



**HL7 Implementation Guide for CDA® Release 2:
Consolidated CDA Templates for Clinical Notes
(US Realm)
Draft Standard for Trial Use Release 2.1**

Draft Standard for Trial Use

August 2015

Volume 2 — Templates and Supporting Material

**Sponsored by:
Structured Documents Work Group
Patient Care Work Group
Child Health work Group**

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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)

Structure of This Guide

Two volumes comprise this *HL7 Implementation Guide for CDA® Release 2: Consolidated CDA Templates for Clinical Notes R2.1*. Volume 1 provides narrative introductory and background material pertinent to this implementation guide, including information on how to understand and use the templates in Volume 2. Volume 2 contains the normative Clinical Document Architecture (CDA) templates for this guide along with lists of all templates, code systems, value sets, and changes from the previous version.

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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)
- Header constraints (e.g., document type, template id, participants)
- Required and optional section-level templates

Table 1: Required and Optional Sections for Each Document Type

Document Type Preferred LOINC templateId	Required Sections	Optional Sections
Care Plan 56447-6 2.16.840.1.113883.10.20.22.1.15	Goals Section Health Concerns Section	Health Status Evaluations and Outcomes Section Interventions Section (V3)

Document Type Preferred LOINC templateId	Required Sections	Optional Sections
<p>Consultation Note (V3) 11488-4 2.16.840.1.113883.10.20.22.1.4:20 14-06-09</p>	<p>Assessment and Plan Section (V2) / Assessment Section / Plan of Treatment Section (V2) History of Past Illness Section (V3) Physical Exam Section (V3) Reason for Visit Section^{1 **}</p>	<p>Advance Directives Section (entries optional) (V3) Allergies and Intolerances Section (entries required) (V3) Chief Complaint and Reason for Visit Section** Chief Complaint Section** Family History Section (V3) Functional Status Section (V2) General Status Section History of Present Illness Section Immunizations Section (entries optional) (V3) Medical Equipment Section (V2) Medications Section (entries required) (V2) Mental Status Section (V2) Nutrition Section Problem Section (entries required) (V3) Procedures Section (entries optional) (V2) Results Section (entries required) (V3) Review of Systems Section Social History Section (V3) Vital Signs Section (entries required) (V3)</p>
<p>Continuity of Care Document (CCD) (V3) (Summarization of Episode Note) 34133-9 (required) 2.16.840.1.113883.10.20.22.1.2:20 14-06-09</p>	<p>Allergies and Intolerances Section (entries required) (V3) Medications Section (entries required) (V2) Problem Section (entries required) (V3) Procedures Section (entries required) (V2) Results Section (entries required) (V3) Social History Section (V3) Vital Signs Section (entries required) (V3)</p>	<p>Advance Directives Section (entries optional) (V3) Encounters Section (entries optional) (V3) Family History Section (V3) Functional Status Section (V2) Immunizations Section (entries required) (V3) Medical Equipment Section (V2) Mental Status Section (V2) Nutrition Section Payers Section (V3) Plan of Treatment Section (V2)</p>

¹ Either Reason for Referral or Reason for Visit must be present.

Document Type Preferred LOINC templateId	Required Sections	Optional Sections
Diagnostic Imaging Report (V3) 18748-4 2.16.840.1.113883.10.20.22.1.5:20 14-06-09	DICOM Object Catalog Section - DCM 121181 Findings Section (DIR)	Code Observations Fetus Subject Context Observer Context Physician of Record Participant (V2) Physician Reading Study Performer (V2) Procedure Context Quantity Measurement Observation SOP Instance Observation Text Observation
Discharge Summary (V3) (Discharge Summarization Note) 18842-5 2.16.840.1.113883.10.20.22.1.8:20 14-06-09	Allergies and Intolerances Section (entries optional) (V3) Hospital Course Section Discharge Diagnosis Section (V3) Discharge Medications Section (entries required) (V3) Plan of Treatment Section (V2)	Admission Diagnosis Section (V3) Admission Medications Section (entries optional) (V3) Chief Complaint and Reason for Visit Section** Chief Complaint Section** Discharge Diet Section (DEPRECATED) Discharge Medications Section (entries optional) (V3) Family History Section (V3) Functional Status Section (V2) History of Past Illness Section (V3) History of Present Illness Section Hospital Consultations Section Hospital Discharge Instructions Section Hospital Discharge Physical Section Hospital Discharge Studies Summary Section Immunizations Section (entries optional) (V3) Nutrition Section Problem Section (entries optional) (V3) Procedures Section (entries optional) (V2) Reason for Visit Section** Review of Systems Section Social History Section (V3) Vital Signs Section (entries optional) (V3)

Document Type Preferred LOINC templateId	Required Sections	Optional Sections
History and Physical (V3) 34117-2 2.16.840.1.113883.10.20.22.1.3:20 14-06-09	Allergies and Intolerances Section (entries optional) (V3) Assessment Section / Assessment and Plan Section (V2) / Plan of Treatment Section (V2)* Chief Complaint and Reason for Visit Section** Chief Complaint Section** Family History Section (V3) General Status Section History of Past Illness Section (V3) Medications Section (entries optional) (V2) Physical Exam Section (V3) Reason for Visit Section** Results Section (entries optional) (V3) Review of Systems Section Social History Section (V3) Vital Signs Section (entries optional) (V3)	Assessment and Plan Section (V2) Assessment Section History of Present Illness Section Immunizations Section (entries optional) (V3) Instructions Section (V2) Plan of Treatment Section (V2) Problem Section (entries optional) (V3) Procedures Section (entries optional) (V2)
Operative Note (V3) (Surgical Operation Note) 11504-8 2.16.840.1.113883.10.20.22.1.7:20 14-06-09	Anesthesia Section (V2) Complications Section (V3) Postoperative Diagnosis Section Preoperative Diagnosis Section (V2) Procedure Description Section Procedure Estimated Blood Loss Section Procedure Findings Section (V3) Procedure Specimens Taken Section	Operative Note Fluids Section Operative Note Surgical Procedure Section Plan of Treatment Section (V2) Planned Procedure Section (V2) Procedure Disposition Section Procedure Implants Section Procedure Indications Section (V2) Surgical Drains Section

Document Type Preferred LOINC templateId	Required Sections	Optional Sections
Procedure Note (V3) 28570-0 2.16.840.1.113883.10.20.22.1.6:20 14-06-09	Assessment Section/ Assessment and Plan Section (V2) /Plan of Treatment Section (V2)* Complications Section (V3) Procedure Description Section Postprocedure Diagnosis Section (V3) Procedure Indications Section (V2)	Allergies and Intolerances Section (entries optional) (V3) Anesthesia Section (V2) Assessment and Plan Section (V2) Assessment Section Chief Complaint and Reason for Visit Section Chief Complaint Section Family History Section (V3) History of Past Illness Section (V3) History of Present Illness Section Medical (General) History Section Medications Administered Section (V2) Medications Section (entries optional) (V2) Physical Exam Section (V3) Plan of Treatment Section (V2) Planned Procedure Section (V2) Procedure Disposition Section Procedure Estimated Blood Loss Section Procedure Findings Section (V3) Procedure Implants Section Procedure Specimens Taken Section Procedures Section (entries optional) (V2) Reason for Visit Section Review of Systems Section Social History Section (V3)

Document Type Preferred LOINC templateId	Required Sections	Optional Sections
<p>Progress Note (V3) (Subsequent Evaluation Note) 11506-3 2.16.840.1.113883.10.20.22.1.9:2014-06-09 (open)]</p>	<p>Assessment Section/Assessment and Plan Section (V2) /Plan of Treatment Section (V2)*</p>	<p>Allergies and Intolerances Section (entries optional) (V3) Assessment and Plan Section (V2) Assessment Section Chief Complaint Section Instructions Section (V2) Interventions Section (V3) Medications Section (entries optional) (V2) Nutrition Section Objective Section Physical Exam Section (V3) Plan of Treatment Section (V2) Problem Section (entries optional) (V3) Results Section (entries optional) (V3) Review of Systems Section Subjective Section Vital Signs Section (entries optional) (V3)</p>
<p>Referral Note (V2) 57133-1 2.16.840.1.113883.10.20.22.1.14</p>	<p>Allergies and Intolerances Section (entries required) (V2) Assessment Section/Assessment and Plan Section (V2) /Plan of Treatment Section (V2)* Medications Section (entries required) (V2) Problem Section (entries required) (V3) Reason for Referral Section (V2)</p>	<p>Advance Directives Section (entries optional) (V3) Assessment and Plan Section (V2) Assessment Section Family History Section (V3) Functional Status Section (V2) General Status Section History of Past Illness Section (V3) History of Present Illness Section Immunizations Section (entries required) (V3) Medical Equipment Section (V2) Mental Status Section (V2) Nutrition Section Physical Exam Section (V3) Plan of Treatment Section (V2) Procedures Section (entries optional) (V2) Results Section (entries required) (V3) Review of Systems Section Social History Section (V3) Vital Signs Section (entries required) (V3)</p>

Document Type Preferred LOINC templateId	Required Sections	Optional Sections
Transfer Summary (V2) 18761-7 2.16.840.1.113883.10.20.22.1.13	Allergies and Intolerances Section (entries required) (V3) Assessment Section/Assessment and Plan Section (V2) /Plan of Treatment Section (V2)* Medications Section (entries required) (V2) Problem Section (entries required) (V3) Reason for Referral Section (V2) Results Section (entries required) (V3) Vital Signs Section (entries required) (V3)	Admission Diagnosis Section (V3) Admission Medications Section (entries optional) (V3) Advance Directives Section (entries required) (V3) Course of Care Section Discharge Diagnosis Section (V3) Encounters Section (entries required) (V3) Family History Section (V3) Functional Status Section (V2) General Status Section History of Past Illness Section (V3) History of Present Illness Section Immunizations Section (entries optional) (V3) Medical Equipment Section (V2) Mental Status Section (V2) Nutrition Section Payers Section (V3) Physical Exam Section (V3) Procedures Section (entries required) (V2) Review of Systems Section Social History Section (V3)
Unstructured Document (V3) Non-preferred 2.16.840.1.113883.10.20.22.1.10:2014-06-09	N/A	N/A

* Wherever referenced, intent is that either “Assessment and Plan” is present or both “Assessment” and “Plan of Care”. Only these combinations should be used.

** Wherever referenced, intent is that either Chief Complaint/Reason for Visit Section is present or Chief Complaint Section and/or Reason for Visit unique Sections should be present.

1.1 US Realm Header (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01 (open)]

Table 2: US Realm Header (V3) Contexts

Contained By:	Contains:
	US Realm Address (AD.US.FIELDDED) US Realm Date and Time (DTM.US.FIELDDED)

Contained By:	Contains:
	US Realm Person Name (PN.US.FIELDDED)

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 3: US Realm Header (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01)					
realmCode	1..1	SHALL		1198-16791	US
typeId	1..1	SHALL		1198-5361	
@root	1..1	SHALL		1198-5250	2.16.840.1.113883.1.3
@extension	1..1	SHALL		1198-5251	POCD_HD000040
templateId	1..1	SHALL		1198-5252	
@root	1..1	SHALL		1198-10036	2.16.840.1.113883.10.20.22.1.1
@extension	1..1	SHALL		1198-32503	2015-08-01
id	1..1	SHALL		1198-5363	
code	1..1	SHALL		1198-5253	
title	1..1	SHALL		1198-5254	
effectiveTime	1..1	SHALL		1198-5256	US Realm Date and Time (DTM.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4)
confidentialityCode	1..1	SHALL		1198-5259	urn:oid:2.16.840.1.113883.1.11.16926 (HL7 BasicConfidentialityKind)
languageCode	1..1	SHALL		1198-5372	urn:oid:2.16.840.1.113883.1.11.11526 (Language)
setId	0..1	MAY		1198-5261	
versionNumber	0..1	MAY		1198-5264	
recordTarget	1..*	SHALL		1198-5266	
patientRole	1..1	SHALL		1198-5267	
id	1..*	SHALL		1198-5268	
addr	1..*	SHALL		1198-5271	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)

telecom	1..*	SHALL		1198-5280	
@use	0..1	SHOULD		1198-5375	urn:oid:2.16.840.1.113883.1.1.20.9.20 (Telecom Use (US Realm Header))
patient	1..1	SHALL		1198-5283	
name	1..*	SHALL		1198-5284	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
administrativeGenderCode	1..1	SHALL		1198-6394	urn:oid:2.16.840.1.113883.1.11.1 (Administrative Gender (HL7 V3))
birthTime	1..1	SHALL		1198-5298	
maritalStatusCode	0..1	SHOULD		1198-5303	urn:oid:2.16.840.1.113883.1.11.1.2212 (Marital Status)
religiousAffiliationCode	0..1	MAY		1198-5317	urn:oid:2.16.840.1.113883.1.11.1.9185 (Religious Affiliation)
raceCode	1..1	SHALL		1198-5322	urn:oid:2.16.840.1.113883.3.2074.1.1.3 (Race Category Excluding Nulls)
sdtc:raceCode	0..*	MAY		1198-7263	urn:oid:2.16.840.1.113883.1.11.1.4914 (Race)
ethnicGroupCode	1..1	SHALL		1198-5323	urn:oid:2.16.840.1.114222.4.11.837 (Ethnicity)
sdtc:ethnicGroupCode	0..*	MAY		1198-32901	urn:oid:2.16.840.1.114222.4.11.877 (Detailed Ethnicity)
guardian	0..*	MAY		1198-5325	
code	0..1	SHOULD		1198-5326	urn:oid:2.16.840.1.113883.1.1.20.12.1 (Personal And Legal Relationship Role Type)
addr	0..*	SHOULD		1198-5359	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	0..*	SHOULD		1198-5382	
@use	0..1	SHOULD		1198-7993	urn:oid:2.16.840.1.113883.1.1.20.9.20 (Telecom Use (US Realm Header))
guardianPerson	1..1	SHALL		1198-5385	
name	1..*	SHALL		1198-5386	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
birthplace	0..1	MAY		1198-	

