Supply) urn:oid: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: **https://vsac.nlm.nih.gov/**

Code	Code System	Code System OID	Print Name
INT	ActMood	urn:oid:2.16.840.1.113883.5.1001	Intent
PRMS	ActMood	urn:oid:2.16.840.1.113883.5.1001	Promise
PRP	ActMood	urn:oid:2.16.840.1.113883.5.1001	Proposal
RQO	ActMood	urn:oid:2.16.840.1.113883.5.1001	Request

Figure 97: 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>
```

3.42 Planned Medication Activity (V2)

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

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Table 204: 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 205: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM
@moodCode	1..1	SHALL		1098-8573	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.3.88.12.3221.8.7 (Medication Route FDA)
approachSiteCode	0..*	MAY		1098-32078	urn:oid: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	urn:oid:2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive)
rateQuantity	0..1	MAY		1098-32079	
@unit	0..1	SHOULD		1098-32134	urn:oid:2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive)
maxDoseQuantity	0..1	MAY		1098-32080	
administrationUnitCode	0..1	MAY		1098-32081	urn:oid:2.16.840.1.113762.1.4.1021.30 (AdministrationUnitDoseForm)
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	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid: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 urn:oid: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)** urn:oid: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 urn:oid: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** urn:oid: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** urn:oid: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** urn:oid: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** urn:oid: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 **AdministrationUnitDoseForm** urn:oid:2.16.840.1.113762.1.4.1021.30 **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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 98: 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="cdbd33f0-6cde-11db-9fe1-0800200c9a66" />
  <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>
```

3.43 Planned Observation (V2)

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

Published as part of Consolidated CDA Templates for Clinical Notes (US Realm) DSTU R2

Table 206: Planned Observation (V2) Contexts

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

Contained By:	Contains:
	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 207: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-8582	urn:oid: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	urn:oid:2.16.840.1.113883.6.1 (LOINC)
statusCode	1..1	SHALL		1098-30453	
@code	1..1	SHALL		1098-32032	urn:oid: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	urn:oid: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	urn:oid: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-	urn:oid:2.16.840.1.113883.5.100

				32035	2 (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	urn:oid: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	urn:oid: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 urn:oid: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)** urn:oid: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 (urn:oid: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 urn:oid: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** urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 208: Planned moodCode (Observation)

Value Set: Planned moodCode (Observation) urn:oid:2.16.840.1.113883.11.20.9.25			
This value set is used to restrict the moodCode on an Observation to future moods.			
Value Set Source: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
INT	ActMood	urn:oid:2.16.840.1.113883.5.1001	Intent
PRMS	ActMood	urn:oid:2.16.840.1.113883.5.1001	Promise
PRP	ActMood	urn:oid:2.16.840.1.113883.5.1001	Proposal
RQO	ActMood	urn:oid:2.16.840.1.113883.5.1001	Request

Figure 99: 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>
```

3.43.1 Ordered Service Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.2 (open)]

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Table 209: 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 210: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-382	urn:oid: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 urn:oid:2.16.840.1.113883.5.6) (CONF:1106-381).
3. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request (CodeSystem: ActMood urn:oid: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 100: 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>
```

3.44 *Planned Procedure (V2)*

```
[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09
(open)]
```

```
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DSTU R2
```

Table 211: 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 212: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		1098-8569	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid: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 urn:oid: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)** urn:oid: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 urn:oid: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** urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 101: 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>
```

3.44.1 Ordered Service Procedure

```
[procedure: identifier urn:oid:2.16.840.1.113883.10.20.34.3.11 (open)]
```

```
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Realm
```

Table 213: 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 214: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		1106-139	urn:oid: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 urn:oid:2.16.840.1.113883.5.6) (CONF:1106-138).
3. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request (CodeSystem: ActMood urn:oid: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 102: 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>
```

3.45 Point of Origin Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.3.36:2015-04-01 (open)]

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Table 215: Point of Origin Observation Contexts

Contained By:	Contains:
Current Inpatient Visit (optional) Current Emergency Department Visit (V2) (optional)	

This template represents the patient's point of origin before arrival for this visit.

Table 216: Point of Origin Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.36:2015-04-01)					
@classCode	1..1	SHALL		1184-614	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1184-615	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1184-609	
@root	1..1	SHALL		1184-611	2.16.840.1.113883.10.20.34.3.36
@extension	1..1	SHALL		1184-894	2015-04-01
id	1..*	SHALL		1184-682	
code	1..1	SHALL		1184-610	
@code	1..1	SHALL		1184-612	78029-6
@codeSystem	1..1	SHALL		1184-613	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1184-683	
@code	1..1	SHALL		1184-684	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1184-616	urn:oid:2.16.840.1.114222.4.11.7359 (Point of Origin (NCHS))
@nullFlavor	0..1	MAY		1184-892	urn:oid:2.16.840.1.113883.10.20.5.9.1 (NullValues_UNK_OTH)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1184-614).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1184-615).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1184-609) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.36" (CONF:1184-611).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-04-01" (CONF:1184-894).
4. **SHALL** contain at least one [1..*] **id** (CONF:1184-682).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1184-610).
    a. This code **SHALL** contain exactly one [1..1] **@code**="78029-6" Point of Origin (CONF:1184-612).

b. This code **SHALL** contain exactly one [1..1]
   @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC
   urn:oid:2.16.840.1.113883.6.1) (CONF:1184-613).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1184-683).
   a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed
      (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1184-684).
7. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD", where the code **SHALL** be
   selected from ValueSet **Point of Origin (NCHS)**
   urn:oid:2.16.840.1.114222.4.11.7359 **DYNAMIC** (CONF:1184-616).
   a. This value **MAY** contain zero or one [0..1] **@nullFlavor**, which **SHALL** be selected
      from ValueSet **NullValues UNK OTH** urn:oid:2.16.840.1.113883.10.20.5.9.1
      STATIC 2015-04-01 (CONF:1184-892).

Table 217: Point of Origin (NCHS)

Value Set: Point of Origin (NCHS) urn:oid:2.16.840.1.114222.4.11.7359			
Where the patient came from immediately before arriving at the healthcare facility.			
Value Set Source: **https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7359**			
Code	**Code System**	**Code System OID**	**Print Name**
4563007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Transfer from a different hospital
448441000124103	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Transfer from Intermediate Care Facility
448421000124105	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Transfer from physician's office, NOS
1971000124109	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Transfer from a Hospice Facility
107724000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Patient transfer from one unit to another
448431000124108	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Transfer from Assisted Living Facility
25986004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Transfer from jail or court
285202004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Non-Healthcare facility point of origin NOS
442311008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Newborn born inside this hospital
445585003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Newborn born outside this hospital
...			

Figure 103: Point of Origin Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- Point of Origin Observation -->
  <templateId root="2.16.840.1.113883.10.20.34.3.36"
    extension="2015-04-01" />
  <id root="cd691b5e-2464-4fb4-936d-0d9d67ebb8fd" />
  <code code="78029-6"
    displayName="Point of Origin"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" />
  <statusCode code="completed" />
  <value xsi:type="CD" code="999999"
    displayName="Point of origin"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT" />
</observation>
```

3.46 Policy Activity (V2)

```
[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.61:2014-06-09 (open)]
```

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Table 218: Policy Activity (V2) Contexts

Contained By:	Contains:
Coverage Activity (V2) (required)	US Realm Address (AD.US.FIELDED)

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 219: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-8899	urn:oid: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	urn:oid:2.16.840.1.114222.4.11.3591 (Payer)
statusCode	1..1	SHALL		1098-8902	
@code	1..1	SHALL		1098-19109	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
performer	1..1	SHALL		1098-8906	
@typeCode	1..1	SHALL		1098-8907	urn:oid: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	urn:oid:2.16.840.1.113883.1.11.10416 (HL7FinanciallyResponsibleParty Type)
addr	0..1	MAY		1098-8910	US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
telecom	0..*	MAY		1098-8911	
representedOrganization	0..1	SHOUL		1098-	

		D		8912	
name	0..1	SHOULD		1098-8913	
performer	0..1	SHOULD		1098-8961	urn:oid: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.FIELDED) (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	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8898).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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 **Payer** urn:oid: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 urn:oid: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 urn:oid: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** urn:oid: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.FIELDED)** (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 urn:oid: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.FIELDED)** (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 urn:oid: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** urn:oid: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.FIELDED) (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] **sdtc:birthTime** (CONF:1098-31344).

   a. 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 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 urn:oid: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.FIELDED) (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 urn:oid: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 220: HL7FinanciallyResponsiblePartyType

Value Set: HL7FinanciallyResponsiblePartyType urn:oid: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: **https://vsac.nlm.nih.gov/**

Code	Code System	Code System OID	Print Name
GUAR	RoleClass	urn:oid:2.16.840.1.113883.5.110	Guarantor
EMP	RoleClass	urn:oid:2.16.840.1.113883.5.110	Employee
INVSBJ	RoleClass	urn:oid:2.16.840.1.113883.5.110	Investigation Subject

Table 221: Coverage Role Type

Value Set: Coverage Role Type urn:oid: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: **https://vsac.nlm.nih.gov/**

Code	Code System	Code System OID	Print Name
FAMDEP	RoleCode	urn:oid:2.16.840.1.113883.5.111	Family dependent
FSTUD	RoleCode	urn:oid:2.16.840.1.113883.5.111	Full-time student
SELF	RoleCode	urn:oid:2.16.840.1.113883.5.111	Self
...			

Figure 104: 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="1.1.1.1.1.1.1.1.14" 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>
```

3.47 Precondition for Substance Administration (V2)

```
[criterion: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09
(open)]
```

```
Published as part of Consolidated CDA Templates for Clinical Notes (US Realm)
DSTU R2
```

Table 222: 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 223: 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	urn:oid:2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
value	1..1	SHALL	CD	1098-7369	urn:oid:2.16.840.1.113883.3.88.1 2.3221.7.4 (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 urn:oid: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** urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:1098-7369).

Figure 105: 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>
```

3.48 Pregnancy Observation

```
[observation: identifier urn:oid:2.16.840.1.113883.10.20.15.3.8 (open)]
```

```
Published as part of Consolidated CDA Templates for Clinical Notes (US Realm)
DSTU R1.1
```

Table 224: Pregnancy Observation Contexts

Contained By:	Contains:
Social History Section (V2) (optional) Patient Information Section (V3) (optional)	Estimated Date of Delivery

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 225: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-452	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 77386006
entryRelationship	0..1	MAY		81-458	
@typeCode	1..1	SHALL		81-459	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-451).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 106: 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>
```

3.49 *Present on Admission Observation*

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.3.37:2015-04-01
(open)]
```

```
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Realm
```

Table 226: Present on Admission Observation Contexts

Contained By:	Contains:
Injury or Poisoning Observation (V2) (optional) Primary Diagnosis Observation (V2) (optional) Problem/Diagnosis/Symptom/Condition Observation (V2) (optional)	

This template represents whether or not the containing diagnosis was present on admission (POA). If this fact is unknown use nullFlavor="UNK".

Table 227: Present on Admission Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.37:2015-04-01)					
@classCode	1..1	SHALL		1184-905	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1184-906	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1184-899	
@root	1..1	SHALL		1184-903	2.16.840.1.113883.10.20.34.3.37
@extension	1..1	SHALL		1184-912	2015-04-01
id	1..*	SHALL		1184-907	
code	1..1	SHALL		1184-901	
@code	0..1	MAY		1184-908	78026-2
@codeSystem	0..1	MAY		1184-909	2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1184-900	
@code	1..1	SHALL		1184-904	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	BL	1184-902	
@nullFlavor	0..1	MAY		1184-910	UNK
@value	0..1	SHOULD		1184-911	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1184-905).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1184-906).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1184-899) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.37" (CONF:1184-903).
   b. **SHALL** contain exactly one [1..1] **@extension**="2015-04-01" (CONF:1184-912).
4. **SHALL** contain at least one [1..*] **id** (CONF:1184-907).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1184-901).
   a. This code **MAY** contain zero or one [0..1] **@code**="78026-2" Present on admission (CONF:1184-908).

          b. This code **MAY** contain zero or one [0..1] **@codeSystem**="2.16.840.1.113883.6.1" (CONF:1184-909).

6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1184-900).

          a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: `ActStatus urn:oid:2.16.840.1.113883.5.14`) (CONF:1184-904).

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:1184-902).

          a. This value **MAY** contain zero or one [0..1] **@nullFlavor**="UNK" (CONF:1184-910).

          b. This value **SHOULD** contain zero or one [0..1] **@value** (CONF:1184-911).

Figure 107: Present on Admission Observation Example

```
<observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.34.3.37"
        extension="2015-04-01" />
    <id root="7d49bb4a-4764-4126-82dd-dcfe7901f702" />
    <code code="78026-2"
        displayName="Present on admission"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC" />
    <statusCode code="completed" />
    <value xsi:type="BL" value="true" />
</observation>
```

3.50 Priority Preference

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.143 (open)]

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Table 228: 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 229: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-30950	urn:oid: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	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6) (CONF:1098-30949).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid: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 urn:oid: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** urn:oid: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 230: Priority Level

Value Set: Priority Level urn:oid: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	urn:oid:2.16.840.1.113883.6.96	High priority
394848005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Normal priority
441808003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Delayed priority

Figure 108: 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>
```

3.51 Problem Observation (V2)

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09
(open)]
```

```
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```

Table 231: 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 232: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-9042	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.6.90 (ICD-10-CM)
@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	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-9041).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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** urn:oid: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 urn:oid: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** urn:oid: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: ICD-10-CM urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 109: 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 110: 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 111: 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" />
```

```
            <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 112: 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>
```

3.51.1 Admission Diagnosis Observation

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.3.34:2015-04-01
(open)]
```

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Table 233: Admission Diagnosis Observation Contexts

Contained By:	Contains:
Problems Section (V3) (optional)	

This template represents the admission diagnosis.