				5395	
place	1..1	SHALL		1198-5396	
addr	1..1	SHALL		1198-5397	
country	0..1	SHOULD		1198-5404	urn:oid:2.16.840.1.113883.3.88.12.80.63 (Country)
postalCode	0..1	MAY		1198-5403	urn:oid:2.16.840.1.113883.3.88.12.80.2 (PostalCode)
languageCommunication	0..*	SHOULD		1198-5406	
languageCode	1..1	SHALL		1198-5407	urn:oid:2.16.840.1.113883.1.11.11526 (Language)
modeCode	0..1	MAY		1198-5409	urn:oid:2.16.840.1.113883.1.11.12249 (LanguageAbilityMode)
proficiencyLevelCode	0..1	SHOULD		1198-9965	urn:oid:2.16.840.1.113883.1.11.12199 (LanguageAbilityProficiency)
preferenceInd	0..1	SHOULD		1198-5414	
providerOrganization	0..1	MAY		1198-5416	
id	1..*	SHALL		1198-5417	
@root	0..1	SHOULD		1198-16820	2.16.840.1.113883.4.6
name	1..*	SHALL		1198-5419	
telecom	1..*	SHALL		1198-5420	
@use	0..1	SHOULD		1198-7994	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
addr	1..*	SHALL		1198-5422	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
author	1..*	SHALL		1198-5444	
time	1..1	SHALL		1198-5445	US Realm Date and Time (DTM.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4)
assignedAuthor	1..1	SHALL		1198-5448	
id	1..*	SHALL		1198-5449	
id	0..1	SHOULD		1198-32882	

@nullFlavor	0..1	MAY		1198-32883	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = UNK
@root	1..1	SHALL		1198-32884	2.16.840.1.113883.4.6
@extension	0..1	SHOULD		1198-32885	
code	0..1	SHOULD		1198-16787	
@code	1..1	SHALL		1198-16788	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1198-5452	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	1..*	SHALL		1198-5428	
@use	0..1	SHOULD		1198-7995	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
assignedPerson	0..1	SHOULD		1198-5430	
name	1..*	SHALL		1198-16789	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
assignedAuthoringDevice	0..1	SHOULD		1198-16783	
manufacturerModelName	1..1	SHALL		1198-16784	
softwareName	1..1	SHALL		1198-16785	
dataEnterer	0..1	MAY		1198-5441	
assignedEntity	1..1	SHALL		1198-5442	
id	1..*	SHALL		1198-5443	
@root	0..1	SHOULD		1198-16821	2.16.840.1.113883.4.6
code	0..1	MAY		1198-32173	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1198-5460	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	1..*	SHALL		1198-5466	

@use	0..1	SHOULD		1198-7996	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
assignedPerson	1..1	SHALL		1198-5469	
name	1..*	SHALL		1198-5470	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
informant	0..*	MAY		1198-8001	
assignedEntity	1..1	SHALL		1198-8002	
id	1..*	SHALL		1198-9945	
code	0..1	MAY		1198-32174	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1198-8220	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
assignedPerson	1..1	SHALL		1198-8221	
name	1..*	SHALL		1198-8222	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
informant	0..*	MAY		1198-31355	
relatedEntity	1..1	SHALL		1198-31356	
custodian	1..1	SHALL		1198-5519	
assignedCustodian	1..1	SHALL		1198-5520	
representedCustodianOrganization	1..1	SHALL		1198-5521	
id	1..*	SHALL		1198-5522	
@root	0..1	SHOULD		1198-16822	2.16.840.1.113883.4.6
name	1..1	SHALL		1198-5524	
telecom	1..1	SHALL		1198-5525	
@use	0..1	SHOULD		1198-7998	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))

addr	1..1	SHALL		1198-5559	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
informationRecipient	0..*	MAY		1198-5565	
intendedRecipient	1..1	SHALL		1198-5566	
id	0..*	MAY		1198-32399	
informationRecipient	0..1	MAY		1198-5567	
name	1..*	SHALL		1198-5568	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
receivedOrganization	0..1	MAY		1198-5577	
name	1..1	SHALL		1198-5578	
legalAuthenticator	0..1	SHOULD		1198-5579	
time	1..1	SHALL		1198-5580	US Realm Date and Time (DTM.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4)
signatureCode	1..1	SHALL		1198-5583	
@code	1..1	SHALL		1198-5584	urn:oid:2.16.840.1.113883.5.89 (Participationsignature) = S
sdtc:signatureText	0..1	MAY		1198-30810	
assignedEntity	1..1	SHALL		1198-5585	
id	1..*	SHALL		1198-5586	
@root	0..1	MAY		1198-16823	2.16.840.1.113883.4.6
code	0..1	MAY		1198-17000	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1198-5589	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	1..*	SHALL		1198-5595	
@use	0..1	SHOULD		1198-7999	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm

					Header))
assignedPerson	1..1	SHALL		1198-5597	
name	1..*	SHALL		1198-5598	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
authenticator	0..*	MAY		1198-5607	
time	1..1	SHALL		1198-5608	US Realm Date and Time (DTM.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4)
signatureCode	1..1	SHALL		1198-5610	
@code	1..1	SHALL		1198-5611	urn:oid:2.16.840.1.113883.5.89 (Participationsignature) = S
sdtc:signatureText	0..1	MAY		1198-30811	
assignedEntity	1..1	SHALL		1198-5612	
id	1..*	SHALL		1198-5613	
@root	0..1	SHOULD		1198-16824	2.16.840.1.113883.4.6
code	0..1	MAY		1198-16825	
@code	0..1	MAY		1198-16826	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1198-5616	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	1..*	SHALL		1198-5622	
@use	0..1	SHOULD		1198-8000	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
assignedPerson	1..1	SHALL		1198-5624	
name	1..*	SHALL		1198-5625	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
participant	0..*	MAY		1198-10003	
time	0..1	MAY		1198-10004	

inFulfillmentOf	0..*	MAY		1198-9952	
order	1..1	SHALL		1198-9953	
id	1..*	SHALL		1198-9954	
documentationOf	0..*	MAY		1198-14835	
serviceEvent	1..1	SHALL		1198-14836	
effectiveTime	1..1	SHALL		1198-14837	
low	1..1	SHALL		1198-14838	
performer	0..*	SHOULD		1198-14839	
@typeCode	1..1	SHALL		1198-14840	urn:oid:2.16.840.1.113883.1.11.19601 (x_ServiceEventPerformer)
functionCode	0..1	MAY		1198-16818	
@code	0..1	SHOULD		1198-32889	urn:oid:2.16.840.1.113883.1.11.10267 (ParticipationFunction)
assignedEntity	1..1	SHALL		1198-14841	
id	1..*	SHALL		1198-14846	
@root	0..1	SHOULD		1198-14847	2.16.840.1.113883.4.6
code	0..1	SHOULD		1198-14842	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
authorization	0..*	MAY		1198-16792	
consent	1..1	SHALL		1198-16793	
id	0..*	MAY		1198-16794	
code	0..1	MAY		1198-16795	
statusCode	1..1	SHALL		1198-16797	
@code	1..1	SHALL		1198-16798	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = completed
componentOf	0..1	MAY		1198-9955	
encompassingEncounter	1..1	SHALL		1198-9956	

id	1..*	SHALL		1198-9959	
effectiveTime	1..1	SHALL		1198-9958	

1.1.1 Properties

1.1.1.1 realmCode

1. **SHALL** contain exactly one [1..1] **realmCode**="US" (CONF:1198-16791).
2. **SHALL** contain exactly one [1..1] **typeId** (CONF:1198-5361).
 - a. This typeId **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.1.3" (CONF:1198-5250).
 - b. This typeId **SHALL** contain exactly one [1..1] **@extension**="POCD_HD000040" (CONF:1198-5251).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-5252) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.1" (CONF:1198-10036).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32503).
 - c. When asserting this templateId, all document, section, and entry templates **SHALL** include a templateId root without an extension. See C-CDA R2.1 Volume 1 - Design Considerations for additional detail (CONF:1198-32936).
4. **SHALL** contain exactly one [1..1] **id** (CONF:1198-5363).
 - a. This id **SHALL** be a globally unique identifier for the document (CONF:1198-9991).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1198-5253).
 - a. This code **SHALL** specify the particular kind of document (e.g., History and Physical, Discharge Summary, Progress Note) (CONF:1198-9992).
6. **SHALL** contain exactly one [1..1] **title** (CONF:1198-5254).
Note: The title can either be a locally defined name or the displayName corresponding to clinicalDocument/code
7. **SHALL** contain exactly one [1..1] [US Realm Date and Time \(DTM.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:1198-5256).
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** (CONF:1198-5259).
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:1198-5372).
10. **MAY** contain zero or one [0..1] **setId** (CONF:1198-5261).
 - a. If setId is present versionNumber **SHALL** be present (CONF:1198-6380).
11. **MAY** contain zero or one [0..1] **versionNumber** (CONF:1198-5264).
 - a. If versionNumber is present setId **SHALL** be present (CONF:1198-6387).

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:1198-5266).
 - a. Such recordTargets **SHALL** contain exactly one [1..1] **patientRole** (CONF:1198-5267).
 - i. This patientRole **SHALL** contain at least one [1..*] **id** (CONF:1198-5268).
 - ii. This patientRole **SHALL** contain at least one [1..*] **US Realm Address (AD.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5271).
 - iii. This patientRole **SHALL** contain at least one [1..*] **telecom** (CONF:1198-5280).
 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:1198-5375)).
 - iv. This patientRole **SHALL** contain exactly one [1..1] **patient** (CONF:1198-5283).
 1. This patient **SHALL** contain at least one [1..*] **US Realm Person Name (PN.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-5284).
 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:1198-6394)).
 3. This patient **SHALL** contain exactly one [1..1] **birthTime** (CONF:1198-5298).
 - a. **SHALL** be precise to year (CONF:1198-5299).
 - b. **SHOULD** be precise to day (CONF:1198-5300).

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

- c. **MAY** be precise to the minute (CONF:1198-32418).
 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:1198-5303)).
 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:1198-5317)).
 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:1198-5322).

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:1198-7263).

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:1198-31347).

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:1198-5323).

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:1198-32901).

10. This patient **MAY** contain zero or more [0..*] **guardian** (CONF:1198-5325).

- 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:1198-5326).

- b. The guardian, if present, **SHOULD** contain zero or more [0..*] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5359).

- c. The guardian, if present, **SHOULD** contain zero or more [0..*] **telecom** (CONF:1198-5382).

- 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:1198-7993).

- d. The guardian, if present, **SHALL** contain exactly one [1..1] **guardianPerson** (CONF:1198-5385).

- i. This guardianPerson **SHALL** contain at least one [1..*] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier:

urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
(CONF:1198-5386).

11. This patient **MAY** contain zero or one [0..1] **birthplace** (CONF:1198-5395).

a. The birthplace, if present, **SHALL** contain exactly one [1..1] **place** (CONF:1198-5396).

i. This place **SHALL** contain exactly one [1..1] **addr** (CONF:1198-5397).

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:1198-5404).

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:1198-5403).

3. If country is US, this addr **SHALL** contain exactly one [1..1] **state**, which **SHALL** be selected from ValueSet [StateValueSet 2.16.840.1.113883.3.88.12.80.1](#) **DYNAMIC** (CONF:1198-5402).

Note: A nullFlavor of ' UNK' may be used if the state is unknown.