Table 234: Admission Diagnosis Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.34:2015-04-01)					
@classCode	1..1	SHALL		1184-869	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1184-870	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1184-867	
@root	1..1	SHALL		1184-871	2.16.840.1.113883.10.20.34.3.34
@extension	1..1	SHALL		1184-874	2015-04-01
code	1..1	SHALL		1184-868	
@code	1..1	SHALL		1184-872	8646-2
@codeSystem	1..1	SHALL		1184-873	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 urn:oid:2.16.840.1.113883.5.6) (CONF:1184-869).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1184-870).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1184-867) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.34" (CONF:1184-871).
   b. **SHALL** contain exactly one [1..1] **@extension**="2015-04-01" (CONF:1184-874).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1184-868).

a. This code **SHALL** contain exactly one [1..1] **@code**="8646-2" Hospital Admission Diagnosis (CONF:1184-872).

b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CONF:1184-873).

Figure 113: Admission Diagnosis Observation Example

```
<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" />
  <!-- Admission Diagnosis Observation -->
  <templateId root="2.16.840.1.113883.10.20.34.3.34"
    extension="2015-04-01" />
  <id root="7d49bb4a-4764-4126-82dd-dcfe7901f701" />
  <code code="8646-2"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Hospital Admission 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>
```

3.51.2 Adverse Effect of Medical Treatment

```
[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.14 (open)]

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```

Table 235: Adverse Effect of Medical Treatment Contexts

Contained By:	Contains:
Problems Section (V3) (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 236: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-488	urn:oid: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	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6) (CONF:1106-487).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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 urn:oid: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 urn:oid: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 114: 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>
```

3.51.3 Injury or Poisoning Observation (V2)

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.3.17:2015-04-01
(open)]
```

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Table 237: Injury or Poisoning Observation (V2) Contexts

Contained By:	Contains:
Problems Section (V3) (optional)	Cause of Injury, Poisoning, or Adverse Effect Present on Admission Observation

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 238: Injury or Poisoning Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.17:2015-04-01)					
@classCode	1..1	SHALL		1184-209	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1184-210	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1184-211	
@root	1..1	SHALL		1184-212	2.16.840.1.113883.10.20.34.3.17
code	1..1	SHALL		1184-445	
@code	1..1	SHALL		1184-446	75321-0
@codeSystem	1..1	SHALL		1184-447	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
value	1..1	SHALL	CD	1184-218	urn:oid:2.16.840.1.114222.4.11.7403 (Injury or Poisoning (NCHS))
@nullFlavor	0..1	MAY		1184-702	UNK
entryRelationship	0..1	MAY		1184-637	
@typeCode	1..1	SHALL		1184-638	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = CAUS
observation	1..1	SHALL		1184-639	Cause of Injury, Poisoning, or Adverse Effect (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.27
entryRelationship	0..1	MAY		1184-1096	
@typeCode	1..1	SHALL		1184-1097	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1184-1098	true
observation	1..1	SHALL		1184-1099	Present on Admission Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.37:2015-04-01

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 urn:oid:2.16.840.1.113883.5.6) (CONF:1184-209).

3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1184-210).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1184-211) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.17" (CONF:1184-212).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1184-445).
   a. This code **SHALL** contain exactly one [1..1] **@code**="75321-0" Clinical finding (CONF:1184-446).
   b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1184-447).
6. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD", where the code **SHOULD** be selected from ValueSet **Injury or Poisoning (NCHS)** urn:oid:2.16.840.1.114222.4.11.7403 **DYNAMIC** (CONF:1184-218).
   a. This value **MAY** contain zero or one [0..1] **@nullFlavor**="UNK" (CONF:1184-702).
7. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1184-637) such that it
   a. **SHALL** contain exactly one [1..1] **@typeCode**="CAUS" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1184-638).
   b. **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:1184-639).
8. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1184-1096) such that it
   a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1184-1097).
   b. **SHALL** contain exactly one [1..1] **@inversionInd**="true" (CONF:1184-1098).
   c. **SHALL** contain exactly one [1..1] **Present on Admission Observation** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.37:2015-04-01) (CONF:1184-1099).

Table 239: Injury or Poisoning (NCHS)

Value Set: Injury or Poisoning (NCHS) urn:oid: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://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7403

Code	Code System	Code System OID	Print Name
72431002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Accidental Poisoning
410061008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Intentional Poisoning
269736006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Poisoning of undetermined intent
242056005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Accidental injury
420025004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Non-accidental injury
269735005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Injury undetermined whether accidental or purposely inflicted
...			

Figure 115: Injury or Poisoning Observation (V2) Example

```
<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 (V2) -->
    <templateId root="2.16.840.1.113883.10.20.34.3.17"
        extension="2015-04-01" />
    <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" />
    <!-- This entryRelationship represents whether or not the diagnosis was present on
admission -->
    <entryRelationship typeCode="SUBJ" inversionInd="true">
        <observation classCode="OBS" moodCode="EVN">
            <!-- Present on Admission Observation -->
            <templateId root="2.16.840.1.113883.10.20.34.3.37"
                extension="2015-04-01" />
            ...
        </observation>
    </entryRelationship>
</observation>
```

3.51.4 Patient's Reason for Visit Observation

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.3.41:2015-04-01
(open)]

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Realm
```

Table 240: Patient's Reason for Visit Observation Contexts

Contained By:	Contains:
Reasons for Visit Section (V2) (optional)	

This template represents the patient's reason for the visit.

Table 241: Patient's Reason for Visit Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.41:2015-04-01)					
@classCode	1..1	SHALL		1184-1083	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1184-1084	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1184-1073	
@root	1..1	SHALL		1184-1078	2.16.840.1.113883.10.20.34.3.41
@extension	1..1	SHALL		1184-1079	2015-04-01
code	1..1	SHALL		1184-1074	
@code	1..1	SHALL		1184-1080	75322-8
@codeSystem	1..1	SHALL		1184-1081	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 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" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1184-1083).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1184-1084).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1184-1073) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.41" (CONF:1184-1078).
   b. **SHALL** contain exactly one [1..1] **@extension**="2015-04-01" (CONF:1184-1079).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1184-1074).
   a. This code **SHALL** contain exactly one [1..1] **@code**="75322-8" Complaint (CONF:1184-1080).
   b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1184-1081).

Figure 116: Patient's Reason for Visit Observation Example

```
<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" />
    <!-- Patient's Reason for Visit -->
    <templateId root="2.16.840.1.113883.10.20.34.3.41"
        extension="2015-04-01" />
    <id root="e88883d7-39b7-4550-b2b4-e34a4bddd78e" />
    <code code="75322-8"
        displayName="Complaint"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC" />
    <statusCode code="completed" />
    <effectiveTime>
        <low value="20130703" />
    </effectiveTime>
    <value xsi:type="CD"
        code="267036007"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT"
        displayName="Shortness of breath" />
</observation>
```

3.51.5 Primary Diagnosis Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.3.6:2015-04-01 (open)]

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Table 242: Primary Diagnosis Observation (V2) Contexts

Contained By:	Contains:
Problems Section (V3) (required)	Present on Admission Observation

This template represents the primary diagnosis. If no other means of determination is possible, use first listed diagnosis as the primary diagnosis.

Table 243: Primary Diagnosis Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.6:2015-04-01)					
@classCode	1..1	SHALL		1184-339	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1184-340	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1184-341	
@root	1..1	SHALL		1184-342	2.16.840.1.113883.10.20.34.3.6
code	1..1	SHALL		1184-518	
@code	1..1	SHALL		1184-519	52534-5
@codeSystem	1..1	SHALL		1184-520	2.16.840.1.113883.6.1
entryRelationship	0..1	MAY		1184-1100	
@typeCode	1..1	SHALL		1184-1101	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	0..1	MAY		1184-1102	true
observation	1..1	SHALL		1184-1103	Present on Admission Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.37:2015-04-01

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 urn:oid:2.16.840.1.113883.5.6) (CONF:1184-339).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1184-340).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1184-341) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.6" (CONF:1184-342).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1184-518).
   a. This code **SHALL** contain exactly one [1..1] **@code**="52534-5" Principal Diagnosis (CONF:1184-519).
   b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CONF:1184-520).
6. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1184-1100).

     a. The entryRelationship, if present, **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1184-1101).

     b. The entryRelationship, if present, **MAY** contain zero or one [0..1] **@inversionInd**="true" (CONF:1184-1102).

     c. The entryRelationship, if present, **SHALL** contain exactly one [1..1] **Present on Admission Observation** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.37:2015-04-01) (CONF:1184-1103).

Figure 117: Primary Diagnosis Observation (V2) Example

```xml
<!-- If no other means of determination is possible,
     use first listed diagnosis as 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 (V2) -->
    <templateId root="2.16.840.1.113883.10.20.34.3.6"
        extension="2015-04-01" />
    <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" />
    <entryRelationship typeCode="SUBJ" inversionInd="true">
        <!-- Present on Admission Observation -->
        <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.34.3.37"
                extension="2015-04-01" />
            ...
        </observation>
    </entryRelationship>
</observation>
```

3.51.6 Problem/Diagnosis/Symptom/Condition Observation (V2)

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.3.1:2015-04-01
(open)]
```

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Table 244: Problem/Diagnosis/Symptom/Condition Observation (V2) Contexts

Contained By:	Contains:
Problems Section (V3) (optional)	Present on Admission Observation

This template represents a problem such as a diagnosis or a symptom or a condition. It is based on the Problem Observation (V2) template.

Table 245: Problem/Diagnosis/Symptom/Condition Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.1:2015-04-01)					
@classCode	1..1	SHALL		1184-268	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1184-269	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1184-270	
@root	1..1	SHALL		1184-271	2.16.840.1.113883.10.20.34.3.1
@extension	1..1	SHALL		1184-1117	2015-04-01
entryRelationship	0..1	MAY		1184-1116	
@typeCode	1..1	SHALL		1184-1118	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1184-1119	true
observation	1..1	SHALL		1184-1120	Present on Admission Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.37:2015-04-01

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 urn:oid:2.16.840.1.113883.5.6) (CONF:1184-268).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1184-269).

4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1184-270) such that it

    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.1" (CONF:1184-271).

    b. **SHALL** contain exactly one [1..1] **@extension**="2015-04-01" (CONF:1184-1117).

5. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1184-1116).

    a. The entryRelationship, if present, **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1184-1118).

    b. The entryRelationship, if present, **SHALL** contain exactly one [1..1] **@inversionInd**="true" (CONF:1184-1119).

    c. The entryRelationship, if present, **SHALL** contain exactly one [1..1] **Present on Admission Observation** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.37:2015-04-01) (CONF:1184-1120).

Figure 118: Problem/Diagnosis/Symptom/Condition Observation (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
    <!-- Problem/Diagnosis/Symptom/Condition Observation (V2) -->
    <!-- C-CDA R2 Problem Observation (V2) -->
    <templateId root="2.16.840.1.113883.10.20.22.4.4"
        extension="2014-06-09" />
    <templateId root="2.16.840.1.113883.10.20.34.3.1"
        extension="2014-04-01" />
    <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>
```