12. This patient **SHOULD** contain zero or more [0..*] **languageCommunication** (CONF:1198-5406).

a. The languageCommunication, if present, **SHALL** contain exactly one [1..1] **languageCode**, which **SHALL** be selected from ValueSet [Language](#) urn:oid:2.16.840.1.113883.1.11.11526 **DYNAMIC** (CONF:1198-5407).

b. The languageCommunication, if present, **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:1198-5409).

c. The languageCommunication, if present, **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:1198-9965).

d. The languageCommunication, if present, **SHOULD** contain zero or one [0..1] **preferenceInd** (CONF:1198-5414).

v. This patientRole **MAY** contain zero or one [0..1] **providerOrganization** (CONF:1198-5416).

1. The providerOrganization, if present, **SHALL** contain at least one [1..*] **id** (CONF:1198-5417).

- a. Such ids **SHOULD** contain zero or one [0..1] `@root="2.16.840.1.113883.4.6"` National Provider Identifier (CONF:1198-16820).
2. The providerOrganization, if present, **SHALL** contain at least one [1..*] `name` (CONF:1198-5419).
3. The providerOrganization, if present, **SHALL** contain at least one [1..*] `telecom` (CONF:1198-5420).
 - 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:1198-7994).
4. The providerOrganization, if present, **SHALL** contain at least one [1..*] [US Realm Address \(AD.US.FIELDDED\)](#) (`identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2`) (CONF:1198-5422).

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:1198-5444).
 - a. Such authors **SHALL** contain exactly one [1..1] [US Realm Date and Time \(DTM.US.FIELDDED\)](#) (`identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4`) (CONF:1198-5445).
 - b. Such authors **SHALL** contain exactly one [1..1] `assignedAuthor` (CONF:1198-5448).
 - i. This `assignedAuthor` **SHALL** contain at least one [1..*] `id` (CONF:1198-5449).

If this `assignedAuthor` is an `assignedPerson`

- ii. This `assignedAuthor` **SHOULD** contain zero or one [0..1] `id` (CONF:1198-32882) 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:1198-32883).
2. **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.4.6"` National Provider Identifier (CONF:1198-32884).
3. **SHOULD** contain zero or one [0..1] `@extension` (CONF:1198-32885).

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:1198-16787).
 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:1198-16788).

- iv. This assignedAuthor **SHALL** contain at least one [1..*] US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5452).
- v. This assignedAuthor **SHALL** contain at least one [1..*] **telecom** (CONF:1198-5428).
 - 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:1198-7995).
- vi. This assignedAuthor **SHOULD** contain zero or one [0..1] **assignedPerson** (CONF:1198-5430).
 - 1. The assignedPerson, if present, **SHALL** contain at least one [1..*] US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-16789).
- vii. This assignedAuthor **SHOULD** contain zero or one [0..1] **assignedAuthoringDevice** (CONF:1198-16783).
 - 1. The assignedAuthoringDevice, if present, **SHALL** contain exactly one [1..1] **manufacturerModelName** (CONF:1198-16784).
 - 2. The assignedAuthoringDevice, if present, **SHALL** contain exactly one [1..1] **softwareName** (CONF:1198-16785).
- viii. There **SHALL** be exactly one assignedAuthor/assignedPerson or exactly one assignedAuthor/assignedAuthoringDevice (CONF:1198-16790).

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:1198-5441).
 - a. The dataEnterer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-5442).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-5443).
 - 1. Such ids **SHOULD** contain zero or one [0..1] @root="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1198-16821).
 - 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:1198-32173).
 - iii. This assignedEntity **SHALL** contain at least one [1..*] US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5460).
 - iv. This assignedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1198-5466).

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:1198-7996).
- v. This assignedEntity **SHALL** contain exactly one [1..1] assignedPerson (CONF:1198-5469).
 1. This assignedPerson **SHALL** contain at least one [1..*] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-5470).

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:1198-8001) such that it
 - a. **SHALL** contain exactly one [1..1] assignedEntity (CONF:1198-8002).
 - i. This assignedEntity **SHALL** contain at least one [1..*] id (CONF:1198-9945).
 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:1198-9946).
 - 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:1198-32174).
 - iii. This assignedEntity **SHALL** contain at least one [1..*] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-8220).
 - iv. This assignedEntity **SHALL** contain exactly one [1..1] assignedPerson (CONF:1198-8221).
 1. This assignedPerson **SHALL** contain at least one [1..*] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-8222).

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:1198-31355) such that it
 - a. **SHALL** contain exactly one [1..1] relatedEntity (CONF:1198-31356).

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:1198-5519).

- a. This custodian **SHALL** contain exactly one [1..1] **assignedCustodian** (CONF:1198-5520).
 - i. This assignedCustodian **SHALL** contain exactly one [1..1] **representedCustodianOrganization** (CONF:1198-5521).
 1. This representedCustodianOrganization **SHALL** contain at least one [1..*] **id** (CONF:1198-5522).
 - a. Such ids **SHOULD** contain zero or one [0..1] **@root="2.16.840.1.113883.4.6" National Provider Identifier** (CONF:1198-16822).
 2. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **name** (CONF:1198-5524).
 3. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **telecom** (CONF:1198-5525).
 - 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:1198-7998).
 4. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **US Realm Address (AD.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5559).

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:1198-5565).

- a. The informationRecipient, if present, **SHALL** contain exactly one [1..1] **intendedRecipient** (CONF:1198-5566).
 - i. This intendedRecipient **MAY** contain zero or more [0..*] **id** (CONF:1198-32399).
 - ii. This intendedRecipient **MAY** contain zero or one [0..1] **informationRecipient** (CONF:1198-5567).
 1. The informationRecipient, if present, **SHALL** contain at least one [1..*] **US Realm Person Name (PN.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-5568).

- iii. This intendedRecipient **MAY** contain zero or one [0..1] **receivedOrganization** (CONF:1198-5577).
 - 1. The receivedOrganization, if present, **SHALL** contain exactly one [1..1] **name** (CONF:1198-5578).

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:1198-5579).

- a. The legalAuthenticator, if present, **SHALL** contain exactly one [1..1] **US Realm Date and Time (DTM.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:1198-5580).
- b. The legalAuthenticator, if present, **SHALL** contain exactly one [1..1] **signatureCode** (CONF:1198-5583).
 - i. This signatureCode **SHALL** contain exactly one [1..1] **@code="S"** (CodeSystem: Participationsignature urn:oid:2.16.840.1.113883.5.89 **STATIC**) (CONF:1198-5584).

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:1198-30810).

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.

- d. The legalAuthenticator, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-5585).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-5586).
 - 1. Such ids **MAY** contain zero or one [0..1]
 - @root="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1198-16823).
 - 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:1198-17000).
 - iii. This assignedEntity **SHALL** contain at least one [1..*] US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5589).
 - iv. This assignedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1198-5595).
 - 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:1198-7999).
 - v. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:1198-5597).
 - 1. This assignedPerson **SHALL** contain at least one [1..*] US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-5598).

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:1198-5607) such that it
 - a. **SHALL** contain exactly one [1..1] US Realm Date and Time (DTM.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:1198-5608).
 - b. **SHALL** contain exactly one [1..1] **signatureCode** (CONF:1198-5610).
 - i. This signatureCode **SHALL** contain exactly one [1..1] **@code="S"** (CodeSystem: Participationsignature urn:oid:2.16.840.1.113883.5.89 **STATIC**) (CONF:1198-5611).

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:1198-30811).
 - 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:1198-5612).
 - i. This **assignedEntity** **SHALL** contain at least one [1..*] **id** (CONF:1198-5613).
 - 1. Such **ids** **SHOULD** contain zero or one [0..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1198-16824).
 - ii. This **assignedEntity** **MAY** contain zero or one [0..1] **code** (CONF:1198-16825).
 - 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:1198-16826).
 - iii. This **assignedEntity** **SHALL** contain at least one [1..*] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5616).
 - iv. This **assignedEntity** **SHALL** contain at least one [1..*] **telecom** (CONF:1198-5622).
 - 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:1198-8000).
 - v. This **assignedEntity** **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:1198-5624).
 - 1. This **assignedPerson** **SHALL** contain at least one [1..*] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-5625).

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:1198-10003) such that it
 - a. **MAY** contain zero or one [0..1] **time** (CONF:1198-10004).
 - b. **SHALL** contain associatedEntity/associatedPerson **AND/OR** associatedEntity/scopingOrganization (CONF:1198-10006).
 - 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:1198-10007).

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:1198-9952).

- a. The inFulfillmentOf, if present, **SHALL** contain exactly one [1..1] **order** (CONF:1198-9953).
 - i. This order **SHALL** contain at least one [1..*] **id** (CONF:1198-9954).

1.1.1.14 documentationOf

23. **MAY** contain zero or more [0..*] **documentationOf** (CONF:1198-14835).

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:1198-14836).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-14837).
 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1198-14838).

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:1198-14839).
 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** (CONF:1198-14840).
 2. The performer, if present, **MAY** contain zero or one [0..1] **functionCode** (CONF:1198-16818).
 - 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** (CONF:1198-32889).

3. The performer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-14841).
 - a. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-14846).
 - i. Such ids **SHOULD** contain zero or one [0..1] **@root="2.16.840.1.113883.4.6"** National Provider Identifier (CONF:1198-14847).
 - 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:1198-14842).

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:1198-16792) such that it
 - a. **SHALL** contain exactly one [1..1] **consent** (CONF:1198-16793).
 - i. This consent **MAY** contain zero or more [0..*] **id** (CONF:1198-16794).
 - ii. This consent **MAY** contain zero or one [0..1] **code** (CONF:1198-16795).
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:1198-16797).
 1. This statusCode **SHALL** contain exactly one [1..1] **@code="completed" Completed (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6)** (CONF:1198-16798).

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:1198-9955).
 - a. The componentOf, if present, **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:1198-9956).

- i. This encompassingEncounter **SHALL** contain at least one [1..*] **id** (CONF:1198-9959).
- ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-9958).

Table 4: 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 5: 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: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
N	ConfidentialityCode	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 6: 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:2.16.840.1.113883.3.6.121	Afar
ab	Language	urn:oid:2.16.840.1.113883.3.6.121	Abkhazian
ace	Language	urn:oid:2.16.840.1.113883.3.6.121	Achinese
ach	Language	urn:oid:2.16.840.1.113883.3.6.121	Acoli
ada	Language	urn:oid:2.16.840.1.113883.3.6.121	Adangme
ady	Language	urn:oid:2.16.840.1.113883.3.6.121	Adyghe; Adygei
ae	Language	urn:oid:2.16.840.1.113883.3.6.121	Avestan
af	Language	urn:oid:2.16.840.1.113883.3.6.121	Afrikaans
afa	Language	urn:oid:2.16.840.1.113883.3.6.121	Afro-Asiatic (Other)
afh	Language	urn:oid:2.16.840.1.113883.3.6.121	Afrihili
...			

Table 7: 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: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html			
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 8: 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: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html			
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 9: 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:			
http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html			
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 10: 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:
http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html

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 11: 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 12: 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 13: 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:			
http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html			
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 14: 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 15: 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 16: 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:
http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html

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 17: LanguageAbilityProficiency

Value Set: LanguageAbilityProficiency urn:oid:2.16.840.1.113883.1.11.12199
Value Set Source:
http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html

Code	Code System	Code System OID	Print Name
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 18: 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://phinivads.cdc.gov/vads/ViewValueSet.action?id=34D34BBC-617F-DD11-B38D-00188B398520#			
Code	Code System	Code System OID	Print Name
2138-6	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Andalusian
2166-7	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Argentinean
2139-4	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Asturian
2142-8	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Belearic Islander
2167-5	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Bolivian
2163-4	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Canal Zone
2145-1	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Canarian
2140-2	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Castillian
2141-0	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Catalonian
2155-0	Race & Ethnicity - CDC	2.16.840.1.113883.6.238	Central American
...			

Table 19: Healthcare Provider Taxonomy (HIPAA)

<p>Value Set: Healthcare Provider Taxonomy (HIPAA) urn:oid:2.16.840.1.114222.4.11.1066</p> <p>The Health Care Provider Taxonomy value set is a collection of unique alphanumeric codes, ten characters in length. The code set is structured into three distinct Levels including Provider Type, Classification, and Area of Specialization. The Health Care Provider Taxonomy code set allows a single provider (individual, group, or institution) to identify their specialty category. Providers may have one or more than one value associated to them. When determining what value or values to associate with a provider, the user needs to review the requirements of the trading partner with which the value(s) are being used.</p> <p>Value Set Source: http://www.nucc.org/index.php?option=com_content&view=article&id=14&Itemid=125</p>			
Code	Code System	Code System OID	Print Name
171100000X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.11388 3.6.101	Acupuncturist
363LA2100X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.11388 3.6.101	Nurse Practitioner - Acute Care
364SA2100X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.11388 3.6.101	Clinical Nurse Specialist - Acute Care
101YA0400X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.11388 3.6.101	Counselor - Addiction (Substance Use Disorder)
103TA0400X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.11388 3.6.101	Psychologist - Addiction (Substance Use Disorder)
163WA0400X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.11388 3.6.101	Registered Nurse - Addiction (Substance Use Disorder)
207LA0401X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.11388 3.6.101	Anesthesiology - Addiction Medicine
207QA0401X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.11388 3.6.101	Family Medicine - Addiction Medicine
207RA0401X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.11388 3.6.101	Internal Medicine - Addiction Medicine
2084A0401X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.11388 3.6.101	Psychiatry & Neurology - Addiction Medicine
...			

Table 20: INDRoleclassCodes

Value Set: INDRoleclassCodes urn:oid:2.16.840.1.113883.11.20.9.33			
Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/inrastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
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 21: 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/inrastructure/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 22: 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:
http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.htm

Code	Code System	Code System OID	Print Name
SNRS	participationFunction	urn:oid:2.16.840.1.113883.3.5.88	Scrub nurse
SASST	participationFunction	urn:oid:2.16.840.1.113883.3.5.88	Second assistant surgeon
...			

Figure 1: US Realm Header (V3) 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="2015-08-01" />
  <!-- 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>

```


Figure 2: recordTarget Example

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

```

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

```

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>
```

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>
```

Figure 5: Assigned Health Care Provider informant Example

```
<informant>
  <assignedEntity>
    <id extension="8888888888" 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>
```

Figure 6: Personal Relation informant Example

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

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>
```

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>
```

Figure 9: Digital signature Example

```
<sdtc:signatureText mediaType="text/xml"
representation="B64">omSJUEdmde9j44zmMiromSJUEdmde9j44zmMirMDSsWdIJdksIJR3373jeu83
6edjzMMIjdMDSsWdIJdksIJR3373jeu83MNYD83jmMdomSJUEdmde9j44zmMir
... MNYD83jmMdomSJUEdmde9j44zmMir6edjzMMIjdMDSsWdIJdksIJR3373jeu83
4zmMir6edjzMMIjdMDSsWdIJdksIJR3373jeu83==</sdtc:signatureText>
```

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>
```

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>
```

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>
```

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>
```


Figure 14: performer Example

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

Figure 15: documentationOf Example

```
<documentationOf>
  <serviceEvent classCode="PCPR">
    <!-- The effectiveTime reflects the provision of care summarized in the document.
    In this scenario, the provision of care summarized is the lifetime for the patient -->
    <effectiveTime>
      <low value="19750501" />
      <!-- The low value represents when the summarized provision of care began.
      In this scenario, the patient's date of birth -->
      <high value="20120915" />
      <!-- The high value represents when the summarized provision of care being
ended.
      In this scenario, when chart summary was created -->
    </effectiveTime>
    <performer typeCode="PRF">
      <functionCode code="PCP"
                    displayName="Primary Care Provider"
                    codeSystem="2.16.840.1.113883.5.88"
                    codeSystemName="ParticipationFunction">
        <originalText>Primary Care Provider</originalText>
      </functionCode>
      <assignedEntity>
        <id extension="5555555555" root="2.16.840.1.113883.4.6" />
        <code code="207QA0505X" displayName="Adult Medicine"
              codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
        <addr>
          <streetAddressLine>1004 Healthcare Drive </streetAddressLine>
          <city>Portland</city>
          <state>OR</state>
          <postalCode>99123</postalCode>
          <country>US</country>
        </addr>
        <telecom use="WP" value="tel:+1(555)555-1004" />
        <assignedPerson>
          <name>
            <given>Patricia</given>
            <given qualifier="CL">Patty</given>
            <family>Primary</family>
            <suffix qualifier="AC">M.D.</suffix>
          </name>
        </assignedPerson>
        <representedOrganization>
          <id extension="219BX" root="1.1.1.1.1.1.1.2" />
          <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>
```

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>
```

1.1.2 Care Plan (V2)

```
[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.15:2015-08-01 (open)]
```

Table 23: Care Plan (V2) Contexts

Contained By:	Contains:
	Goals Section Health Concerns Section (V2) Health Status Evaluations and Outcomes Section Interventions Section (V3) US Realm Person Name (PN.US.FIELDDED)

CARE PLAN FRAMEWORK

A Care Plan (including Home Health Plan of Care (HHPoC)) is a consensus-driven dynamic plan that represents a patient’s and Care Team Members’ prioritized concerns, goals, and planned interventions. It serves as a blueprint shared by all Care Team Members (including the patient, their caregivers and providers), to guide the patient’s care. A Care Plan integrates multiple interventions proposed by multiple providers and disciplines for multiple conditions.

A Care Plan represents one or more Plan(s) of Care and serves to reconcile and resolve conflicts between the various Plans of Care developed for a specific patient by different providers. While both a plan of care and a care plan include the patient’s life goals and require Care Team Members (including patients) to prioritize goals and interventions, the reconciliation process becomes more complex as the number of plans of care increases. The Care Plan also serves to enable longitudinal coordination of care.

The CDA Care Plan represents an instance of this dynamic Care Plan at a point in time. The CDA document itself is NOT dynamic.

Key differentiators between a Care Plan CDA and CCD (another “snapshot in time” document):

- Requires relationships between various acts:
 - o Health Concerns

- o Problems
 - o Interventions
 - o Goals
 - o Outcomes
- Provides the ability to identify patient and provider priorities with each act
 - Provides a header participant to indicate occurrences of Care Plan review

Please see Volume 1 of this guide to view a Care Plan Relationship diagram and story board.

Table 24: Care Plan (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.1.15:2015-08-01)					
templateId	1..1	SHALL		1198-28741	
@root	1..1	SHALL		1198-28742	2.16.840.1.113883.10.20.22.1.15
@extension	1..1	SHALL		1198-32877	2015-08-01
code	1..1	SHALL		1198-28745	
@code	1..1	SHALL		1198-28746	52521-2
@codeSystem	1..1	SHALL		1198-28747	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
setId	0..1	SHOULD		1198-32321	
versionNumber	0..1	SHOULD		1198-32322	
informationRecipient	0..*	SHOULD		1198-31993	
intendedRecipient	1..1	SHALL		1198-31994	
id	1..*	SHALL		1198-31996	
addr	0..*	SHOULD		1198-31997	
telecom	0..*	SHOULD		1198-31998	
informationRecipient	0..1	SHOULD		1198-31999	
name	1..1	SHALL		1198-32320	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
receivedOrganization	0..1	SHOULD		1198-32000	
id	0..*	SHOULD		1198-32001	
name	1..*	SHALL		1198-32002	
standardIndustryClassCode	0..1	SHOULD		1198-32003	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
authenticator	0..1	SHOULD		1198-31910	

time	1..1	SHALL		1198-31911	
signatureCode	1..1	SHALL		1198-31912	
sdtc:signatureText	0..1	MAY		1198-31913	
assignedEntity	1..1	SHALL		1198-31914	
id	1..*	SHALL		1198-31915	
code	1..1	SHALL		1198-31916	
@code	1..1	SHALL		1198-31917	ONESELF
@codeSystem	1..1	SHALL		1198-31918	urn:oid:2.16.840.1.113883.5.111 (RoleCode) = 2.16.840.1.113883.5.111
participant	0..*	SHOULD		1198-31677	
@typeCode	1..1	SHALL		1198-31678	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = VRF
functionCode	1..1	SHALL		1198-31679	
@code	1..1	SHALL		1198-31680	425268008
@codeSystem	1..1	SHALL		1198-31681	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
time	1..1	SHALL		1198-31682	
associatedEntity	1..1	SHALL		1198-31683	
@classCode	1..1	SHALL		1198-31686	urn:oid:2.16.840.1.113883.5.110 (RoleClass) = ASSIGNED
id	1..*	SHALL		1198-31684	
code	0..1	SHOULD		1198-31685	
@code	1..1	SHALL		1198-32367	urn:oid:2.16.840.1.113883.11.20.12.1 (Personal And Legal Relationship Role Type)
participant	0..*	SHOULD		1198-31895	
@typeCode	1..1	SHALL		1198-31896	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = IND
associatedEntity	1..1	SHALL		1198-31897	
@classCode	1..1	SHALL		1198-	urn:oid:2.16.840.1.113883.11.20.

				31898	9.33 (INDRoleclassCodes)
associatedPerson	1..1	SHALL		1198-31899	
name	1..*	SHALL		1198-31900	
documentationOf	1..1	SHALL		1198-31901	
serviceEvent	1..1	SHALL		1198-31902	
@classCode	1..1	SHALL		1198-31903	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PCPR
effectiveTime	1..1	SHALL		1198-31904	
low	1..1	SHALL		1198-32330	
high	0..1	MAY		1198-32331	
performer	1..*	SHALL		1198-31905	
assignedEntity	1..1	SHALL		1198-31907	
id	1..*	SHALL		1198-31908	
code	0..1	MAY		1198-31909	
assignedPerson	1..1	SHALL		1198-32328	
name	1..1	SHALL		1198-32329	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
relatedDocument	0..*	MAY		1198-29893	
@typeCode	1..1	SHALL		1198-31889	urn:oid:2.16.840.1.113883.11.20.9.62 (Related Document (append/replace))
parentDocument	1..1	SHALL		1198-29894	
setId	1..1	SHALL		1198-29895	
versionNumber	1..1	SHALL		1198-29896	
componentOf	0..1	SHOULD		1198-32004	
encompassingEncounter	1..1	SHALL		1198-32005	
effectiveTime	1..1	SHALL		1198-32007	

component	1..1	SHALL		1198-28753	
structuredBody	1..1	SHALL		1198-28754	
component	1..1	SHALL		1198-28755	
section	1..1	SHALL		1198-28756	Health Concerns Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.58:2015-08-01)
component	1..1	SHALL		1198-28761	
section	1..1	SHALL		1198-28762	Goals Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.60)
component	0..1	SHOULD		1198-28763	
section	1..1	SHALL		1198-28764	Interventions Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.21.2.3:2015-08-01)
component	0..1	SHOULD		1198-29596	
section	1..1	SHALL		1198-29597	Health Status Evaluations and Outcomes Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.61)

1. Conforms to [US Realm Header \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-28741) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.15" (CONF:1198-28742).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32877).
3. **SHALL** contain exactly one [1..1] **code** (CONF:1198-28745).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="52521-2" Overall Plan of Care/ Advance Care Directives (CONF:1198-28746).
 - 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:1198-28747).
4. **SHOULD** contain zero or one [0..1] **setId** (CONF:1198-32321).
5. **SHOULD** contain zero or one [0..1] **versionNumber** (CONF:1198-32322).
6. **SHOULD** contain zero or more [0..*] **informationRecipient** (CONF:1198-31993) such that it
 - a. **SHALL** contain exactly one [1..1] **intendedRecipient** (CONF:1198-31994).
 - i. This intendedRecipient **SHALL** contain at least one [1..*] **id** (CONF:1198-31996).

- ii. This intendedRecipient **SHOULD** contain zero or more [0..*] **addr** (CONF:1198-31997).
 - iii. This intendedRecipient **SHOULD** contain zero or more [0..*] **telecom** (CONF:1198-31998).
 - iv. This intendedRecipient **SHOULD** contain zero or one [0..1] **informationRecipient** (CONF:1198-31999).
 - 1. The informationRecipient, if present, **SHALL** contain exactly one [1..1] **US Realm Person Name (PN.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-32320).
 - v. This intendedRecipient **SHOULD** contain zero or one [0..1] **receivedOrganization** (CONF:1198-32000).
 - 1. The receivedOrganization, if present, **SHOULD** contain zero or more [0..*] **id** (CONF:1198-32001).
 - 2. The receivedOrganization, if present, **SHALL** contain at least one [1..*] **name** (CONF:1198-32002).
 - 3. The receivedOrganization, if present, **SHOULD** contain zero or one [0..1] **standardIndustryClassCode**, which **SHALL** be selected from ValueSet **Healthcare Provider Taxonomy (HIPAA)** urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1198-32003).
7. **SHOULD** contain zero or one [0..1] **authenticator** (CONF:1198-31910) such that it
- a. **SHALL** contain exactly one [1..1] **time** (CONF:1198-31911).
 - b. **SHALL** contain exactly one [1..1] **signatureCode** (CONF:1198-31912).
 - c. **MAY** contain zero or one [0..1] **sdct:signatureText** (CONF:1198-31913).
 - d. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-31914).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-31915).
 - ii. This assignedEntity **SHALL** contain exactly one [1..1] **code** (CONF:1198-31916).
 - 1. This code **SHALL** contain exactly one [1..1] **@code="ONESELF"** Self (CONF:1198-31917).
 - 2. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.5.111"** (CodeSystem: RoleCode urn:oid:2.16.840.1.113883.5.111) (CONF:1198-31918).
8. **SHOULD** contain zero or more [0..*] **participant** (CONF:1198-31677) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="VRF"** Verifier (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:1198-31678).
 - b. **SHALL** contain exactly one [1..1] **functionCode** (CONF:1198-31679).
 - i. This functionCode **SHALL** contain exactly one [1..1] **@code="425268008"** Review of Care Plan (CONF:1198-31680).
 - ii. This functionCode **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:1198-31681).
 - c. **SHALL** contain exactly one [1..1] **time** (CONF:1198-31682).