3.52 *Problem Status (DEPRECATED)*

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2014-06-09
(open)]
```

```
Deprecated as part of Consolidated CDA Templates for Clinical Notes (US
Realm) DSTU R2
```

Table 246: 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 247: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-7358	urn:oid: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
code	1..1	SHALL		1098-19162	
@code	1..1	SHALL		1098-19163	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 33999-4
statusCode	1..1	SHALL		1098-7364	
@code	1..1	SHALL		1098-19113	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1098-7365	urn:oid:2.16.840.1.113883.3.88.12.80.68 (Problem Status)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7357).

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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).

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 urn:oid: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 urn:oid: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** urn:oid:2.16.840.1.113883.3.88.12.80.68 **DYNAMIC** (CONF:1098-7365).

Table 248: Problem Status

Value Set: Problem Status urn:oid:2.16.840.1.113883.3.88.12.80.68			
A value 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	urn:oid:2.16.840.1.113883.6.96	Active
73425007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Inactive
413322009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Resolved

3.53 Procedure Activity Act (V2)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.12:2014-06-09 (open)]

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Table 249: 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 250: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-8290	urn:oid: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	urn:oid:2.16.840.1.113883.11.20.9.22 (ProcedureAct statusCode)
effectiveTime	1..1	SHALL		1098-8299	
priorityCode	0..1	MAY		1098-8300	urn:oid:2.16.840.1.113883.1.11.16866 (Act Priority)
performer	0..*	SHOULD		1098-8301	
assignedEntity	1..1	SHALL		1098-8302	
id	1..*	SHALL		1098-8303	
addr	1..*	SHALL		1098-8304	
telecom	1..*	SHALL		1098-8305	
representedOrganization	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	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1098-8319	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8289).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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** urn:oid: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** urn:oid: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 at least one [1..*] **id** (CONF:1098-8303).
      ii. This assignedEntity **SHALL** contain at least one [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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 251: Act Priority

Code	Code System	Code System OID	Print Name

Value Set: Act Priority urn:oid:2.16.840.1.113883.1.11.16866
Value Set Source: **https://vsac.nlm.nih.gov/**

Code	Code System	Code System OID	Print Name
A	ActPriority	urn:oid:2.16.840.1.113883.5.7	ASAP
CR	ActPriority	urn:oid:2.16.840.1.113883.5.7	Callback results
CS	ActPriority	urn:oid:2.16.840.1.113883.5.7	Callback for scheduling
CSP	ActPriority	urn:oid:2.16.840.1.113883.5.7	Callback placer for scheduling
CSR	ActPriority	urn:oid:2.16.840.1.113883.5.7	Contact recipient for scheduling
EL	ActPriority	urn:oid:2.16.840.1.113883.5.7	Elective
EM	ActPriority	urn:oid:2.16.840.1.113883.5.7	Emergency
P	ActPriority	urn:oid:2.16.840.1.113883.5.7	Preoperative
PRN	ActPriority	urn:oid:2.16.840.1.113883.5.7	As needed
R	ActPriority	urn:oid:2.16.840.1.113883.5.7	Routine
...			

Table 252: ProcedureAct statusCode

Value Set: ProcedureAct statusCode urn:oid:2.16.840.1.113883.11.20.9.22
A ValueSet of HL7 actStatus codes for use with a procedure activity
Value Set Source: **https://vsac.nlm.nih.gov/**

Code	Code System	Code System OID	Print Name
completed	ActStatus	urn:oid:2.16.840.1.113883.5.14	Completed
active	ActStatus	urn:oid:2.16.840.1.113883.5.14	Active
aborted	ActStatus	urn:oid:2.16.840.1.113883.5.14	Aborted
cancelled	ActStatus	urn:oid:2.16.840.1.113883.5.14	Cancelled

Figure 119: 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>
```

3.53.1 Provided Service Act

```
[act: identifier urn:oid:2.16.840.1.113883.10.20.34.3.20 (open)]
```

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Table 253: 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 254: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1106-228	urn:oid: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	urn:oid:2.16.840.1.113883.6.12 (CPT4)
statusCode	1..1	SHALL		1106-233	
@code	1..1	SHALL		1106-364	urn:oid: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 urn:oid:2.16.840.1.113883.5.6) (CONF:1106-227).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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 (urn:oid: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 urn:oid:2.16.840.1.113883.5.14) (CONF:1106-364).

Figure 120: 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 121: 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>
```

3.54 Procedure Activity Observation (V2)

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09
(open)]
```

```
Published as part of Consolidated CDA Templates for Clinical Notes (US Realm)
DSTU R2
```

Table 255: 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 256: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-8237	urn:oid: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	urn:oid:2.16.840.1.113883.11.20.9.22 (ProcedureAct statusCode)
effectiveTime	0..1	SHOULD		1098-8246	
priorityCode	0..1	MAY		1098-8247	urn:oid: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	urn:oid: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](#)	
representedOrganization	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](#)	urn:oid: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](#)	urn:oid: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](#)	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		[1098-8269](#)	urn:oid: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](#)	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
substanceAdministration	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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8282).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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** urn:oid: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** urn:oid:2.16.840.1.11.16866 **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** urn:oid: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..*] **<u>Author Participation</u>** (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 urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8262).

    b. **SHALL** contain exactly one [1..1] **<u>Service Delivery Location</u>** (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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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] **<u>Instruction (V2)</u>** (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 urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8277).

    b. **SHALL** contain exactly one [1..1] **<u>Indication (V2)</u>** (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 urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8280).

    b. **SHALL** contain exactly one [1..1] **<u>Medication Activity (V2)</u>** (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 urn:oid: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 122: 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>
    <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>
```

3.54.1 Provided Service Observation

```
[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.3 (open)]
```

```
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Realm
```

Table 257: 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 258: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-366	urn:oid: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	urn:oid:2.16.840.1.113883.6.12 (CPT4)
statusCode	1..1	SHALL		1106-373	
@code	1..1	SHALL		1106-374	urn:oid: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 urn:oid:2.16.840.1.113883.5.6) (CONF:1106-365).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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/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:1106-771).
   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 (urn:oid: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 urn:oid:2.16.840.1.113883.5.14) (CONF:1106-374).

Figure 123: 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>
```

3.55 Procedure Activity Procedure (V2)

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09 (open)]

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Table 259: 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 260: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		1098-7653	urn:oid: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	urn:oid:2.16.840.1.113883.11.20.9.22 (ProcedureAct statusCode)
effectiveTime	0..1	SHOULD		1098-7662	
priorityCode	0..1	MAY		1098-7668	urn:oid: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	urn:oid: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	
representedOrganization	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	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC

@moodCode	1..1	SHALL		1098-7772	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
substanceAdministration	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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7652).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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** urn:oid: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** urn:oid: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** urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 124: 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>
```

3.55.1 Provided Service Procedure

```
[procedure: identifier urn:oid:2.16.840.1.113883.10.20.34.3.12 (open)]

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Realm
```

Table 261: 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 262: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		1106-146	urn:oid: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	urn:oid:2.16.840.1.113883.6.12 (CPT4)
@code	1..1	SHALL		1106-376	urn:oid:2.16.840.1.113883.6.12 (CPT4)
statusCode	1..1	SHALL		1106-152	
@code	1..1	SHALL		1106-377	urn:oid: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 urn:oid:2.16.840.1.113883.5.6) (CONF:1106-145).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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/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:1106-770).
   b. This code **MAY** contain zero or more [0..*] **translation** (CodeSystem: CPT4 urn:oid: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 (urn:oid: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 urn:oid:2.16.840.1.113883.5.14) (CONF:1106-377).

Figure 125: 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>
```

3.56 *Procedure Follow-Up Attempt Observation*

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.3.42:2015-04-01 (open)]

Published as part of National Health Care Surveys, Release 1, DSTU 1.1 - US Realm

Table 263: Procedure Follow-Up Attempt Observation Contexts

Contained By:	Contains:
Current Outpatient Visit (V3) (optional)	Follow-up Attempt Outcome Observation

This template represents whether or not a follow-up attempt was made within 24-hours after surgery and if so, the results of that follow-up. If this fact is unknown use nullFlavor="UNK".

Table 264: Procedure Follow-Up Attempt Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.42:2015-04-01)					
@classCode	1..1	SHALL		1184-1127	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1184-1128	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1184-1121	
@root	1..1	SHALL		1184-1125	2.16.840.1.113883.10.20.34.3.42
@extension	1..1	SHALL		1184-1134	2015-04-01
id	1..*	SHALL		1184-1129	
code	1..1	SHALL		1184-1123	
@code	1..1	SHALL		1184-1130	78027-0
@codeSystem	1..1	SHALL		1184-1131	2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1184-1122	
@code	1..1	SHALL		1184-1126	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	BL	1184-1124	
@nullFlavor	0..1	MAY		1184-1132	UNK
@value	0..1	SHOULD		1184-1133	
entryRelationship	0..1	SHOULD		1184-1148	
@typeCode	1..1	SHALL		1184-1149	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1184-1150	Follow-up Attempt Outcome Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.43:2015-04-01

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1184-1127).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1184-1128).

3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1184-1121) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.42" (CONF:1184-1125).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-04-01" (CONF:1184-1134).
4. **SHALL** contain at least one [1..*] **id** (CONF:1184-1129).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1184-1123).
    a. This code **SHALL** contain exactly one [1..1] **@code**="78027-0" Follow-up attempt made within 24-hours after surgery (CONF:1184-1130).
    b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CONF:1184-1131).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1184-1122).
    a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1184-1126).

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:1184-1124).
    a. This value **MAY** contain zero or one [0..1] **@nullFlavor**="UNK" (CONF:1184-1132).
    b. This value **SHOULD** contain zero or one [0..1] **@value** (CONF:1184-1133).
8. **SHOULD** contain zero or one [0..1] **entryRelationship** (CONF:1184-1148).
    a. The entryRelationship, if present, **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1184-1149).
    b. The entryRelationship, if present, **SHALL** contain exactly one [1..1] **Follow-up Attempt Outcome Observation** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.43:2015-04-01) (CONF:1184-1150).
    c. If a follow-up attempt was made then this entry **SHALL** be present (CONF:1184-1151).

Figure 126: Procedure Follow-Up Attempt Observation

```
<observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.34.3.42"
        extension="2015-04-01" />
    <id root="ecbec7b7-7fc0-47b2-85b5-39778319b8fb" />
    <!-- Follow-up attempt -->
    <code code="78027-0"
        displayName="Follow-up attempt made within 24-hours after surgery"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC" />
    <statusCode code="completed" />
    <value xsi:type="BL" value="true" />
    <!-- Follow-Up Attempt Outcome Observation -->
    <entryRelationship typeCode="REFR">
        <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.34.3.43"
                extension="2015-04-01" />
            ...
        </observation>
    </entryRelationship>
</observation>
```

3.57 Product Instance

```
[participantRole: identifier urn:oid:2.16.840.1.113883.10.20.22.4.37 (open)]

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DSTU R1.1
```

Table 265: 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 266: 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	urn:oid: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 urn:oid: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 127: 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)51022222233336(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>
```

3.58 Prognosis Observation

```
[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.113 (open)]
```

```
Published as part of Consolidated CDA Templates for Clinical Notes (US Realm)
DSTU R2
```

Table 267: 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 268: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-29036	urn:oid: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	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-29035).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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 urn:oid: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 urn:oid: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 128: 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 129: 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>
```

3.59 *Reaction Observation (V2)*

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09
(open)]
```

```
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```

Table 269: Reaction Observation (V2) Contexts

Contained By:	Contains:
Medication Activity (V2) (optional)	Medication Activity (V2)
Procedure Activity Procedure (V2) (optional)	Procedure Activity Procedure (V2)
Procedure Activity Observation (V2) (optional)	Severity Observation (V2)
Immunization Activity (V2) (optional)	

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 270: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-7326	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 (Problem)
entryRelationship	0..*	MAY		1098-7337	
@typeCode	1..1	SHALL		1098-7338	urn:oid: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	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
@inversionInd	1..1	SHALL		1098-7344	true
substanceAdministration	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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7325).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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 urn:oid: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 urn:oid: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** urn:oid: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 urn:oid: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 urn:oid: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 urn:oid: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 130: 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>
```

3.60 Result Observation (V2)

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2014-06-09
(open)]
```

```
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```

Table 271: 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 272: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-7131	urn:oid: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	urn:oid:2.16.840.1.113883.6.1 (LOINC)
statusCode	1..1	SHALL		1098-7134	
@code	1..1	SHALL		1098-14849	urn:oid:2.16.840.1.113883.11.20.9.39 (Result Status)
effectiveTime	1..1	SHALL		1098-7140	
value	0..1	SHOULD		1098-7143	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT)
interpretationCode	0..*	SHOULD		1098-7147	
@code	1..1	SHALL		1098-32476	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7130).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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 (urn:oid: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** urn:oid: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 (urn:oid: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)** urn:oid: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 273: Result Status

Value Set: Result Status urn:oid:2.16.840.1.113883.11.20.9.39			
Value Set Source: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
aborted	ActStatus	urn:oid:2.16.840.1.113883.5.14	aborted
active	ActStatus	urn:oid:2.16.840.1.113883.5.14	active
cancelled	ActStatus	urn:oid:2.16.840.1.113883.5.14	cancelled
completed	ActStatus	urn:oid:2.16.840.1.113883.5.14	completed
held	ActStatus	urn:oid:2.16.840.1.113883.5.14	held
suspended	ActStatus	urn:oid:2.16.840.1.113883.5.14	suspended

Table 274: Observation Interpretation (HL7)

Value Set: Observation Interpretation (HL7) urn:oid:2.16.840.1.113883.1.11.78			
Value Set Source: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
A	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	abnormal
B	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	better
Carrier	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	carrier
D	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	decreased
HX	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	above high threshold
I	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	intermediate
IND	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	indeterminate
LX	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	below low threshold
MS	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	moderately susceptible
N	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	normal
...			

Figure 131: Result Observation (V2) Example

```xml
<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="1.1.1.1.1.1.1.4" />
            <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 132: Pending Result Observation (V2) Example

```xml
<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 133: Original Lab Units in <translation> Example

```xml
<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="1.1.1.1.1.1.1.4" />
        </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>
```

3.61 Result Organizer (V2)

```
[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2014-06-09
(open)]
```

```
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```

Table 275: 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 276: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass)
@moodCode	1..1	SHALL		1098-7122	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7121).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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** urn:oid: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 134: 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>
```

3.62 Service Delivery Location

```
[participantRole: identifier urn:oid:2.16.840.1.113883.10.20.22.4.32 (open)]

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```

Table 277: 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 278: 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	urn:oid: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	urn:oid: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	urn:oid: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 urn:oid: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** urn:oid: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 urn:oid: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 279: HealthcareServiceLocation

Value Set: HealthcareServiceLocation urn:oid: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: **https://vsac.nlm.nih.gov/**

Code	Code System	Code System OID	Print Name
1162-7	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	24-Hour observation area
1184-1	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Administrative area
1210-4	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Adult Mixed Acuity Unit
1099-1	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Adult step down unit [post-critical care]
1110-6	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Allergy clinic
1166-8	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Ambulatory surgical setting
1212-0	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Any Age Mixed Acuity Unit
1106-4	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Assisted living area
1145-2	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Behavioral health clinic
1185-8	HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259	Blood bank
...			

Figure 135: 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>
```

3.63 Severity Observation (V2)

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09
(open)]
```

```
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DSTU R2
```

Table 280: Severity Observation (V2) Contexts

Contained By:	Contains:
Reaction Observation (V2) (optional)	

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 281: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-7346	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1098-7356	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7345).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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 urn:oid: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 urn:oid: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** urn:oid:2.16.840.1.113883.3.88.12.3221.6.8 **DYNAMIC** (CONF:1098-7356).

Table 282: Problem Severity

Value Set: Problem Severity urn:oid: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	urn:oid:2.16.840.1.113883.6.96	Mild (qualifier value)
371923003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Mild to moderate (qualifier value)
6736007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Moderate (severity modifier) (qualifier value)
371924009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Moderate to severe (qualifier value)
24484000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Severe (severity modifier) (qualifier value)
399166001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Fatal (qualifier value)

Figure 136: Severity Observation (V2) Example

```
<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>
```

3.64 Smoking Status - Meaningful Use (V2)

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09
(open)]
```

```
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```

Table 283: Smoking Status - Meaningful Use (V2) Contexts

Contained By:	Contains:
Social History Section (V2) (optional) Patient Information Section (V3) (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 284: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-14807	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-31928	
low	0..0	SHALL NOT		1098-32894	
width	0..0	SHALL NOT		1098-32895	
high	0..0	SHALL NOT		1098-32896	
center	0..0	SHALL NOT		1098-32897	
value	1..1	SHALL	CD	1098-14810	
@code	1..1	SHALL		1098-14817	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-14806).

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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 urn:oid: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 urn:oid: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.
   a. This effectiveTime **SHALL NOT** contain [0..0] **low** (CONF:1098-32894).
   b. This effectiveTime **SHALL NOT** contain [0..0] **width** (CONF:1098-32895).
   c. This effectiveTime **SHALL NOT** contain [0..0] **high** (CONF:1098-32896).
   d. This effectiveTime **SHALL NOT** contain [0..0] **center** (CONF:1098-32897).
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** urn:oid: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 285: Current Smoking Status

Value Set: Current Smoking Status urn:oid: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	urn:oid:2.16.840.1.113883.6.96	Current every day smoker
428041000124106	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Current some day smoker
8517006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Former smoker
266919005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Never smoker (Never Smoked)
77176002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Smoker, current status unknown
266927001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Unknown if ever smoked
428071000124103	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Heavy tobacco smoker
428061000124105	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Light tobacco smoker

Figure 137: 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="1.1.1.1.1.1.1.2" />
        </assignedAuthor>
    </author>
</observation>
```

3.65 *Social History Observation (V2)*

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2014-06-09
(open)]
```

```
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```

Table 286: 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 287: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-8549	urn:oid: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	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8548).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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` (urn:oid: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` urn:oid: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 138: 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>
```

3.66 *Substance Administered Act*

```
[act: identifier urn:oid:2.16.840.1.113883.10.20.22.4.118 (open)]
```

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Table 288: 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 289: 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](#)	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		[1098-31501](#)	urn:oid: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](#)	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
statusCode	1..1	SHALL		[1098-31505](#)	urn:oid: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 urn:oid:2.16.840.1.113883.5.6) (CONF:1098-31500).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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 urn:oid:2.16.840.1.113883.6.96) (CONF:1098-31508).
6. **SHALL** contain exactly one [1..1] **statusCode**="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-31505).
7. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:1098-31509).

Figure 139: Substance Administered Act Example

```xml
<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>
```

3.67 Tobacco Use (V2)

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09
(open)]
```

```
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DSTU R2
```

Table 290: Tobacco Use (V2) Contexts

Contained By:	Contains:
Social History Section (V2) (optional) Patient Information Section (V3) (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 291: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-16559	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid: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 `urn:oid:2.16.840.1.113883.5.6` **STATIC**) (CONF:1098-16558).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood `urn:oid: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 urn:oid: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 urn:oid: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. A "former smoker" is recorded with the proper code "current smoker" with an effectiveTime/low and effectiveTime/high defining the time during which the patient was a 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** urn:oid: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 292: Tobacco Use

Value Set: Tobacco Use urn:oid: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 excluding temporal findings such as 'Former Smoker' 'Never Chewed', etc.			
Value Set Source: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
81703003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Chews tobacco
228494002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Snuff user
59978006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Cigar smoker
43381005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Passive smoker
228524006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Exposed to tobacco smoke at home
427189007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Maternal tobacco use
394871007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Thinking about stopping smoking
65568007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Cigarette smoker
160619003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Rolls own cigarettes
266927001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Pipe smoker
...			

Figure 140: 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="1.1.1.1.1.1.1.2" />
        </assignedAuthor>
    </author>
</observation>
```

3.68 Transport Mode to Hospital Observation

```
[observation: identifier urn:oid:2.16.840.1.113883.10.20.34.3.24 (open)]

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Realm
```

Table 293: Transport Mode to Hospital Observation Contexts

Contained By:	Contains:
Current Emergency Department Visit (V2) (optional)	

This template represents the patient's mode of transport to the hospital.

Table 294: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1106-615	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1106-616	urn:oid:2.16.840.1.114222.4.11.7277 (Transport Mode to Hospital (NCHS))
@nullFlavor	0..1	MAY		1106-866	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1106-614).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid: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 urn:oid: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 urn:oid: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)** urn:oid:2.16.840.1.114222.4.11.7277 **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 295: Transport Mode to Hospital (NCHS)

Value Set: Transport Mode to Hospital (NCHS) urn:oid:2.16.840.1.114222.4.11.7277

The mode of transport (e.g., ground ambulance, walk-in, police) delivering the patient to a hospital.

Value Set Source:
https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7277

Code	Code System	Code System OID	Print Name
44613004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Ground transport ambulance
32472009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Medical helicopter
73957001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Air transport ambulance
46160005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Motor vehicle
257250006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Pedestrian conveyance
442301000124107	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Police vehicle

Figure 141: Transport Mode to Hospital Observation Example

```
<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>
```

3.69 *Vital Sign Observation (V2)*

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09
(open)]
```

```
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```

Table 296: 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]
Pulse/Resp Rate	/min
BMI	kg/m2
BSA	m2

Table 297: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-7298	urn:oid: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	urn:oid: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	urn:oid: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	urn:oid:2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive)
interpretationCode	0..1	MAY		1098-7307	
@code	1..1	SHALL		1098-32886	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7297).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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** urn:oid: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 urn:oid: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** urn:oid: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)** urn:oid: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 298: Vital Sign Result

Value Set: Vital Sign Result urn:oid:2.16.840.1.113883.3.88.12.80.62			
This identifies the vital sign result type.			
Value Set Source: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
8310-5	LOINC	urn:oid:2.16.840.1.113883.6.1	Body Temperature
8462-4	LOINC	urn:oid:2.16.840.1.113883.6.1	BP Diastolic
8480-6	LOINC	urn:oid:2.16.840.1.113883.6.1	BP Systolic
8287-5	LOINC	urn:oid:2.16.840.1.113883.6.1	Head Circumference
8867-4	LOINC	urn:oid:2.16.840.1.113883.6.1	Heart Rate
8302-2	LOINC	urn:oid:2.16.840.1.113883.6.1	Height
39156-5	LOINC	urn:oid:2.16.840.1.113883.6.1	BMI (Body Mass Index)
2710-2	LOINC	urn:oid:2.16.840.1.113883.6.1	O2 % BldC Oximetry
9279-1	LOINC	urn:oid:2.16.840.1.113883.6.1	Respiratory Rate
3141-9	LOINC	urn:oid:2.16.840.1.113883.6.1	Weight Measured
...			

Figure 142: 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>
```

3.70 *Vital Signs Organizer (V2)*

```
[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2014-06-09
(open)]
```

```
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```

Table 299: Vital Signs Organizer (V2) Contexts

Contained By:	Contains:
Vital Signs Section (entries optional) (V2) (optional) Vital Signs Section (entries required) (V2) (required)	Author Participation Vital Sign Observation (V2)

This template provides a mechanism for grouping vital signs (e.g., grouping systolic blood pressure and diastolic blood pressure).

Table 300: 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	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		1098-7280	urn:oid: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	urn:oid: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	urn:oid: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 urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7279).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid: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 urn:oid: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 urn:oid: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 143: 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)]
```

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Table 301: 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 302: 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	urn:oid: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	
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)** urn:oid: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, **MAY** contain zero or more [0..*] **id** (CONF:1098-31478).

ii. The representedOrganization, if present, **MAY** contain zero or more [0..*] **name** (CONF:1098-31479).

iii. The representedOrganization, if present, **MAY** contain zero or more [0..*] **telecom** (CONF:1098-31480).

iv. The representedOrganization, if present, **MAY** contain zero or more [0..*] **addr** (CONF:1098-31481).

Figure 144: 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 145: 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.FIELDED)

```
[addr: identifier urn:oid:2.16.840.1.113883.10.20.22.5.2 (open)]
```

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Table 303: US Realm Address (AD.US.FIELDED) 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 304: US Realm Address (AD.US.FIELDED) 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	urn:oid:2.16.840.1.113883.1.11.10637 (PostalAddressUse)
country	0..1	SHOULD		81-7295	urn:oid:2.16.840.1.113883.3.88.12.80.63 (Country)
state	0..1	SHOULD		81-7293	urn:oid:2.16.840.1.113883.3.88.12.80.1 (StateValueSet)
city	1..1	SHALL		81-7292	
postalCode	0..1	SHOULD		81-7294	urn:oid:2.16.840.1.113883.3.88.12.80.2 (PostalCode)
streetAddressLine	1..1	SHALL		81-7291	

1. **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet **PostalAddressUse** urn:oid: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** urn:oid: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** urn:oid: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** urn:oid: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 exactly one [1..1] **streetAddressLine** (CONF:81-7291).
7. **SHALL NOT** have mixed content except for white space (CONF:81-7296).

Table 305: PostalAddressUse

Value Set: PostalAddressUse urn:oid:2.16.840.1.113883.1.11.10637			
A value set of HL7 Codes for address use.			
Value Set Source: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
BAD	AddressUse	urn:oid:2.16.840.1.113883.5.1119	bad address
CONF	AddressUse	urn:oid:2.16.840.1.113883.5.1119	confidential
DIR	AddressUse	urn:oid:2.16.840.1.113883.5.1119	direct
H	AddressUse	urn:oid:2.16.840.1.113883.5.1119	home address
HP	AddressUse	urn:oid:2.16.840.1.113883.5.1119	primary home
HV	AddressUse	urn:oid:2.16.840.1.113883.5.1119	vacation home
PHYS	AddressUse	urn:oid:2.16.840.1.113883.5.1119	physical visit address
PST	AddressUse	urn:oid:2.16.840.1.113883.5.1119	postal address
PUB	AddressUse	urn:oid:2.16.840.1.113883.5.1119	public
TMP	AddressUse	urn:oid:2.16.840.1.113883.5.1119	temporary
…			

Table 306: StateValueSet

Value Set: StateValueSet urn:oid: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.census.gov/geo/reference/ansi_statetables.html**				

Code	Code System	Code System OID	Print Name
AL	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Alabama
AK	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Alaska
AZ	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Arizona
AR	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Arkansas
CA	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	California
CO	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Colorado
CT	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Connecticut
DE	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Delaware
DC	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	District of Columbia
FL	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Florida
...			

Figure 146: US Realm Address Example

```
<addr use="HP">
    <streetAddressLine>22 Sample Street</streetAddressLine>
    <city>Beaverton</city>
    <state>OR</state>
    <postalCode>97867</postalCode>
    <country>US</country>
</addr>
```

4.3 *US Realm Date and Time (DTM.US.FIELDED)*

```
[effectiveTime: identifier urn:oid:2.16.840.1.113883.10.20.22.5.4 (open)]
```

```
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```

Table 307: US Realm Date and Time (DTM.US.FIELDED) 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.FIELDED), but is used with elements having a datatype of TS.