- d. **SHALL** contain exactly one [1..1] **associatedEntity** (CONF:1198-31683).
 - i. This **associatedEntity** **SHALL** contain exactly one [1..1] **@classCode**="ASSIGNED" (CodeSystem: RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:1198-31686).
 - ii. This **associatedEntity** **SHALL** contain at least one [1..*] **id** (CONF:1198-31684).
 - iii. This **associatedEntity** **SHOULD** contain zero or one [0..1] **code** (CONF:1198-31685).
 - 1. The code, if present, **SHALL** contain exactly one [1..1] **@code** (ValueSet: [Personal And Legal Relationship Role Type](#) urn:oid:2.16.840.1.113883.11.20.12.1) (CONF:1198-32367).
- 9. **SHOULD** contain zero or more [0..*] **participant** (CONF:1198-31895) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="IND" Indirect (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:1198-31896).
 - b. **SHALL** contain exactly one [1..1] **associatedEntity** (CONF:1198-31897).
 - i. This **associatedEntity** **SHALL** contain exactly one [1..1] **@classCode**, which **SHALL** be selected from ValueSet [INDRoleclassCodes](#) urn:oid:2.16.840.1.113883.11.20.9.33 **STATIC** (CONF:1198-31898).
 - ii. This **associatedEntity** **SHALL** contain exactly one [1..1] **associatedPerson** (CONF:1198-31899).
 - 1. This **associatedPerson** **SHALL** contain at least one [1..*] **name** (CONF:1198-31900).

The **serviceEvent** describes the provision of healthcare over a period of time. The duration over which care was provided is indicated in **serviceEvent/effectiveTime**. Additional data from outside this duration may also be included if it is relevant to care provided during that time range (e.g., reviewed during the stated time range).

- 10. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:1198-31901) such that it
 - a. **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:1198-31902).
 - i. This **serviceEvent** **SHALL** contain exactly one [1..1] **@classCode**="PCPR" Care Provision (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1198-31903).
 - ii. This **serviceEvent** **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-31904).
 - 1. This **effectiveTime** **SHALL** contain exactly one [1..1] **low** (CONF:1198-32330).
 - 2. This **effectiveTime** **MAY** contain zero or one [0..1] **high** (CONF:1198-32331).
 - iii. This **serviceEvent** **SHALL** contain at least one [1..*] **performer** (CONF:1198-31905) such that it
 - 1. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-31907).
 - a. This **assignedEntity** **SHALL** contain at least one [1..*] **id** (CONF:1198-31908).

- b. This assignedEntity **MAY** contain zero or one [0..1] **code** (CONF:1198-31909).
 - c. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:1198-32328).
 - i. This assignedPerson **SHALL** contain exactly one [1..1] **US Realm Person Name (PN.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-32329).
- 11. **MAY** contain zero or more [0..*] **relatedDocument** (CONF:1198-29893) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**, which **SHALL** be selected from ValueSet **Related Document (append/replace)** (identifier: urn:oid:2.16.840.1.113883.11.20.9.62) **STATIC** (CONF:1198-31889).
 - b. **SHALL** contain exactly one [1..1] **parentDocument** (CONF:1198-29894).
 - i. This parentDocument **SHALL** contain exactly one [1..1] **setId** (CONF:1198-29895).
 - ii. This parentDocument **SHALL** contain exactly one [1..1] **versionNumber** (CONF:1198-29896).
- 12. **SHOULD** contain zero or one [0..1] **componentOf** (CONF:1198-32004) such that it
 - a. **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:1198-32005).
 - i. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-32007).
- 13. **SHALL** contain exactly one [1..1] **component** (CONF:1198-28753).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:1198-28754).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-28755) such that it
 - 1. **SHALL** contain exactly one [1..1] **Health Concerns Section (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.58:2015-08-01) (CONF:1198-28756).
 - ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-28761) such that it
 - 1. **SHALL** contain exactly one [1..1] **Goals Section** (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.60) (CONF:1198-28762).
 - iii. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-28763) such that it
 - 1. **SHALL** contain exactly one [1..1] **Interventions Section (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.21.2.3:2015-08-01) (CONF:1198-28764).
 - iv. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-29596) such that it

1. **SHALL** contain exactly one [1..1] [Health Status Evaluations and Outcomes Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.61) (CONF:1198-29597).
- v. This structuredBody **SHALL NOT** contain a Plan of Treatment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09) (CONF:1198-31044).

Table 25: Related Document (append/replace)

Value Set: Related Document (append/replace) urn:oid:2.16.840.1.113883.11.20.9.62			
The Related Document value set is used to constrain a related document to two concepts - append and replace.			
Specific URL pending			
Value Set Source:			
http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
APND	HL7ActRelationshipType	urn:oid:2.16.840.1.113883.5.1002	Append
RPLC	HL7ActRelationshipType	urn:oid:2.16.840.1.113883.5.1002	Replace

Figure 17: Care Plan Patient authenticator Example

```

<!-- This authenticator represents patient agreement or
  sign-off of the Care Plan-->
<authenticator>
  <time value="20130802" />
  <signatureCode code="S" />
  <sdct:signatureText mediaType="text/xml"
representation="B64">omSJUEdmde9j44zmMir6edjzMMIjdMDSsWdIJdksIJR3373jeu83
6edjzMMIjdMDSsWdIJdksIJR3373jeu83MNYD83jmMdomSJUEdmde9j44zmMir
...
MNYD83jmMdomSJUEdmde9j44zmMir6edjzMMIjdMDSsWdIJdksIJR3373jeu83
4zmMir6edjzMMIjdMDSsWdIJdksIJR3373jeu83==</sdct:signatureText>
  <assignedEntity>
    <id extension="996-756-495" root="2.16.840.1.113883.19.5" />
    <code code="ONESELF" displayName="Self" codeSystem="2.16.840.1.113883.5.111"
codeSystemName="HL7 Role code" />
  </assignedEntity>
</authenticator>

```

Figure 18: Care Plan Review Example

```
<!-- This participant represents the Care Plan review.
If the date in the time element is in the past,
then this review has already taken place.
If the date in the time element is in the future,
then this is the date of the next scheduled review. -->
<!-- This example shows a Care Plan Review that has already taken place -->
<participant typeCode="IND">
  <functionCode code="425268008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Review of Care Plan" />
  <time value="20130801" />
  <associatedEntity classCode="ASSIGNED">
    <id root="20cf14fb-b65c-4c8c-a54d-b0cca834c18c" />
  </associatedEntity>
</participant>
```

Figure 19: Care Plan Caregiver participant Example

```
<participant typeCode="IND">
  <functionCode code="407543004" displayName="Primary Carer"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED-CT" />
  <!-- Caregiver -->
  <associatedEntity classCode="CAREGIVER">
    <code code="MTH" codeSystem="2.16.840.1.113883.5.111" />
    <addr>
      <streetAddressLine>17 Daws Rd.</streetAddressLine>
      <city>Ann Arbor</city>
      <state>MI</state>
      <postalCode>97857</postalCode>
      <country>US</country>
    </addr>
    <telecom value="tel:(999)555-1212" use="WP" />
    <associatedPerson>
      <name>
        <prefix>Mrs.</prefix>
        <given>Martha</given>
        <family>Jones</family>
      </name>
    </associatedPerson>
  </associatedEntity>
</participant>
```

Figure 20: Care Plan performer Example

```

<performer typeCode="PRF">
  <time value="20130715223615-0800" />
  <assignedEntity>
    <id extension="5555555555" root="2.16.840.1.113883.4.6" />
    <code code="59058001" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED
CT" displayName="General Physician" />
    <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)-1004" />
    <assignedPerson>
      <name>
        <given>Patricia</given>
        <given qualifier="CL">Patty</given>
        <family>Primary</family>
        <suffix qualifier="AC">M.D.</suffix>
      </name>
    </assignedPerson>
  </assignedEntity>
</performer>

```

Figure 21: Care Plan relatedDocument Example

```

<!-- This document is the second in a set - relatedDocument
describes the parent document-->
<relatedDocument typeCode="RPLC">
  <parentDocument>
    <id root="223769be-f6ee-4b04-a0ce-b56ae998c880" />
    <code code="CarePlan-x" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Care Plan" />
    <setId root="004bb033-b948-4f4c-b5bf-a8dbd7d8dd40" />
    <versionNumber value="1" />
  </parentDocument>
</relatedDocument>

```

1.1.3 Consultation Note (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.4:2015-08-01 (open)]

Table 26: Consultation Note (V3) Contexts

Contained By:	Contains:
	Advance Directives Section (entries optional) (V3) Allergies and Intolerances Section (entries required) (V3)

Contained By:	Contains:
	Assessment and Plan Section (V2) Assessment Section Chief Complaint and Reason for Visit Section Chief Complaint Section Family History Section (V3) Functional Status Section (V2) General Status Section History of Past Illness Section (V3) History of Present Illness Section Immunizations Section (entries optional) (V3) Medical Equipment Section (V2) Medications Section (entries required) (V2) Mental Status Section (V2) Nutrition Section Physical Exam Section (V3) Plan of Treatment Section (V2) Problem Section (entries required) (V3) Procedures Section (entries optional) (V2) Reason for Visit Section Results Section (entries required) (V3) Review of Systems Section Social History Section (V3) US Realm Date and Time (DT.US.FIELDED) Vital Signs Section (entries required) (V3)

The Consultation Note is generated by a request from a clinician for an opinion or advice from another clinician. Consultations may involve face-to-face time with the patient or may fall under the auspices of telemedicine visits. Consultations may occur while the patient is inpatient or ambulatory. The Consultation Note should also be used to summarize an Emergency Room or Urgent Care encounter.

A Consultation Note includes the reason for the referral, history of present illness, physical examination, and decision-making components (Assessment and Plan).

Table 27: Consultation Note (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.4:2015-08-01)					
templateId	1..1	SHALL		1198-8375	
@root	1..1	SHALL		1198-10040	2.16.840.1.113883.10.20.22.1.4
@extension	1..1	SHALL		1198-32502	2015-08-01
code	1..1	SHALL		1198-17176	urn:oid:2.16.840.1.113883.11.20.9.31 (ConsultDocumentType)
participant	0..*	SHOULD		1198-31656	
@typeCode	1..1	SHALL		1198-31657	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CALLBCK
associatedEntity	1..1	SHALL		1198-31658	
@classCode	1..1	SHALL		1198-31659	urn:oid:2.16.840.1.113883.5.110 (RoleClass) = ASSIGNED
id	1..*	SHALL		1198-31660	
addr	0..*	SHOULD		1198-31661	
telecom	1..*	SHALL		1198-31662	
associatedPerson	1..1	SHALL		1198-31663	
name	1..*	SHALL		1198-31664	
scopingOrganization	0..1	MAY		1198-31665	
inFulfillmentOf	1..*	SHALL		1198-8382	
order	1..1	SHALL		1198-29923	
id	1..*	SHALL		1198-29924	
componentOf	1..1	SHALL		1198-8386	
encompassingEncounter	1..1	SHALL		1198-8387	
id	1..*	SHALL		1198-8388	
effectiveTime	1..1	SHALL		1198-8389	US Realm Date and Time (DT.US.FIELDED) (identifier:)

					urn:oid:2.16.840.1.113883.10.20.22.5.3
responsibleParty	0..1	MAY		1198-8391	
assignedEntity	1..1	SHALL		1198-32904	
encounterParticipant	0..*	MAY		1198-8392	
assignedEntity	1..1	SHALL		1198-32902	
component	1..1	SHALL		1198-8397	
structuredBody	1..1	SHALL		1198-28895	
component	0..1	MAY		1198-28896	
section	1..1	SHALL		1198-28897	Assessment Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.8)
component	0..1	MAY		1198-28898	
section	1..1	SHALL		1198-28899	Assessment and Plan Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.9:2014-06-09)
component	0..1	MAY		1198-28900	
section	1..1	SHALL		1198-28901	Plan of Treatment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09)
component	0..1	MAY		1198-28904	
section	1..1	SHALL		1198-28905	Reason for Visit Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.12)
component	1..1	SHALL		1198-28906	
section	1..1	SHALL		1198-28907	History of Present Illness Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.4)
component	0..1	SHOULD		1198-28908	
section	1..1	SHALL		1198-28909	Physical Exam Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.2.10:2015-08-01)

component	1..1	SHALL		1198-28910	
section	1..1	SHALL		1198-28911	Allergies and Intolerances Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.6.1:2015-08-01)
component	0..1	MAY		1198-28912	
section	1..1	SHALL		1198-28913	Chief Complaint Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1)
component	0..1	MAY		1198-28915	
section	1..1	SHALL		1198-28916	Chief Complaint and Reason for Visit Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.13)
component	0..1	MAY		1198-28917	
section	1..1	SHALL		1198-28918	Family History Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2015-08-01)
component	0..1	MAY		1198-28919	
section	1..1	SHALL		1198-28920	General Status Section (identifier: urn:oid:2.16.840.1.113883.10.20.2.5)
component	0..1	MAY		1198-28921	
section	1..1	SHALL		1198-28922	History of Past Illness Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.20:2015-08-01)
component	0..1	MAY		1198-28923	
section	1..1	SHALL		1198-28924	Immunizations Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.2:2015-08-01)
component	0..1	SHOULD		1198-28925	
section	1..1	SHALL		1198-28926	Medications Section (entries required) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.1.1:2014-06-09)
component	1..1	SHALL		1198-28928	
section	1..1	SHALL		1198-	Problem Section (entries required)