Table 308: US Realm Date and Time (DTM.US.FIELDED) 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 147: 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.FIELDED)

```
[name: identifier urn:oid:2.16.840.1.113883.10.20.22.5.1 (open)]
```

```
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DSTU R1.1
```

Table 309: US Realm Patient Name (PTN.US.FIELDED) 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 310: US Realm Patient Name (PTN.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)					
@use	0..1	MAY		81-7154	urn:oid:2.16.840.1.113883.1.11.15913 (EntityNameUse)
family	1..1	SHALL	ST	81-7159	
@qualifier	0..1	MAY		81-7160	urn:oid:2.16.840.1.113883.11.20.9.26 (EntityPersonNamePartQualifier)
given	1..*	SHALL	ST	81-7157	
@qualifier	0..1	MAY		81-7158	urn:oid:2.16.840.1.113883.11.20.9.26 (EntityPersonNamePartQualifier)
prefix	0..*	MAY	ST	81-7155	
@qualifier	0..1	MAY		81-7156	urn:oid:2.16.840.1.113883.11.20.9.26 (EntityPersonNamePartQualifier)
suffix	0..1	MAY	ST	81-7161	
@qualifier	0..1	MAY		81-7162	urn:oid: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** urn:oid: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** urn:oid: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** urn:oid: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** urn:oid: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** urn:oid: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 311: EntityNameUse

Value Set: EntityNameUse urn:oid:2.16.840.1.113883.1.11.15913			
Value Set Source: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
A	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Artist/Stage
ABC	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Alphabetic
ASGN	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Assigned
C	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	License
I	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Indigenous/Tribal
IDE	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Ideographic
L	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Legal
P	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Pseudonym
PHON	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Phonetic
R	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Religious
...			

Table 312: EntityPersonNamePartQualifier

Value Set: EntityPersonNamePartQualifier urn:oid:2.16.840.1.113883.11.20.9.26			
Value Set Source: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
AC	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	academic
AD	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	adopted
BR	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	birth
CL	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	callme
IN	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	initial
NB	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	nobility
PR	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	professional
SP	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	spouse
TITLE	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	title
VV	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	voorvoegsel

Figure 148: 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)]

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```

Table 313: 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 314: 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 315: Template List

Template Title	Template Type	templateId
Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.34.1.4:2016-07-01
Inpatient Encounter (NHCS-IP) (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.34.1.2:2016-07-01
National Health Care Surveys (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.34.1.1:2015-04-01
Outpatient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.34.1.3:2016-07-01
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
Emergency Department Encounters Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.34.2.13:2016-07-01
Encounters Section (entries optional) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.22:2014-06-09
Immunizations Section	section	urn:oid:2.16.840.1.113883.10.20.34.2.7
Inpatient Encounters Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.34.2.12:2016-07-01
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
Outpatient Encounters Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.34.2.8:2016-07-01
Patient Information Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.34.2.5:2016-07-01
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
Problems Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.34.2.2:2016-07-01
Reasons for Visit Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.34.2.14:2016-07-01
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.

Template Title	Template Type	templateId
		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
Admission Diagnosis Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.34:2015-04-01
Admission Priority Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.35:2015-04-01
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
Asthma Diagnosis Observation (RETIRED)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.5:2016-07-01
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
Clinical Note and External Document Reference	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.44:2016-07-01
Co-morbid Condition Observation (RETIRED)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.4:2016-07-01
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 Emergency Department Visit (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.40:2016-07-01
Current Inpatient Visit	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.39:2015-04-01
Current Outpatient Visit (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.10:2016-07-01
Discharge Status Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.28
Drug Monitoring Act	entry	urn:oid:2.16.840.1.113883.10.20.2

Template Title	Template Type	templateId
		2.4.123
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 (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.32:2015-04-01
Estimated Date of Delivery	entry	urn:oid:2.16.840.1.113883.10.20.15.3.1
Follow-up Attempt Outcome Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.43:2015-04-01
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 (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.17:2015-04-01
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 Free Text Sig	entry	urn:oid:2.16.840.1.113883.10.20.22.4.147
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
New Patient Act	entry	urn:oid:2.16.840.1.113883.10.20.34.3.9
Number of Visits in the Last 12	entry	urn:oid:2.16.840.1.113883.10.20.3

Template Title	Template Type	templateId
Months		4.3.26
Observation Unit Stay Encounter	entry	urn:oid:2.16.840.1.113883.10.20.3 4.3.33
On Oxygen on Arrival Observation	entry	urn:oid:2.16.840.1.113883.10.20.3 4.3.29
Ordered Service Act	entry	urn:oid:2.16.840.1.113883.10.20.3 4.3.19
Ordered Service Observation	entry	urn:oid:2.16.840.1.113883.10.20.3 4.3.2
Ordered Service Procedure	entry	urn:oid:2.16.840.1.113883.10.20.3 4.3.11
Pain Assessment Scale Observation	entry	urn:oid:2.16.840.1.113883.10.20.3 4.3.22
Patient Residence Observation	entry	urn:oid:2.16.840.1.113883.10.20.3 4.3.25
Patient Seen in this ED in last 72 Hours and Discharged	entry	urn:oid:2.16.840.1.113883.10.20.3 4.3.31
Patient's Reason for Visit Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20. 34.3.41:2015-04-01
Planned Act (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20. 22.4.39:2014-06-09
Planned Coverage	entry	urn:oid:2.16.840.1.113883.10.20.2 2.4.129
Planned Immunization Activity	entry	urn:oid:2.16.840.1.113883.10.20.2 2.4.120
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
Point of Origin Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20. 34.3.36:2015-04-01
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:2.16.840.1.113883.10.20.1 5.3.8
Present on Admission Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20. 34.3.37:2015-04-01
Primary Diagnosis Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20. 34.3.6:2015-04-01
Priority Preference	entry	urn:oid:2.16.840.1.113883.10.20.2 2.4.143
Problem Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.

Template Title	Template Type	templateId
		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
Problem/Diagnosis/Symptom/Condition Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.1:2015-04-01
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
Procedure Follow-Up Attempt Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.42:2015-04-01
Product Instance	entry	urn:oid:2.16.840.1.113883.10.20.22.4.37
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
Specialty Unit Stay Encounter	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.38:2015-04-01
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:2.16.840.1.113883.10.20.3

Template Title	Template Type	templateId
		4.3.23
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.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
US Realm Date and Time (DTM.US.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.4
US Realm Patient Name (PTN.US.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1
US Realm Person Name (PN.US.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1.1

Table 316: Template Containments

Template Title	Template Type	templateId
Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.34.1.4:2016-07-01
Emergency Department Encounters Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.34.2.13:2016-07-01
Current Emergency Department Visit (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.40:2016-07-01
Clinical Note and External Document Reference	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.44:2016-07-01
Episode of Care Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.32:2015-04-01
Major Reason for Visit	entry	urn:oid:2.16.840.1.113883.10.20.34.3.7
Patient Seen in this ED in last 72 Hours and Discharged	entry	urn:oid:2.16.840.1.113883.10.20.34.3.31
Point of Origin Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.36:2015-04-01
Transport Mode to Hospital Observation	entry	urn:oid:2.16.840.1.113883.10.20.34.3.24
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:2.16.840.1.113883.10.20.22.4.4:2014-06-09
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
Observation Unit Stay Encounter	entry	urn:oid:2.16.840.1.113883.10.20.34.3.33

Template Title	Template Type	templateId
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.FIELDED)	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

Template Title	Template Type	templateId
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.FIELDED)	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.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Free Text Sig	entry	urn:oid:2.16.840.1.113883.10.20.22.4.147
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	entry	urn:hl7ii:2.16.840.1.113883.10.20.

Template Title	Template Type	templateId
(V2)		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.FIELDED)	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.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Free Text Sig	entry	urn:oid:2.16.840.1.113883.10.20.22.4.147
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	entry	urn:hl7ii:2.16.840.1.113883.10.20.

Template Title	Template Type	templateId
Medication Information (V2)		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.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1
Drug Vehicle	entry	urn:oid:2.16.840.1.113883.10.20.2

Template Title	Template Type	templateId
		2.4.24
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.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Free Text Sig	entry	urn:oid:2.16.840.1.113883.10.20.22.4.147
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:2.16.840.1.113883.10.20.2

Template Title	Template Type	templateId
		2.4.37
Service Delivery Location	entry	urn:oid:2.16.840.1.113883.10.20.2 2.4.32
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:2.16.840.1.113883.10.20.2 2.4.118
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:2.16.840.1.113883.10.20.2 2.4.119
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:2.16.840.1.113883.10.20.2 2.4.143
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.2 2.4.119
Patient Information Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20. 34.2.5:2016-07-01
Patient Residence Observation	entry	urn:oid:2.16.840.1.113883.10.20.3 4.3.25
Pregnancy Observation	entry	urn:oid:2.16.840.1.113883.10.20.1 5.3.8
Estimated Date of Delivery	entry	urn:oid:2.16.840.1.113883.10.20.1 5.3.1
Smoking Status - Meaningful Use (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20. 22.4.78:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.2 2.4.119
Tobacco Use (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20. 22.4.85:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.2 2.4.119
Payment Sources Section	section	urn:oid:2.16.840.1.113883.10.20.3 4.2.4
Planned Coverage	entry	urn:oid:2.16.840.1.113883.10.20.2 2.4.129
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.2 2.4.119
Problems Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.

Template Title	Template Type	templateId
		34.2.2:2016-07-01
Admission Diagnosis Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.34:2015-04-01
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
Injury or Poisoning Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.17:2015-04-01
Cause of Injury, Poisoning, or Adverse Effect	entry	urn:oid:2.16.840.1.113883.10.20.34.3.27
Present on Admission Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.37:2015-04-01
Primary Diagnosis Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.6:2015-04-01
Present on Admission Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.37:2015-04-01
Problem/Diagnosis/Symptom/ Condition Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.1:2015-04-01
Present on Admission Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.37:2015-04-01
Reasons for Visit Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.34.2.14:2016-07-01
Patient's Reason for Visit Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.41:2015-04-01
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:2.16.840.1.113883.10.20.3

Template Title	Template Type	templateId
		4.3.3
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
Inpatient Encounter (NHCS-IP) (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.34.1.2:2016-07-01
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	entry	urn:hl7ii:2.16.840.1.113883.10.20.

Template Title	Template Type	templateId
(V2)		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.FIELDED)	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.FIELDED)	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

Template Title	Template Type	templateId
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.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Free Text Sig	entry	urn:oid:2.16.840.1.113883.10.20.22.4.147
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.FIELDED)	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

Template Title	Template Type	templateId
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.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Free Text Sig	entry	urn:oid:2.16.840.1.113883.10.20.22.4.147
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

Template Title	Template Type	templateId
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
Inpatient Encounters Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.34.2.12:2016-07-01
Current Inpatient Visit	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.39:2015-04-01
Admission Priority Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.35:2015-04-01
Point of Origin Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.36:2015-04-01
Specialty Unit Stay Encounter	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.38:2015-04-01
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.FIELDED)	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

Template Title	Template Type	templateId
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.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Free Text Sig	entry	urn:oid:2.16.840.1.113883.10.20.22.4.147
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

Template Title	Template Type	templateId
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 (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.34.2.5:2016-07-01
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
Smoking Status - Meaningful Use (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
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
Problems Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.34.2.2:2016-07-01
Admission Diagnosis Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.34:2015-04-01
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
Injury or Poisoning Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.17:2015-04-01
Cause of Injury, Poisoning, or Adverse Effect	entry	urn:oid:2.16.840.1.113883.10.20.34.3.27
Present on Admission Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.37:2015-04-01

Template Title	Template Type	templateId
Primary Diagnosis Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.6:2015-04-01
Present on Admission Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.37:2015-04-01
Problem/Diagnosis/Symptom/ Condition Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.1:2015-04-01
Present on Admission Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.37:2015-04-01
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
National Health Care Surveys (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.34.1.1:2015-04-01
Outpatient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.34.1.3:2016-07-01

Template Title	Template Type	templateId
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.FIELDED)	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

Template Title	Template Type	templateId
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.FIELDED)	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.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Free Text Sig	entry	urn:oid:2.16.840.1.113883.10.20.22.4.147
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	entry	urn:hl7ii:2.16.840.1.113883.10.20.

Template Title	Template Type	templateId
(V2)		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.FIELDED)	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.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Free Text Sig	entry	urn:oid:2.16.840.1.113883.10.20.22.4.147
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	entry	urn:hl7ii:2.16.840.1.113883.10.20.

Template Title	Template Type	templateId
Medication Information (V2)		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.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1
Drug Vehicle	entry	urn:oid:2.16.840.1.113883.10.20.2

Template Title	Template Type	templateId
		2.4.24
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.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
Medication Free Text Sig	entry	urn:oid:2.16.840.1.113883.10.20.22.4.147
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:2.16.840.1.113883.10.20.2

Template Title	Template Type	templateId
		2.4.37
Service Delivery Location	entry	urn:oid:2.16.840.1.113883.10.20.2 2.4.32
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:2.16.840.1.113883.10.20.2 2.4.118
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:2.16.840.1.113883.10.20.2 2.4.119
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:2.16.840.1.113883.10.20.2 2.4.143
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.2 2.4.119
Outpatient Encounters Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20. 34.2.8:2016-07-01
Current Outpatient Visit (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20. 34.3.10:2016-07-01
Clinical Note and External Document Reference	entry	urn:hl7ii:2.16.840.1.113883.10.20. 34.3.44:2016-07-01
Episode of Care Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20. 34.3.32:2015-04-01
Major Reason for Visit	entry	urn:oid:2.16.840.1.113883.10.20.3 4.3.7
New Patient Act	entry	urn:oid:2.16.840.1.113883.10.20.3 4.3.9
Number of Visits in the Last 12 Months	entry	urn:oid:2.16.840.1.113883.10.20.3 4.3.26
Procedure Follow-Up Attempt Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20. 34.3.42:2015-04-01
Follow-up Attempt Outcome Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20. 34.3.43:2015-04-01
Patient Information Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20. 34.2.5:2016-07-01
Patient Residence Observation	entry	urn:oid:2.16.840.1.113883.10.20.3 4.3.25
Pregnancy Observation	entry	urn:oid:2.16.840.1.113883.10.20.1

Template Title	Template Type	templateId
		5.3.8
Estimated Date of Delivery	entry	urn:oid:2.16.840.1.113883.10.20.15.3.1
Smoking Status - Meaningful Use (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.22.4.119
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
Problems Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.34.2.2:2016-07-01
Admission Diagnosis Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.34:2015-04-01
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
Injury or Poisoning Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.17:2015-04-01
Cause of Injury, Poisoning, or Adverse Effect	entry	urn:oid:2.16.840.1.113883.10.20.34.3.27
Present on Admission Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.37:2015-04-01
Primary Diagnosis Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.6:2015-04-01
Present on Admission Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.37:2015-04-01
Problem/Diagnosis/Symptom/Condition Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.1:2015-04-01
Present on Admission Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.37:2015-04-01
Reasons for Visit Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.34.2.14:2016-07-01
Patient's Reason for Visit Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.41:2015-04-01
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.

Template Title	Template Type	templateId
		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.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
US Realm Date and Time (DTM.US.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.4
US Realm Person Name (PN.US.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1.1
Asthma Diagnosis Observation (RETIRED)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.5:2016-07-01
Co-morbid Condition Observation (RETIRED)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.4:2016-07-01

6   VALUE SETS IN THIS GUIDE

Table 317: Value Sets

Name	OID	URL
Act Priority	urn:oid:2.16.840.1.113883.1.11.16866	https://vsac.nlm.nih.gov/
ActStatus	urn:oid:2.16.840.1.113883.1.11.159331	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.1.11.15933
AdministrationUnitDoseForm	urn:oid:2.16.840.1.113762.1.4.1021.30	N/A
Administrative Gender (HL7 V3)	urn:oid:2.16.840.1.113883.1.11.1	https://vsac.nlm.nih.gov/
AgePQ_UCUM	urn:oid:2.16.840.1.113883.11.20.9.21	http://unitsofmeasure.org/ucum.html
Body Site	urn:oid:2.16.840.1.113883.3.88.12.3221.8.9	https://vsac.nlm.nih.gov/
Clinical Substance	urn:oid:2.16.840.1.113762.1.4.1010.2	https://vsac.nlm.nih.gov/
Condition Control (NCHS)	urn:oid:2.16.840.1.114222.4.11.7433	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7433
Country	urn:oid: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	urn:oid:2.16.840.1.113883.1.11.18877	https://vsac.nlm.nih.gov/
Current Smoking Status	urn:oid:2.16.840.1.113883.11.20.9.38	https://vsac.nlm.nih.gov/
CVX Vaccines Administered - Vaccine Set	urn:oid:2.16.840.1.113762.1.4.1010.6	http://www2a.cdc.gov/vaccines/iis/iisstandards/vaccines.asp?rpt=cvx
Detailed Ethnicity	urn:oid:2.16.840.1.114222.4.11.877	http://phinvads.cdc.gov/vads/ViewValueSet.action?id=34D34BBC-617F-DD11-B38D-00188B398520#
Discharge Disposition IP (NCHS)	urn:oid:2.16.840.1.114222.4.11.7360	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7360__
Disposition (NCHS)	urn:oid:2.16.840.1.114222.4.11.7436	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7436
Disposition ED (NCHS)	urn:oid:2.16.840.1.114222.4.11.7437	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7437
Disposition OPD (NCHS)	urn:oid:2.16.840.1.114222.4.11.7361	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7361

Name	OID	URL
EncounterTypeCode	urn:oid:2.16.840.1.113883.3.88.12.80.32	https://vsac.nlm.nih.gov/
EntityNameUse	urn:oid:2.16.840.1.113883.1.11.15913	https://vsac.nlm.nih.gov/
EntityPersonNamePartQualifier	urn:oid:2.16.840.1.113883.11.20.9.26	https://vsac.nlm.nih.gov/
Episode of Care (NCHS)	urn:oid:2.16.840.1.114222.4.11.7439	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7439
Ethnicity	urn:oid:2.16.840.1.114222.4.11.837	https://vsac.nlm.nih.gov/
Follow-up Attempt Outcome (NCHS)	urn:oid:2.16.840.1.114222.4.11.7362	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7362
Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.114222.4.11.1066	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.1066
HealthcareServiceLocation	urn:oid:2.16.840.1.113883.1.11.20275	https://vsac.nlm.nih.gov/
HL7 BasicConfidentialityKind	urn:oid:2.16.840.1.113883.1.11.16926	https://vsac.nlm.nih.gov/
HL7FinanciallyResponsiblePartyType	urn:oid:2.16.840.1.113883.1.11.10416	https://vsac.nlm.nih.gov/
Hospital Discharge Status (NCHS)	urn:oid:2.16.840.1.114222.4.11.7440	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7440
INDRoleclassCodes	urn:oid:2.16.840.1.113883.11.20.9.33	https://vsac.nlm.nih.gov/
Injury or Poisoning (NCHS)	urn:oid:2.16.840.1.114222.4.11.7403	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7403
Language	urn:oid:2.16.840.1.113883.1.11.11526	http://www.loc.gov/standards/iso639-2/php/code_list.php
LanguageAbilityMode	urn:oid:2.16.840.1.113883.1.11.12249	https://vsac.nlm.nih.gov/
LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.1.11.12199	https://vsac.nlm.nih.gov/
Major Reason for Visit (NCHS)	urn:oid:2.16.840.1.114222.4.11.7404	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7404
Marital Status	urn:oid:2.16.840.1.113883.1.11.12212	https://vsac.nlm.nih.gov/
Medication Clinical Drug	urn:oid:2.16.840.1.113762.1.4.1010.4	http://phinvads.cdc.gov/vads/ViewValueSet.action?id=239BEF3E-971C-DF11-B334-0015173D1785
Medication Fill Status	urn:oid:2.16.840.1.113883.3.88.12.80.64	https://vsac.nlm.nih.gov/

Name	OID	URL
Medication Route FDA	urn:oid:2.16.840.1.113883.3.88.12.3221.8.7	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.3221.8.7
MoodCodeEvnInt	urn:oid:2.16.840.1.113883.11.20.9.18	https://vsac.nlm.nih.gov/
No Immunization Reason Value Set	urn:oid:2.16.840.1.113883.1.11.19717	https://vsac.nlm.nih.gov/
NullValues_UNK_OTH	urn:oid:2.16.840.1.113883.10.20.5.9.1	N/A
Observation Interpretation (HL7)	urn:oid:2.16.840.1.113883.1.11.78	https://vsac.nlm.nih.gov/
ParticipationFunction	urn:oid:2.16.840.1.113883.1.11.10267	https://vsac.nlm.nih.gov/
Patient Education	urn:oid:2.16.840.1.113883.11.20.9.34	https://vsac.nlm.nih.gov/
Patient Residence (NCHS)	urn:oid:2.16.840.1.114222.4.11.7402	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7402
PatientLanguage	urn:oid:2.16.840.1.113883.11.20.9.64	http://www.loc.gov/standards/iso639-2/php/code_list.php
Payer	urn:oid:2.16.840.1.114222.4.11.3591	https://vsac.nlm.nih.gov/
Personal And Legal Relationship Role Type	urn:oid:2.16.840.1.113883.11.20.12.1	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.11.20.12.1
Planned moodCode (Act/Encounter/Procedure)	urn:oid:2.16.840.1.113883.11.20.9.23	https://vsac.nlm.nih.gov/
Planned moodCode (Observation)	urn:oid:2.16.840.1.113883.11.20.9.25	https://vsac.nlm.nih.gov/
Planned moodCode (SubstanceAdministration/Supply)	urn:oid:2.16.840.1.113883.11.20.9.24	https://vsac.nlm.nih.gov/
Point of Origin (NCHS)	urn:oid:2.16.840.1.114222.4.11.7359	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7359
PostalAddressUse	urn:oid:2.16.840.1.113883.1.11.10637	https://vsac.nlm.nih.gov/
PostalCode	urn:oid:2.16.840.1.113883.3.88.12.80.2	http://ushik.ahrq.gov/ViewItemDetails?system=mdr&itemKey=86671000
Priority (Type) of Admission or Visit (NCHS)	urn:oid:2.16.840.1.114222.4.11.7365	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7365
Priority Level	urn:oid:2.16.840.1.113883.11.20.9.60	https://vsac.nlm.nih.gov/
Problem	urn:oid:2.16.840.1.113883.3.88.12.3221.7.4	http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.3221.7.4
Problem Severity	urn:oid:2.16.840.1.113883.3.88.12	https://vsac.nlm.nih.gov/

Name	OID	URL
	.3221.6.8	
Problem Status	urn:oid:2.16.840.1.113883.3.88.12.80.68	https://vsac.nlm.nih.gov/
Problem Type	urn:oid:2.16.840.1.113883.3.88.12.3221.7.2	http://www.loinc.org
ProcedureAct statusCode	urn:oid:2.16.840.1.113883.11.20.9.22	https://vsac.nlm.nih.gov/
Provider ED (NCHS)	urn:oid:2.16.840.1.114222.4.11.7419	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7419
Race	urn:oid:2.16.840.1.113883.1.11.14914	https://vsac.nlm.nih.gov/
Race Category Excluding Nulls	urn:oid:2.16.840.1.113883.3.2074.1.1.3	https://vsac.nlm.nih.gov/
Religious Affiliation	urn:oid:2.16.840.1.113883.1.11.19185	https://vsac.nlm.nih.gov/
Residence and Accommodation Type	urn:oid:2.16.840.1.113883.11.20.9.49	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.11.20.9.49
Result Status	urn:oid:2.16.840.1.113883.11.20.9.39	https://vsac.nlm.nih.gov/
Specialty Unit Type (NCHS)	urn:oid:2.16.840.1.114222.4.11.7363	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7363
Specific Vaccine Clinical Drug	urn:oid:2.16.840.1.113762.1.4.1010.10	https://vsac.nlm.nih.gov/
StateValueSet	urn:oid:2.16.840.1.113883.3.88.12.80.1	http://www.census.gov/geo/reference/ansi_statetables.html
Telecom Use (US Realm Header)	urn:oid:2.16.840.1.113883.11.20.9.20	https://vsac.nlm.nih.gov/
Tobacco Use	urn:oid:2.16.840.1.113883.11.20.9.41	https://vsac.nlm.nih.gov/
Transport Mode to Hospital (NCHS)	urn:oid:2.16.840.1.114222.4.11.7277	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7277
Triage System (NCHS)	urn:oid:2.16.840.1.114222.4.11.7401	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7401
Type of clinic/location (NCHS)	urn:oid:2.16.840.1.114222.4.11.7364	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7364
UnitsOfMeasureCaseSensitive	urn:oid:2.16.840.1.113883.1.11.12839	http://unitsofmeasure.org/ucum.html
Vaccine Clinical Drug	urn:oid:2.16.840.1.113762.1.4.1010.8	https://vsac.nlm.nih.gov/
Vital Sign Result	urn:oid:2.16.840.1.113883.3.88.12.80.62	https://vsac.nlm.nih.gov/

Name	OID	URL
x_ServiceEventPerformer	urn:oid:2.16.840.1.113883.1.11.19601	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html