				28929	(V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.5.1:2015-08-01)
component	0..1	MAY		1198-28930	
section	1..1	SHALL		1198-28931	Procedures Section (entries optional) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.7:2014-06-09)
component	0..1	SHOULD		1198-28932	
section	1..1	SHALL		1198-28933	Results Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.3.1:2015-08-01)
component	0..1	MAY		1198-28934	
section	1..1	SHALL		1198-28935	Social History Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.17:2015-08-01)
component	0..1	MAY		1198-28936	
section	1..1	SHALL		1198-28937	Vital Signs Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.4.1:2015-08-01)
component	0..1	MAY		1198-28942	
section	1..1	SHALL		1198-28943	Advance Directives Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.21:2015-08-01)
component	0..1	MAY		1198-28944	
section	1..1	SHALL		1198-28945	Functional Status Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.14:2014-06-09)
component	0..1	MAY		1198-30237	
section	1..1	SHALL		1198-30238	Review of Systems Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.18)
component	0..1	MAY		1198-30904	
section	1..1	SHALL		1198-30905	Medical Equipment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2)

					0.22.2.23:2014-06-09
component	0..1	MAY		1198-30906	
section	1..1	SHALL		1198-30907	Mental Status Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.56:2015-08-01)
component	0..1	MAY		1198-30909	
section	1..1	SHALL		1198-30910	Nutrition Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.57)

1.1.4 Properties

1. Conforms to [US Realm Header \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8375) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.1.4"** (CONF:1198-10040).
 - b. **SHALL** contain exactly one [1..1] **@extension="2015-08-01"** (CONF:1198-32502).

The Consultation Note recommends use of the document type code 11488-4 "Consult Note", with further specification provided by author or performer, setting, or specialty. When pre-coordinated codes are used, any coded values describing the author or performer of the service act or the practice setting must be consistent with the LOINC document type.

3. **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [ConsultDocumentType](#) urn:oid:2.16.840.1.113883.11.20.9.31 **DYNAMIC** (CONF:1198-17176).

1.1.4.1 participant

This participant represents the person to contact for questions about the consult summary. This call back contact individual may be a different person than the individual(s) identified in the author or legalAuthenticator participant.

4. **SHOULD** contain zero or more [0..*] **participant** (CONF:1198-31656) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="CALLBCK"** call back contact (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **DYNAMIC**) (CONF:1198-31657).
 - b. **SHALL** contain exactly one [1..1] **associatedEntity** (CONF:1198-31658).
 - i. This associatedEntity **SHALL** contain exactly one [1..1] **@classCode="ASSIGNED"** assigned entity (CodeSystem: RoleClass urn:oid:2.16.840.1.113883.5.110 **DYNAMIC**) (CONF:1198-31659).
 - ii. This associatedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-31660).
 - iii. This associatedEntity **SHOULD** contain zero or more [0..*] **addr** (CONF:1198-31661).

- iv. This associatedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1198-31662).
- v. This associatedEntity **SHALL** contain exactly one [1..1] **associatedPerson** (CONF:1198-31663).
 - 1. This associatedPerson **SHALL** contain at least one [1..*] **name** (CONF:1198-31664).
- vi. This associatedEntity **MAY** contain zero or one [0..1] **scopingOrganization** (CONF:1198-31665).

1.1.4.2 inFulfillmentOf

The inFulfillmentOf element describes prior orders that are fulfilled (in whole or part) by the service events described in the Consultation Note. For example, a prior order might be the consultation that is being reported in the note.

- 5. **SHALL** contain at least one [1..*] **inFulfillmentOf** (CONF:1198-8382).
 - a. Such inFulfillmentOfs **SHALL** contain exactly one [1..1] **order** (CONF:1198-29923).

Where a referral is being fulfilled by this consultation, this id would be the same as the id in the Patient Referral Act template.

- i. This order **SHALL** contain at least one [1..*] **id** (CONF:1198-29924).

1.1.4.3 componentOf

A Consultation Note is always associated with an encounter; the id element of the encompassingEncounter is required to be present and represents the identifier for the encounter.

- 6. **SHALL** contain exactly one [1..1] **componentOf** (CONF:1198-8386).
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:1198-8387).
 - i. This encompassingEncounter **SHALL** contain at least one [1..*] **id** (CONF:1198-8388).
 - ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **US Realm Date and Time (DT.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.3) (CONF:1198-8389).
 - iii. This encompassingEncounter **MAY** contain zero or one [0..1] **responsibleParty** (CONF:1198-8391).
 - 1. The responsibleParty, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-32904).
 - a. This assignedEntity **SHALL** contain an assignedPerson or a representedOrganization or both (CONF:1198-32905).

The encounterParticipant element represents persons who participated in the encounter and not necessarily the entire episode of care.

- iv. This encompassingEncounter **MAY** contain zero or more [0..*] **encounterParticipant** (CONF:1198-8392).

1. The encounterParticipant, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-32902).
 - a. This assignedEntity **SHALL** contain an assignedPerson or a representedOrganization or both (CONF:1198-32906).

1.1.4.4 component

7. **SHALL** contain exactly one [1..1] **component** (CONF:1198-8397).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:1198-28895).
 - i. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28896) such that it
 1. **SHALL** contain exactly one [1..1] Assessment Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.8) (CONF:1198-28897).
 - ii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28898) such that it
 1. **SHALL** contain exactly one [1..1] Assessment and Plan Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.9:2014-06-09) (CONF:1198-28899).
 - iii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28900) such that it
 1. **SHALL** contain exactly one [1..1] Plan of Treatment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09) (CONF:1198-28901).
 - iv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28904) such that it
 1. **SHALL** contain exactly one [1..1] Reason for Visit Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.12) (CONF:1198-28905).
 - v. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-28906) such that it
 1. **SHALL** contain exactly one [1..1] History of Present Illness Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.4) (CONF:1198-28907).
 - vi. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-28908) such that it
 1. **SHALL** contain exactly one [1..1] Physical Exam Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.2.10:2015-08-01) (CONF:1198-28909).
 - vii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-28910) such that it

1. **SHALL** contain exactly one [1..1] [Allergies and Intolerances Section \(entries required\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.6.1:2015-08-01) (CONF:1198-28911).
- viii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28912) such that it
 1. **SHALL** contain exactly one [1..1] [Chief Complaint Section](#) (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1) (CONF:1198-28913).
- ix. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28915) such that it
 1. **SHALL** contain exactly one [1..1] [Chief Complaint and Reason for Visit Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.13) (CONF:1198-28916).
- x. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28917) such that it
 1. **SHALL** contain exactly one [1..1] [Family History Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2015-08-01) (CONF:1198-28918).
- xi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28919) such that it
 1. **SHALL** contain exactly one [1..1] [General Status Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.2.5) (CONF:1198-28920).
- xii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28921) such that it
 1. **SHALL** contain exactly one [1..1] [History of Past Illness Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.20:2015-08-01) (CONF:1198-28922).
- xiii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28923) such that it
 1. **SHALL** contain exactly one [1..1] [Immunizations Section \(entries optional\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.2:2015-08-01) (CONF:1198-28924).
- xiv. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-28925) such that it
 1. **SHALL** contain exactly one [1..1] [Medications Section \(entries required\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.1.1:2014-06-09) (CONF:1198-28926).
- xv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-28928) such that it

1. **SHALL** contain exactly one [1..1] [Problem Section \(entries required\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.5.1:2015-08-01) (CONF:1198-28929).
- xvi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28930) such that it
1. **SHALL** contain exactly one [1..1] [Procedures Section \(entries optional\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.7:2014-06-09) (CONF:1198-28931).
- xvii. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-28932) such that it
1. **SHALL** contain exactly one [1..1] [Results Section \(entries required\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2015-08-01) (CONF:1198-28933).
- xviii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28934) such that it
1. **SHALL** contain exactly one [1..1] [Social History Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01) (CONF:1198-28935).
- xix. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28936) such that it
1. **SHALL** contain exactly one [1..1] [Vital Signs Section \(entries required\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2015-08-01) (CONF:1198-28937).
- xx. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28942) such that it
1. **SHALL** contain exactly one [1..1] [Advance Directives Section \(entries optional\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.21:2015-08-01) (CONF:1198-28943).
- xxi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28944) such that it
1. **SHALL** contain exactly one [1..1] [Functional Status Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.14:2014-06-09) (CONF:1198-28945).
- xxii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30237) such that it
1. **SHALL** contain exactly one [1..1] [Review of Systems Section](#) (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.18) (CONF:1198-30238).

- xxiii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30904) such that it
1. **SHALL** contain exactly one [1..1] Medical Equipment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.23:2014-06-09) (CONF:1198-30905).
- xxiv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30906) such that it
1. **SHALL** contain exactly one [1..1] Mental Status Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.56:2015-08-01) (CONF:1198-30907).
- xxv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30909) such that it
1. **SHALL** contain exactly one [1..1] Nutrition Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.57) (CONF:1198-30910).
- xxvi. This structuredBody **SHALL NOT** contain an Assessment and Plan Section (V2) (2.16.840.1.113883.10.20.22.2.9:2014-06-09) when either an Assessment Section (2.16.840.1.113883.10.20.22.2.8) or a Plan of Treatment Section (V2) (2.16.840.1.113883.10.20.22.2.10:2014-06-09) is present (CONF:1198-28939).
- xxvii. This structuredBody **SHALL NOT** contain a Chief Complaint and Reason for Visit Section (2.16.840.1.113883.10.20.22.2.13) when either a Chief Complaint Section (1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1) or a Reason for Visit Section (2.16.840.1.113883.10.20.22.2.12) is present (CONF:1198-28940).
- xxviii. **SHALL** include a Reason for Referral or Reason for Visit section (CONF:1198-9504).
- xxix. **SHALL** include an Assessment and Plan Section, or both an Assessment Section and a Plan of Treatment Section (CONF:1198-9501).

Table 28: ConsultDocumentType

Value Set: ConsultDocumentType urn:oid:2.16.840.1.113883.11.20.9.31			
Specific URL Pending			
Value Set Source: http://www.loinc.org/			
Code	Code System	Code System OID	Print Name
11488-4	LOINC	urn:oid:2.16.840.1.113883.6.1	Consult note
34099-2	LOINC	urn:oid:2.16.840.1.113883.6.1	Cardiology Consult note
34756-7	LOINC	urn:oid:2.16.840.1.113883.6.1	Dentistry Consult note
34758-3	LOINC	urn:oid:2.16.840.1.113883.6.1	Dermatology Consult note
34760-9	LOINC	urn:oid:2.16.840.1.113883.6.1	Diabetology Consult note
34879-7	LOINC	urn:oid:2.16.840.1.113883.6.1	Endocrinology Consult note
34761-7	LOINC	urn:oid:2.16.840.1.113883.6.1	Gastroenterology Consult note
34764-1	LOINC	urn:oid:2.16.840.1.113883.6.1	General Medicine Consult note
34776-5	LOINC	urn:oid:2.16.840.1.113883.6.1	Gerontology Consult note
34779-9	LOINC	urn:oid:2.16.840.1.113883.6.1	Hematology + Medical Oncology Consult note
...			