7 CODE SYSTEMS IN THIS GUIDE

Table 318: Code Systems

Name	OID
ActCode	urn:oid:2.16.840.1.113883.5.4
ActMood	urn:oid:2.16.840.1.113883.5.1001
ActPriority	urn:oid:2.16.840.1.113883.5.7
ActReason	urn:oid:2.16.840.1.113883.5.8
ActStatus	urn:oid:2.16.840.1.113883.5.14
AddressUse	urn:oid:2.16.840.1.113883.5.1119
AdministrativeGender	urn:oid:2.16.840.1.113883.5.1
CDC Vaccine Code (CVX)	urn:oid:2.16.840.1.113883.12.292
ConfidentialityCode	urn:oid:2.16.840.1.113883.5.25
Country	urn:oid:2.16.840.1.113883.3.88.12.80.63
CPT4	urn:oid:2.16.840.1.113883.6.12
EntityClass	urn:oid:2.16.840.1.113883.5.41
EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43
EntityNameUse	urn:oid:2.16.840.1.113883.5.45
FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92
Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101
HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83
HL7 Discharge disposition	urn:oid:2.16.840.1.113883.12.112
HL7 HealthcareServiceLocation	urn:oid:2.16.840.1.113883.6.259
HL7 Race	urn:oid:2.16.840.1.113883.5.104
HL7ActClass	urn:oid:2.16.840.1.113883.5.6
HL7ActRelationshipType	urn:oid:2.16.840.1.113883.5.1002
HL7NullFlavor	urn:oid:2.16.840.1.113883.5.1008
HL7ParticipationType	urn:oid:2.16.840.1.113883.5.90
ICD10	urn:oid:2.16.840.1.113883.6.3
ICD-10-CM	urn:oid:2.16.840.1.113883.6.90
Language	urn:oid:2.16.840.1.113883.6.121
LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60
LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.5.61
LOINC	urn:oid:2.16.840.1.113883.6.1
MaritalStatus	urn:oid:2.16.840.1.113883.5.2
NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1
participationFunction	urn:oid:2.16.840.1.113883.5.88
Participationsignature	urn:oid:2.16.840.1.113883.5.89
PHIN VADS code system	urn:oid:2.16.840.1.114222.4.5.274

Name	OID
Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238
ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076
RoleClass	urn:oid:2.16.840.1.113883.5.110
RoleCode	urn:oid:2.16.840.1.113883.5.111
RxNorm	urn:oid:2.16.840.1.113883.6.88
SNOMED CT	urn:oid:2.16.840.1.113883.6.96
Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.113883.3.221.5
UCUM	urn:oid:2.16.840.1.113883.6.8
Unique Ingredient Identifier (UNII)	urn:oid:2.16.840.1.113883.4.9
USPostalCodes	urn:oid:2.16.840.1.113883.6.231

8 CHANGES FROM PREVIOUS VERSION

8.1 Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3)

Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3)
(urn:hl7ii:2.16.840.1.113883.10.20.34.1.4:2016-07-01)

Change	Old	New
Name	Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V2)	Emergency Department Encounter (NHCS-ED, NHAMCS-ED) (V3)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.34.1.4:2015-04-01	urn:hl7ii:2.16.840.1.113883.10.20.34.1.4:2016-07-01
CONF #: 3256-571 Modified	SHALL contain exactly one [1..1] component (CONF:1184-571).	Heading: component SHALL contain exactly one [1..1] component (CONF:3256-571).
CONF #: 3256-572 Modified	Heading: structuredBody This component SHALL contain exactly one [1..1] structuredBody (CONF:1184-572).	This component SHALL contain exactly one [1..1] structuredBody (CONF:3256-572).
CONF #: 3256-667 Modified	MAY contain zero or more [0..*] documentationOf (CONF:1184-667).	Heading: documentationOf MAY contain zero or more [0..*] documentationOf (CONF:3256-667).
CONF #: 3256-668 Modified	Heading: serviceEvent The documentationOf, if present, SHALL contain exactly one [1..1] serviceEvent (CONF:1184-668).	The documentationOf, if present, SHALL contain exactly one [1..1] serviceEvent (CONF:3256-668).
CONF #: 3256-671 Modified	SHALL contain exactly one [1..1] componentOf (CONF:1184-671).	Heading: componentOf SHALL contain exactly one [1..1] componentOf (CONF:3256-671).
CONF #: 3256-672 Modified	Heading: encompassingEncounter See National Health Care Surveys template for other encompassingEncounter elements. This componentOf SHALL contain exactly one [1..1] encompassingEncounter (CONF:1184-672).	See National Health Care Surveys template for other encompassingEncounter elements. This componentOf SHALL contain exactly one [1..1] encompassingEncounter (CONF:3256-672).
CONF #: 3256-585 Modified	SHALL contain exactly one [1..1] Patient's Reasons for Visit Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.14:2015-04-01) (CONF:1184-585).	SHALL contain exactly one [1..1] Reasons for Visit Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.14:2016-07-01) (CONF:3256-585).
CONF #: 3256-586 Modified	SHALL contain exactly one [1..1] Problems Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.2:2015-04-01) (CONF:1184-586).	SHALL contain exactly one [1..1] Problems Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.2:2016-07-01) (CONF:3256-586).
CONF #: 3256-760 Modified	SHALL contain exactly one [1..1]	SHALL contain exactly one [1..1]

Change	Old	New
	Emergency Department Encounters Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.13:2015-04-01) (CONF:1184-760).	Emergency Department Encounters Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.13:2016-07-01) (CONF:3256-760).
CONF #: 3256-810 Modified	SHALL contain exactly one [1..1] Patient Information Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.5:2015-04-01) (CONF:1184-810).	SHALL contain exactly one [1..1] Patient Information Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.5:2016-07-01) (CONF:3256-810).
CONF #: 3256-866 Modified	SHALL contain exactly one [1..1] @extension="2015-04-01" (CONF:1184-866).	SHALL contain exactly one [1..1] @extension="2016-07-01" (CONF:3256-866).

8.2   Inpatient Encounter (NHCS-IP) (V3)

Inpatient Encounter (NHCS-IP) (V3) (urn:hl7ii:2.16.840.1.113883.10.20.34.1.2:2016-07-01)

Change	Old	New
Name	Inpatient Encounter (NHCS-IP) (V2)	Inpatient Encounter (NHCS-IP) (V3)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.34.1.2:2015-04-01	urn:hl7ii:2.16.840.1.113883.10.20.34.1.2:2016-07-01
CONF #: 3256-250 Modified	SHALL contain exactly one [1..1] componentOf (CONF:1184-250).	Heading: componentOf SHALL contain exactly one [1..1] componentOf (CONF:3256-250).
CONF #: 3256-251 Modified	Heading: encompassingEncounter See National Health Care Surveys template for other encompassingEncounter elements. This componentOf SHALL contain exactly one [1..1] encompassingEncounter (CONF:1184-251).	See National Health Care Surveys template for other encompassingEncounter elements. This componentOf SHALL contain exactly one [1..1] encompassingEncounter (CONF:3256-251).
CONF #: 3256-422 Modified	MAY contain zero or more [0..*] documentationOf (CONF:1184-422).	Heading: documentationOf MAY contain zero or more [0..*] documentationOf (CONF:3256-422).
CONF #: 3256-423 Modified	Heading: serviceEvent See National Health Care Surveys template for other serviceEvent elements. The documentationOf, if present, SHALL contain exactly one [1..1] serviceEvent (CONF:1184-423).	See National Health Care Surveys template for other serviceEvent elements. The documentationOf, if present, SHALL contain exactly one [1..1] serviceEvent (CONF:3256-423).
CONF #: 3256-247 Modified	SHALL contain exactly one [1..1] Patient Information Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.5:2015-04-01) (CONF:1184-247).	SHALL contain exactly one [1..1] Patient Information Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.5:2016-07-01) (CONF:3256-247).
CONF #: 3256-259 Modified	SHALL contain exactly one [1..1] Inpatient Encounters Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.12:2015-04-01) (CONF:1184-259).	SHALL contain exactly one [1..1] Inpatient Encounters Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.12:2016-07-01) (CONF:3256-259).
CONF #: 3256-261 Modified	SHALL contain exactly one [1..1] Problems Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.2:2015-04-01) (CONF:1184-261).	SHALL contain exactly one [1..1] Problems Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.2:2016-07-01) (CONF:3256-261).
CONF #: 3256-767 Modified	SHALL contain exactly one [1..1] @extension="2015-04-01" (CONF:1184-767).	SHALL contain exactly one [1..1] @extension="2016-07-01" (CONF:3256-767).

8.3 Outpatient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V3)

Outpatient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V3)
(urn:hl7ii:2.16.840.1.113883.10.20.34.1.3:2016-07-01)

Change	Old	New
Name	Outpatient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V2)	Outpatient Encounter (NHCS-OPD, NAMCS, NHAMCS-OPD) (V3)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.34.1.3:2015-04-01	urn:hl7ii:2.16.840.1.113883.10.20.34.1.3:2016-07-01
CONF #: 3256-284 Modified	SHALL contain exactly one [1..1] component (CONF:1184-284).	Heading: component SHALL contain exactly one [1..1] component (CONF:3256-284).
CONF #: 3256-285 Modified	Heading: structuredBody This component SHALL contain exactly one [1..1] structuredBody (CONF:1184-285).	This component SHALL contain exactly one [1..1] structuredBody (CONF:3256-285).
CONF #: 3256-455 Modified	MAY contain zero or more [0..*] documentationOf (CONF:1184-455).	Heading: documentationOf MAY contain zero or more [0..*] documentationOf (CONF:3256-455).
CONF #: 3256-456 Modified	Heading: serviceEvent See National Health Care Surveys template for other serviceEvent elements. The documentationOf, if present, SHALL contain exactly one [1..1] serviceEvent (CONF:1184-456).	See National Health Care Surveys template for other serviceEvent elements. The documentationOf, if present, SHALL contain exactly one [1..1] serviceEvent (CONF:3256-456).
CONF #: 3256-287 Modified	SHALL contain exactly one [1..1] Patient Information Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.5:2015-04-01) (CONF:1184-287).	SHALL contain exactly one [1..1] Patient Information Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.5:2016-07-01) (CONF:3256-287).
CONF #: 3256-293 Modified	SHALL contain exactly one [1..1] Patient's Reasons for Visit Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.14:2015-04-01) (CONF:1184-293).	SHALL contain exactly one [1..1] Reasons for Visit Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.14:2016-07-01) (CONF:3256-293).
CONF #: 3256-295 Modified	SHALL contain exactly one [1..1] Outpatient Encounters Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.8:2015-04-01) (CONF:1184-295).	SHALL contain exactly one [1..1] Outpatient Encounters Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.8:2016-07-01) (CONF:3256-295).
CONF #: 3256-297 Modified	SHALL contain exactly one [1..1] Problems Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.2:2015-04-01) (CONF:1184-297).	SHALL contain exactly one [1..1] Problems Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.2.2:2016-07-01) (CONF:3256-297).
CONF #: 3256-768 Modified	SHALL contain exactly one [1..1]	SHALL contain exactly one [1..1]

Change	Old	New
	@extension="2015-04-01" (CONF:1184-768).	@extension="2016-07-01" (CONF:3256-768).
CONF #: 3256-917 Modified	MAY contain zero or one [0..1] componentOf (CONF:1184-917).	Heading: componentOf MAY contain zero or one [0..1] componentOf (CONF:3256-917).
CONF #: 3256-918 Modified	Heading: encompassingEncounter The componentOf, if present, SHALL contain exactly one [1..1] encompassingEncounter (CONF:1184-918).	The componentOf, if present, SHALL contain exactly one [1..1] encompassingEncounter (CONF:3256-918).

8.4   *Asthma Diagnosis Observation (RETIRED)*

Asthma Diagnosis Observation (RETIRED)
(urn:hl7ii:2.16.840.1.113883.10.20.34.3.5:2016-07-01)

Change	Old	New
Name	Asthma Diagnosis Observation (V2)	Asthma Diagnosis Observation (RETIRED)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.34.3.5:2015-04-01	urn:hl7ii:2.16.840.1.113883.10.20.34.3.5:2016-07-01
Description	This template represents a diagnosis of Asthma.	This template represents a diagnosis of Asthma. Retired as per STU Comment: http://www.hl7.org/dstucomments/showdetail_comment.cfm?commentid=925 Asthma Diagnoses are now represented using the Problem/Diagnosis/Symptom/Condition Observation.
Implied Template	Diagnosis Observation (urn:oid:2.16.840.1.113883.10.20.34.3.1)	
CONF #: 1184-397 Removed	SHALL contain exactly one [1..1] Condition Control Observation (identifier: urn:oid:2.16.840.1.113883.10.20.34.3.21) (CONF:1184-397).	
CONF #: 1184-916 Removed	SHALL contain exactly one [1..1] Present on Admission Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.37:2015-04-01) (CONF:1184-916).	
CONF #: 1184-517 Removed	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:1184-517).	
CONF #: 1184-394 Removed	MAY contain zero or one [0..1] entryRelationship (CONF:1184-394) such that it	
CONF #: 1184-443 Removed	SHALL contain exactly one [1..1] templateId (CONF:1184-443) such that it	
CONF #: 1184-515 Removed	MAY contain zero or one [0..1] entryRelationship (CONF:1184-515) such that it	

Change	Old	New
CONF #: 1184-334 Removed	SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1184-334).	
CONF #: 1184-335 Removed	SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1184-335).	
CONF #: 1184-336 Removed	SHALL contain exactly one [1..1] value with @xsi:type="CD", where the code SHALL be selected from ValueSet Asthma (NCHS) urn:oid:2.16.840.1.114222.4.11.7432 DYNAMIC (CONF:1184-336).	
CONF #: 1184-395 Removed	SHALL contain exactly one [1..1] @typeCode="SUBJ" Subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1184-395).	
CONF #: 1184-396 Removed	SHALL contain exactly one [1..1] @inversionInd="true" True (CONF:1184-396).	
CONF #: 1184-444 Removed	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.34.3.5" (CONF:1184-444).	
CONF #: 1184-516 Removed	SHALL contain exactly one [1..1] @typeCode="SUBJ" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1184-516).	
CONF #: 1184-913 Removed	MAY contain zero or one [0..1] entryRelationship (CONF:1184-913) such that it	
CONF #: 1184-914 Removed	SHALL contain exactly one [1..1] @typeCode="SUBJ" Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1184-914).	
CONF #: 1184-915 Removed	SHALL contain exactly one [1..1] @inversionInd="true" (CONF:1184-915).	