Figure 22: Consultation Note Callback participant Example

```
<participant typeCode="CALLBACK">
  <time value="20050329224411+0500" />
  <associatedEntity classCode="ASSIGNED">
    <id extension="99999999" root="2.16.840.1.113883.4.6" />
    <code code="200000000X" codeSystem="2.16.840.1.113883.6.101"
displayName="Allopathic & Osteopathic Physicians" />
    <addr>
      <streetAddressLine>1002 Healthcare Drive </streetAddressLine>
      <city>Ann Arbor</city>
      <state>MI</state>
      <postalCode>97857</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:555-555-1002" />
    <associatedPerson>
      <name>
        <given>Henry</given>
        <family>Seven</family>
        <suffix>DO</suffix>
      </name>
    </associatedPerson>
  </associatedEntity>
</participant>
```

Figure 23: Consultation Note (V2) 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>
```

Figure 24: Consultation Note structuredBody Example

```
<component>
  <structuredBody>
    <component>
      <section>
        <templateId root="2.16.840.1.113883.10.20.22.2.6.1"
          extension="2015-08-01" />
        <!-- Allergies section template -->
        <code code="48765-2" codeSystem="2.16.840.1.113883.6.1"
          displayName="Allergies, adverse reactions, alerts"
codeSystemName="LOINC" />
        <title>Allergies, Adverse Reactions, Alerts</title>
        ...

      </section>
    </component>
    <component>
      <section>
        <templateId root="2.16.840.1.113883.10.20.22.2.8" />
        <!-- Assessment-->
        <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
          code="51848-0" displayName="ASSESSMENT" />
        <title>ASSESSMENT</title>
        ...

      </section>
    </component>
    <component>
      <section>
        <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.4" />
        <!-- History of Present Illness -->
        <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
          code="10164-2" displayName="HISTORY OF PRESENT ILLNESS" />
        <title>HISTORY OF PRESENT ILLNESS</title>
        ...

      </section>
    </component>
    <component>
      <section>
        <!--MEDICATION SECTION (V2) (coded entries required) -->
        <templateId root="2.16.840.1.113883.10.20.22.2.1.1" extension="2014-06-09"
/>
        <code code="10160-0" codeSystem="2.16.840.1.113883.6.1"
          codeSystemName="LOINC" displayName="HISTORY OF MEDICATION USE" />
        <title>MEDICATIONS</title>
        ...

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

```

        <templateId root="2.16.840.1.113883.10.20.2.10" extension="2015-08-01" />
        <!-- Physical Exam (V3) -->
        <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
            code="29545-1" displayName="PHYSICAL FINDINGS" />
        <title>PHYSICAL EXAMINATION</title>
        ...

    </section>
</component>
<component>
    <section>
        <templateId root="2.16.840.1.113883.10.20.22.2.10"
            extension="2014-06-09" />
        <!-- Plan of Treatment Section (V2) template -->
        <code code="18776-5" codeSystem="2.16.840.1.113883.6.1"
            codeSystemName="LOINC" displayName="Treatment plan" />
        <title>PLAN OF CARE</title>
        ...

    </section>
</component>
<component>
    <section>
        <!-- Problem Section (entries required) (V3) -->
        <templateId root="2.16.840.1.113883.10.20.22.2.5.1" extension="2015-08-01"
/>
        <code code="11450-4" codeSystem="2.16.840.1.113883.6.1"
            codeSystemName="LOINC" displayName="PROBLEM LIST" />
        <title>PROBLEMS</title>
        ...

    </section>
</component>
<component>
    <section>
        <templateId root="2.16.840.1.113883.10.20.22.2.7"
            extension="2014-06-09" />
        <!-- Procedures Section (entries optional) (V2) -->
        <code code="47519-4" codeSystem="2.16.840.1.113883.6.1"
            codeSystemName="LOINC" displayName="HISTORY OF PROCEDURES" />
        <title>PROCEDURES</title>
        ...

    </section>
</component>
<component>
    <section>
        <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.1"
            extension="2014-06-09" />
        <!-- Reason for Referral Section V2 -->
        <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
            code="42349-1" displayName="REASON FOR REFERRAL" />
        <title>REASON FOR REFERRAL</title>

```

```

...

    </section>
  </component>
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.22.2.3.1" extension="2015-08-01"
/>
    <!-- Results Section (entries required) (V3) -->
    <code code="30954-2" codeSystem="2.16.840.1.113883.6.1"
      codeSystemName="LOINC" displayName="RESULTS" />
    <title>RESULTS</title>
    ...

  </section>
</component>
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.22.2.17" extension="2015-08-01"
/>
    <!-- Social history section (V3)-->
    <code code="29762-2" codeSystem="2.16.840.1.113883.6.1"
      displayName="Social History" />
    <title>SOCIAL HISTORY</title>
    ...

  </section>
</component>
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.22.2.4.1" extension="2015-08-01"
/>
    <!-- Vital Signs Section (V3)-->
    <code code="8716-3" codeSystem="2.16.840.1.113883.6.1"
      codeSystemName="LOINC" displayName="VITAL SIGNS" />
    <title>VITAL SIGNS</title>
    ...

  </section>
</component>
</structuredBody>
</component>

```

1.1.5 Continuity of Care Document (CCD) (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.2:2015-08-01 (open)]

Table 29: Continuity of Care Document (CCD) (V3) Contexts

Contained By:	Contains:
	Advance Directives Section (entries optional) (V3) Allergies and Intolerances Section (entries required) (V3) Encounters Section (entries optional) (V3) Family History Section (V3) Functional Status Section (V2) Immunizations Section (entries required) (V3) Medical Equipment Section (V2) Medications Section (entries required) (V2) Mental Status Section (V2) Nutrition Section Payers Section (V3) Plan of Treatment Section (V2) Problem Section (entries required) (V3) Procedures Section (entries required) (V2) Results Section (entries required) (V3) Social History Section (V3) Vital Signs Section (entries required) (V3)

This document type was originally based on the Continuity of Care Document (CCD) Release 1.1 which itself was derived from HITSP C32 and CCD Release 1.0.

The Continuity of Care Document (CCD) represents a core data set of the most relevant administrative, demographic, and clinical information facts about a patient's healthcare, covering one or more healthcare encounters. It provides a means for one healthcare practitioner, system, or setting to aggregate all of the pertinent data about a patient and forward it to another to support the continuity of care.

The primary use case for the CCD is to provide a snapshot in time containing the germane clinical, demographic, and administrative data for a specific patient. The key characteristic of a CCD is that the ServiceEvent is constrained to "PCPR". This means it does not function to report new ServiceEvents associated with performing care. It reports on care that has already been provided. The CCD provides a historical tally of the care over a range of time and is not a record of new services delivered.

More specific use cases, such as a Discharge Summary, Transfer Summary, Referral Note, Consultation Note, or Progress Note, are available as alternative documents in this guide.

Table 30: Continuity of Care Document (CCD) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.1.2:2015-08-01)					
templateId	1..1	SHALL		1198-8450	
@root	1..1	SHALL		1198-10038	2.16.840.1.113883.10.20.22.1.2
@extension	1..1	SHALL		1198-32516	2015-08-01
code	1..1	SHALL		1198-17180	
@code	1..1	SHALL		1198-17181	34133-9
@codeSystem	1..1	SHALL		1198-32138	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
author	1..*	SHALL		1198-9442	
assignedAuthor	1..1	SHALL		1198-9443	
documentationOf	1..1	SHALL		1198-8452	
serviceEvent	1..1	SHALL		1198-8480	
@classCode	1..1	SHALL		1198-8453	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PCPR
effectiveTime	1..1	SHALL		1198-8481	
low	1..1	SHALL		1198-8454	
high	1..1	SHALL		1198-8455	
performer	0..*	SHOULD		1198-8482	
@typeCode	1..1	SHALL		1198-8458	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF
assignedEntity	0..1	MAY		1198-8459	
id	1..1	SHALL		1198-30882	
assignedPerson	0..1	MAY		1198-32467	
component	1..1	SHALL		1198-30659	
structuredBody	1..1	SHALL		1198-30660	

component	1..1	SHALL		1198-30661	
section	1..1	SHALL		1198-30662	Allergies and Intolerances Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.6.1:2015-08-01)
component	1..1	SHALL		1198-30663	
section	1..1	SHALL		1198-30664	Medications Section (entries required) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.1.1:2014-06-09)
component	1..1	SHALL		1198-30665	
section	1..1	SHALL		1198-30666	Problem Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.5.1:2015-08-01)
component	0..1	SHOULD		1198-30667	
section	1..1	SHALL		1198-30668	Procedures Section (entries required) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.7.1:2014-06-09)
component	1..1	SHALL		1198-30669	
section	1..1	SHALL		1198-30670	Results Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.3.1:2015-08-01)
component	0..1	MAY		1198-30671	
section	1..1	SHALL		1198-30672	Advance Directives Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.21:2015-08-01)
component	0..1	MAY		1198-30673	
section	1..1	SHALL		1198-30674	Encounters Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.22:2015-08-01)
component	0..1	MAY		1198-30675	
section	1..1	SHALL		1198-30676	Family History Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.15:2015-08-01)
component	0..1	MAY		1198-30677	

section	1..1	SHALL		1198-30678	Functional Status Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.14:2014-06-09)
component	0..1	MAY		1198-30679	
section	1..1	SHALL		1198-30680	Immunizations Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.2.1:2015-08-01)
component	0..1	MAY		1198-30681	
section	1..1	SHALL		1198-30682	Medical Equipment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.23:2014-06-09)
component	0..1	MAY		1198-30683	
section	1..1	SHALL		1198-30684	Payers Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2015-08-01)
component	0..1	SHOULD		1198-30685	
section	1..1	SHALL		1198-30686	Plan of Treatment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09)
component	1..1	SHALL		1198-30687	
section	1..1	SHALL		1198-30688	Social History Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01)
component	1..1	SHALL		1198-30689	
section	1..1	SHALL		1198-30690	Vital Signs Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2015-08-01)
component	0..1	MAY		1198-32143	
section	1..1	SHALL		1198-32144	Mental Status Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.56:2015-08-01)
component	0..1	MAY		1198-32624	
section	1..1	SHALL		1198-32625	Nutrition Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.57)

1.1.6 Properties

1. Conforms to [US Realm Header \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8450) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.2" (CONF:1198-10038).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32516).
3. **SHALL** contain exactly one [1..1] **code** (CONF:1198-17180).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="34133-9" Summarization of Episode Note (CONF:1198-17181).
 - 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:1198-32138).

1.1.6.1 author

4. **SHALL** contain at least one [1..*] **author** (CONF:1198-9442).
 - a. Such authors **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:1198-9443).
 - i. Such assignedAuthors **SHALL** contain exactly one [1..1] assignedPerson and/or exactly one [1..1] representedOrganization (CONF:1198-8456).
 - ii. If assignedAuthor has an associated representedOrganization with no assignedPerson or assignedAuthoringDevice, then the value for "ClinicalDocument/author/assignedAuthor/id/@NullFlavor" **SHALL** be "NA" "Not applicable" 2.16.840.1.113883.5.1008 NullFlavor STATIC (CONF:1198-8457).

1.1.6.2 documentationOf

The documentationOf relationship in a Continuity Care Document contains the representation of providers who are wholly or partially responsible for the safety and well-being of a subject of care.

5. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:1198-8452).

The main activity being described by a CCD is the provision of healthcare over a period of time. This is shown by setting the value of serviceEvent/@classCode to "PCPR" (care provision) and indicating the duration over which care was provided in serviceEvent/effectiveTime. Additional data from outside this duration may also be included if it is relevant to care provided during that time range (e.g., reviewed during the stated time range).

NOTE: Implementations originating a CCD should take care to discover what the episode of care being summarized is. For example, when a patient fills out a form providing relevant health history, the episode of care being documented might be from birth to the present.

- a. This documentationOf **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:1198-8480).

- i. This serviceEvent **SHALL** contain exactly one [1..1] @classCode="PCPR" Care Provision (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-8453).
- ii. This serviceEvent **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-8481).
 - 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1198-8454).
 - 2. This effectiveTime **SHALL** contain exactly one [1..1] **high** (CONF:1198-8455).

1.1.6.3 performer

The serviceEvent/performer represents the healthcare providers involved in the current or pertinent historical care of the patient. Preferably, the patient's key healthcare providers would be listed, particularly their primary physician and any active consulting physicians, therapists, and counselors.