8.5   Co-morbid Condition Observation (RETIRED)

Co-morbid Condition Observation (RETIRED)
(urn:hl7ii:2.16.840.1.113883.10.20.34.3.4:2016-07-01)

Change	Old	New
Name	Co-morbid Condition Observation (V2)	Co-morbid Condition Observation (RETIRED)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.34.3.4:2015-04-01	urn:hl7ii:2.16.840.1.113883.10.20.34.3.4:2016-07-01
Description	This template represents a co-morbid condition.	This template represents a co-morbid condition. Retired as per STU Comment: http://www.hl7.org/dstucomments/showdetail_comment.cfm?commentid=921 Co-morbid conditions are now represented using the Problem/Diagnosis/Symptom/Condition Observation.
Implied Template	Problem Observation (V2) (urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2014-06-09)	
CONF #: 1184-1090 Removed	The entryRelationship, if present, SHALL contain exactly one [1..1] Present on Admission Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.37:2015-04-01) (CONF:1184-1090).	
CONF #: 1184-328 Removed	SHALL contain exactly one [1..1] templateId (CONF:1184-328) such that it	
CONF #: 1184-402 Removed	SHALL contain exactly one [1..1] code (CONF:1184-402).	
CONF #: 1184-326 Removed	SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1184-326).	
CONF #: 1184-327 Removed	SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1184-327).	
CONF #: 1184-329 Removed	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.34.3.4" (CONF:1184-329).	
CONF #: 1184-403 Removed	This code SHALL contain exactly	

Change	Old	New
	one [1..1] @code="75618-9" Comorbid condition (CONF:1184-403).	
CONF #: 1184-404 Removed	This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CONF:1184-404).	
CONF #: 1184-330 Removed	SHALL contain exactly one [1..1] value, which SHALL be selected from ValueSet Problem urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 DYNAMIC (CONF:1184-330).	
CONF #: 1184-1087 Removed	MAY contain zero or one [0..1] entryRelationship (CONF:1184-1087).	
CONF #: 1184-1088 Removed	The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="SUBJ" Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1184-1088).	
CONF #: 1184-1089 Removed	The entryRelationship, if present, SHALL contain exactly one [1..1] @inversionInd="true" (CONF:1184-1089).	

8.6 *Current Emergency Department Visit (V2)*

Current Emergency Department Visit (V2)
(urn:hl7ii:2.16.840.1.113883.10.20.34.3.40:2016-07-01)

Change	Old	New
Name	Current Emergency Department Visit	Current Emergency Department Visit (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.34.3.40:2015-04-01	urn:hl7ii:2.16.840.1.113883.10.20.34.3.40:2016-07-01
Description	This template represents the patient's current emergency department visit. The major reason for this visit is represented by the Major Reason for this Visit template. To indicate whether this is an initial or follow-up visit use the Episode of Care template. The method of transport to the hospital is recorded in the Transport Mode to Hospital Observation. The point of origin of the patient is entered in the Point of Origin Observation template. The External Document Reference is used to record clinician notes (e.g., physicians', nurses', P.A.s', N.P.s' and C.N.M.s' notes).	This template represents the patient's current emergency department visit. The major reason for this visit is represented by the Major Reason for this Visit template. To indicate whether this is an initial or follow-up visit use the Episode of Care template. The method of transport to the hospital is recorded in the Transport Mode to Hospital Observation. The point of origin of the patient is entered in the Point of Origin Observation template. The Clinical Note and External Document Reference template is used to record clinician notes (e.g., physicians', nurses', P.A.s', N.P.s' and C.N.M.s' notes) such as Triage, Intake, History of Present Illness, Clinical Impression and Discharge.
CONF #: 3256-1011 Modified	SHALL contain exactly one [1..1] @extension="2015-04-01" (CONF:1184-1011).	SHALL contain exactly one [1..1] @extension="2016-07-01" (CONF:3256-1011).
CONF #: 3256-1157 Modified	The reference, if present, 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:1184-1157).	The reference, if present, SHALL contain exactly one [1..1] Clinical Note and External Document Reference (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.44:2016-07-01) (CONF:3256-1157).

8.7 Current Outpatient Visit (V3)

Current Outpatient Visit (V3) (urn:hl7ii:2.16.840.1.113883.10.20.34.3.10:2016-07-01)

Change	Old	New
Name	Current Outpatient Visit (V2)	Current Outpatient Visit (V3)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.34.3.10:2015-04-01	urn:hl7ii:2.16.840.1.113883.10.20.34.3.10:2016-07-01
Description	This template represents the patient's current outpatient 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. To indicate whether this is an initial or follow-up visit use the Episode of Care template. Information about follow-up after surgery is contained in the Procedure Follow-up Attempt Observation template.	This template represents the patient's current outpatient visit to the facility. If the current visit is the result of a referral, the referral document is referenced through the Clinical Note and 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. To indicate whether this is an initial or follow-up visit use the Episode of Care template. Information about follow-up after surgery is contained in the Procedure Follow-up Attempt Observation template.
CONF #: 3256-993 Modified	SHALL contain exactly one [1..1] @extension="2015-04-01" (CONF:1184-993).	SHALL contain exactly one [1..1] @extension="2016-07-01" (CONF:3256-993).
CONF #: 3256-1160 Modified	The reference, if present, 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:1184-1160).	The reference, if present, SHALL contain exactly one [1..1] Clinical Note and External Document Reference (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.44:2016-07-01) (CONF:3256-1160).

8.8 Emergency Department Encounters Section (V2)

Emergency Department Encounters Section (V2)
(urn:hl7ii:2.16.840.1.113883.10.20.34.2.13:2016-07-01)

Change	Old	New
Name	Emergency Department Encounters Section	Emergency Department Encounters Section (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.34.2.13:2015-04-01	urn:hl7ii:2.16.840.1.113883.10.20.34.2.13:2016-07-01
CONF #: 3256-1051 Modified	SHALL contain exactly one [1..1] Current Emergency Department Visit (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.40:2015-04-01) (CONF:1184-1051).	SHALL contain exactly one [1..1] Current Emergency Department Visit (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.40:2016-07-01) (CONF:3256-1051).
CONF #: 3256-1053 Modified	SHALL contain exactly one [1..1] @extension="2015-04-01" (CONF:1184-1053).	SHALL contain exactly one [1..1] @extension="2016-07-01" (CONF:3256-1053).

8.9 Inpatient Encounters Section (V2)

Inpatient Encounters Section (V2) (urn:hl7ii:2.16.840.1.113883.10.20.34.2.12:2016-07-01)

Change	Old	New
Name	Inpatient Encounters Section	Inpatient Encounters Section (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.34.2.12:2015-04-01	urn:hl7ii:2.16.840.1.113883.10.20.34.2.12:2016-07-01
CONF #: 3256-1047 Modified	SHALL contain exactly one [1..1] @extension="2015-04-01" (CONF:1184-1047).	SHALL contain exactly one [1..1] @extension="2016-07-01" (CONF:3256-1047).
CONF #: 3256-1064 Modified	MAY contain zero or one [0..1] entry (CONF:1184-1064) such that it	MAY contain zero or more [0..*] entry (CONF:3256-1064) such that it

8.10 Outpatient Encounters Section (V3)

Outpatient Encounters Section (V3) (urn:hl7ii:2.16.840.1.113883.10.20.34.2.8:2016-07-01)

Change	Old	New
Name	Outpatient Encounters Section (V2)	Outpatient Encounters Section (V3)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.34.2.8:2015-04-01	urn:hl7ii:2.16.840.1.113883.10.20.34.2.8:2016-07-01
CONF #: 3256-440 Modified	SHALL contain exactly one [1..1] Current Outpatient Visit (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.10:2015-04-01) (CONF:1184-440).	SHALL contain exactly one [1..1] Current Outpatient Visit (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.10:2016-07-01) (CONF:3256-440).
CONF #: 3256-1048 Modified	SHALL contain exactly one [1..1] @extension="2015-04-01" (CONF:1184-1048).	SHALL contain exactly one [1..1] @extension="2016-07-01" (CONF:3256-1048).

8.11 Patient Information Section (V3)

Patient Information Section (V3) (urn:hl7ii:2.16.840.1.113883.10.20.34.2.5:2016-07-01)

Change	Old	New
Name	Patient Information Section (V2)	Patient Information Section (V3)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.34.2.5:2015-04-01	urn:hl7ii:2.16.840.1.113883.10.20.34.2.5:2016-07-01
CONF #: 3256-205 Modified	MAY contain zero or one [0..1] entry (CONF:1184-205) such that it	MAY contain zero or more [0..*] entry (CONF:3256-205) such that it
CONF #: 3256-663 Modified	If the document is an Outpatient Encounter then this entry SHALL be present (CONF:1184-663).	If the document is an Outpatient Encounter then at least one of this entry SHALL be present (CONF:3256-663).
CONF #: 3256-1108 Modified	SHALL contain exactly one [1..1] @extension="2015-04-01" (CONF:1184-1108).	SHALL contain exactly one [1..1] @extension="2016-07-01" (CONF:3256-1108).

8.12 Problems Section (V3)

Problems Section (V3) (urn:hl7ii:2.16.840.1.113883.10.20.34.2.2:2016-07-01)

Change	Old	New
Name	Problems Section (V2)	Problems Section (V3)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.34.2.2:2015-04-01	urn:hl7ii:2.16.840.1.113883.10.20.34.2.2:2016-07-01
CONF #: 1184-337 Removed	SHOULD contain zero or more [0..*] entry (CONF:1184-337) such that it	
CONF #: 1184-346 Removed	MAY contain zero or one [0..1] entry (CONF:1184-346) such that it	
CONF #: 1184-338 Removed	SHALL contain exactly one [1..1] Co-morbid Condition Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.4:2015-04-01) (CONF:1184-338).	
CONF #: 1184-347 Removed	SHALL contain exactly one [1..1] Asthma Diagnosis Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.5:2015-04-01) (CONF:1184-347).	
CONF #: 3256-74 Modified	SHALL contain exactly one [1..1] entry (CONF:1184-74) such that it	If no other means of determination is possible, use first listed diagnosis as the primary diagnosis. SHALL contain exactly one [1..1] entry (CONF:3256-74) such that it
CONF #: 3256-1175 Modified	MAY contain zero or one [0..1] @extension (CONF:1184-1175).	MAY contain zero or one [0..1] @extension="2016-07-01" (CONF:3256-1175).

8.13 Reasons for Visit Section (V2)

Reasons for Visit Section (V2) (urn:hl7ii:2.16.840.1.113883.10.20.34.2.14:2016-07-01)

Change	Old	New
Name	Patient's Reasons for Visit Section	Reasons for Visit Section (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.34.2.14:2015-04-01	urn:hl7ii:2.16.840.1.113883.10.20.34.2.14:2016-07-01
Description	This section records the patient's reason for visit (the patient's own description).	This section records the patient's chief complaint (the NHCS calls this the "patient's reason for visit") in the patient's own words and/or the reason for the patient's visit in the provider's words. It can also contain a coded reason for visit in the contained Patient's Reason for Visit Observation.
Implied Template		Chief Complaint and Reason for Visit Section (urn:oid:2.16.840.1.113883.10.20.22.2.13)
CONF #: 1184-1067 Removed	SHALL contain exactly one [1..1] code (CONF:1184-1067).	
CONF #: 1184-1069 Removed	SHALL contain exactly one [1..1] title (CONF:1184-1069).	
CONF #: 1184-1070 Removed	SHALL contain exactly one [1..1] text (CONF:1184-1070).	
CONF #: 1184-1071 Removed	This code SHALL contain exactly one [1..1] @code=" 29298-7" Reason for Visit (CONF:1184-1071).	
CONF #: 1184-1072 Removed	This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1184-1072).	
CONF #: 3256-1161 Modified	MAY contain zero or one [0..1] @extension="2015-04-01" (CONF:1184-1161).	MAY contain zero or one [0..1] @extension="2016-07-01" (CONF:3256-1161).