- iii. This serviceEvent **SHOULD** contain zero or more [0..*] **performer** (CONF:1198-8482).
 - 1. The performer, if present, **SHALL** contain exactly one [1..1] @typeCode="PRF" Participation physical performer (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1198-8458).
 - 2. The performer, if present, **MAY** contain zero or one [0..1] **assignedEntity** (CONF:1198-8459).
 - a. The assignedEntity, if present, **SHALL** contain exactly one [1..1] **id** (CONF:1198-30882) such that it
 - i. If this assignedEntity is an assignedPerson, the assignedEntity **SHOULD** contain zero or one [0..1] **id** such that it (CONF:1198-32466).
 - 1. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1198-32484).
 - b. The assignedEntity, if present, **MAY** contain zero or one [0..1] **assignedPerson** (CONF:1198-32467).

1.1.6.4 component

- 6. **SHALL** contain exactly one [1..1] **component** (CONF:1198-30659).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:1198-30660).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30661) such that it
 - 1. **SHALL** contain exactly one [1..1] Allergies and Intolerances Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.6.1:2015-08-01) (CONF:1198-30662).

- ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30663) such that it
 - 1. **SHALL** contain exactly one [1..1] [Medications Section \(entries required\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.1.1:2014-06-09) (CONF:1198-30664).
- iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30665) such that it
 - 1. **SHALL** contain exactly one [1..1] [Problem Section \(entries required\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.5.1:2015-08-01) (CONF:1198-30666).
- iv. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-30667) such that it
 - 1. **SHALL** contain exactly one [1..1] [Procedures Section \(entries required\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.7.1:2014-06-09) (CONF:1198-30668).
- v. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30669) such that it
 - 1. **SHALL** contain exactly one [1..1] [Results Section \(entries required\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2015-08-01) (CONF:1198-30670).
- vi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30671) such that it
 - 1. **SHALL** contain exactly one [1..1] [Advance Directives Section \(entries optional\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.21:2015-08-01) (CONF:1198-30672).
- vii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30673) such that it
 - 1. **SHALL** contain exactly one [1..1] [Encounters Section \(entries optional\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.22:2015-08-01) (CONF:1198-30674).
- viii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30675) such that it
 - 1. **SHALL** contain exactly one [1..1] [Family History Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2015-08-01) (CONF:1198-30676).
- ix. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30677) such that it
 - 1. **SHALL** contain exactly one [1..1] [Functional Status Section \(V2\)](#) (identifier:

- urn:hl7ii:2.16.840.1.113883.10.20.22.2.14:2014-06-09
(CONF:1198-30678).
- x. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30679) such that it
1. **SHALL** contain exactly one [1..1] [Immunizations Section \(entries required\) \(V3\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.2.1:2015-08-01)
(CONF:1198-30680).
- xi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30681) such that it
1. **SHALL** contain exactly one [1..1] [Medical Equipment Section \(V2\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.23:2014-06-09)
(CONF:1198-30682).
- xii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30683) such that it
1. **SHALL** contain exactly one [1..1] [Payers Section \(V3\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2015-08-01)
(CONF:1198-30684).
- xiii. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-30685) such that it
1. **SHALL** contain exactly one [1..1] [Plan of Treatment Section \(V2\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09)
(CONF:1198-30686).
- xiv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30687) such that it
1. **SHALL** contain exactly one [1..1] [Social History Section \(V3\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01)
(CONF:1198-30688).
- xv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30689) such that it
1. **SHALL** contain exactly one [1..1] [Vital Signs Section \(entries required\) \(V3\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2015-08-01)
(CONF:1198-30690).
- xvi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-32143) such that it
1. **SHALL** contain exactly one [1..1] [Mental Status Section \(V2\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.56:2015-08-01)
(CONF:1198-32144).
- xvii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-32624) such that it

1. **SHALL** contain exactly one [1..1] [Nutrition Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.57) (CONF:1198-32625).

Figure 25: CCD (V2) author Example

```
<author>
  <time value="201209151030-0800" />
  <assignedAuthor>
    <id extension="5555555555" 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" />
    <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>
```

Figure 26: CCD (V2) Performer Example

```
<performer typeCode="PRF">
  <functionCode code="PP" displayName="Primary Performer"
codeSystem="2.16.840.1.113883.12.443" codeSystemName="Provider Role">
    <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="2.16.840.1.113883.6.101" codeSystemName="NUCC" />
    <addr>
      ...
    </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>
      ...
    </representedOrganization>
  </assignedEntity>
</performer>
```

Figure 27: CCD (V2) serviceEvent Example

```
<documentationOf>
  <serviceEvent classCode="PCPR">
    <!-- The effectiveTime reflects the provision of care summarized in the document.
    In this scenario, the provision of care summarized is the lifetime for
    the patient -->
    <effectiveTime>
      <low value="19750501" />
      <!-- The low value represents when the summarized provision of care began.
      In this scenario, the patient's date of birth -->
      <high value="20120915" />
      <!-- The high value represents when the summarized provision of care being
      ended. In this scenario, when chart summary was created -->
    </effectiveTime>
    <performer typeCode="PRF">
      ...
    </performer>
  </serviceEvent>
</documentationOf>
```


1.1.7 Diagnostic Imaging Report (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.5:2015-08-01 (open)]

Table 31: Diagnostic Imaging Report (V3) Contexts

Contained By:	Contains:
	Code Observations DICOM Object Catalog Section - DCM 121181 Fetus Subject Context Findings Section (DIR) Observer Context Physician of Record Participant (V2) Physician Reading Study Performer (V2) Procedure Context Quantity Measurement Observation SOP Instance Observation Text Observation US Realm Date and Time (DT.US.FIELDDED) US Realm Person Name (PN.US.FIELDDED)

A Diagnostic Imaging Report (DIR) is a document that contains a consulting specialist’s interpretation of image data. It conveys the interpretation to the referring (ordering) physician and becomes part of the patient’s medical record. It is for use in Radiology, Endoscopy, Cardiology, and other imaging specialties.

Table 32: Diagnostic Imaging Report (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.1.5:2015-08-01)					
templateId	1..1	SHALL		1198-8404	
@root	1..1	SHALL		1198-10042	2.16.840.1.113883.10.20.22.1.5
@extension	1..1	SHALL		1198-32515	2014-06-09
id	1..1	SHALL		1198-30932	
@root	1..1	SHALL		1198-30933	
code	1..1	SHALL		1198-14833	
@code	1..1	SHALL		1198-14834	urn:oid:1.3.6.1.4.1.12009.10.2.5 (LOINC Imaging Document Codes)
informant	0..0	SHALL NOT		1198-8410	
informationRecipient	0..*	MAY		1198-8411	
participant	0..1	MAY		1198-8414	
associatedEntity	1..1	SHALL		1198-31198	
associatedPerson	1..1	SHALL		1198-31199	
name	1..1	SHALL		1198-31200	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
inFulfillmentOf	0..*	MAY		1198-30936	
order	1..1	SHALL		1198-30937	
id	1..*	SHALL		1198-30938	
documentationOf	1..1	SHALL		1198-8416	
serviceEvent	1..1	SHALL		1198-8431	
@classCode	1..1	SHALL		1198-8430	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
id	0..*	SHOULD		1198-8418	

code	1..1	SHALL		1198-8419	
performer	0..*	SHOULD		1198-8422	Physician Reading Study Performer (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.6.2.1:2014-06-09)
relatedDocument	0..1	MAY		1198-8432	
parentDocument	1..1	SHALL		1198-32089	
id	1..1	SHALL		1198-32090	
componentOf	0..1	MAY		1198-30939	
encompassingEncounter	1..1	SHALL		1198-30940	
id	1..*	SHALL		1198-30941	
effectiveTime	1..1	SHALL		1198-30943	US Realm Date and Time (DT.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.3)
responsibleParty	0..1	MAY		1198-30945	
assignedEntity	1..1	SHALL		1198-30946	
encounterParticipant	0..1	SHOULD		1198-30948	Physician of Record Participant (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.6.2.2:2014-06-09)
component	1..1	SHALL		1198-14907	
structuredBody	1..1	SHALL		1198-30695	
component	1..1	SHALL		1198-30696	
section	1..1	SHALL		1198-30697	Findings Section (DIR) (identifier: urn:oid:2.16.840.1.113883.10.20.6.1.2)
component	0..1	SHOULD		1198-30698	
section	1..1	SHALL		1198-30699	DICOM Object Catalog Section - DCM 121181 (identifier: urn:oid:2.16.840.1.113883.10.20.6.1.1)
component	0..*	MAY		1198-31055	
section	1..1	SHALL		1198-31056	

code	1..1	SHALL		1198-31057	
@code	1..1	SHALL		1198-31207	urn:oid:2.16.840.1.113883.11.20.9.59 (DIRSectionTypeCodes)
title	0..1	SHOULD		1198-31058	
text	0..1	SHOULD		1198-31059	
subject	0..*	MAY		1198-31215	
relatedSubject	1..1	SHALL		1198-31216	Fetus Subject Context (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.3)
author	0..*	MAY		1198-31217	
assignedAuthor	1..1	SHALL		1198-31218	Observer Context (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.4)
entry	0..*	MAY		1198-31213	
act	1..1	SHALL		1198-31214	Procedure Context (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.5)
entry	0..*	MAY		1198-31357	
observation	1..1	SHALL		1198-31358	Text Observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.12)
entry	0..*	MAY		1198-31359	
observation	1..1	SHALL		1198-31360	Code Observations (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.13)
entry	0..*	MAY		1198-31361	
observation	1..1	SHALL		1198-31362	Quantity Measurement Observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.14)
entry	0..*	MAY		1198-31363	
observation	1..1	SHALL		1198-31364	SOP Instance Observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.8)
component	0..*	MAY		1198-31208	

1.1.8 Properties

1. Conforms to [US Realm Header \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8404) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.5" (CONF:1198-10042).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1198-32515).
3. **SHALL** contain exactly one [1..1] **id** (CONF:1198-30932).
 - a. This id **SHALL** contain exactly one [1..1] **@root** (CONF:1198-30933).

OIDs SHALL be represented in dotted decimal notation, where each decimal number is either 0 or starts with a nonzero digit. More formally, an OID SHALL be in the form of the regular expression: (0-2)((1-9)0-9)*|0)+

- i. The ClinicalDocument/id/@root attribute **SHALL** be a syntactically correct OID, and **SHALL NOT** be a UUID (CONF:1198-30934).
- ii. OIDs **SHALL** be no more than 64 characters in length (CONF:1198-30935).

Preferred code is 18748-4 LOINC Diagnostic Imaging Report

4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-14833).
 - a. This code **SHALL** contain exactly one [1..1] **@code**, which **SHOULD** be selected from ValueSet [LOINC Imaging Document Codes](#) urn:oid:1.3.6.1.4.1.12009.10.2.5 **DYNAMIC** (CONF:1198-14834).
5. **SHALL NOT** contain [0..0] **informant** (CONF:1198-8410).

1.1.8.1 informationRecipient

6. **MAY** contain zero or more [0..*] **informationRecipient** (CONF:1198-8411).
 - a. The physician requesting the imaging procedure (ClinicalDocument/participant[@typeCode=REF]/associatedEntity), if present, **SHOULD** also be recorded as an informationRecipient, unless in the local setting another physician (such as the attending physician for an inpatient) is known to be the appropriate recipient of the report (CONF:1198-8412).
 - b. When no referring physician is present, as in the case of self-referred screening examinations allowed by law, the intendedRecipient **MAY** be absent. The intendedRecipient **MAY** also be the health chart of the patient, in which case the receivedOrganization **SHALL** be the scoping organization of that chart (CONF:1198-8413).

1.1.8.2 participant

If participant is present, the associatedEntity/associatedPerson element SHALL be present and SHALL represent the physician requesting the imaging procedure (the referring physician AssociatedEntity that is the target of ClinicalDocument/participant@typeCode=REF).

7. **MAY** contain zero or one [0..1] **participant** (CONF:1198-8414) such that it
 - a. **SHALL** contain exactly one [1..1] **associatedEntity** (CONF:1198-31198).

- i. This associatedEntity **SHALL** contain exactly one [1..1] **associatedPerson** (CONF:1198-31199).
 - 1. This associatedPerson **SHALL** contain exactly one [1..1] **US Realm Person Name (PN.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-31200).

1.1.8.3 inFulfillmentOf

An inFulfillmentOf element represents the Placer Order that is either a group of orders (modeled as PlacerGroup in the Placer Order RMIM of the Orders & Observations domain) or a single order item (modeled as ObservationRequest in the same RMIM). This optionality reflects two major approaches to the grouping of procedures as implemented in the installed base of imaging information systems. These approaches differ in their handling of grouped procedures and how they are mapped to identifiers in the Digital Imaging and Communications in Medicine (DICOM) image and structured reporting data. The example of a CT examination covering chest, abdomen, and pelvis will be used in the discussion below. In the IHE Scheduled Workflow model, the Chest CT, Abdomen CT, and Pelvis CT each represent a Requested Procedure, and all three procedures are grouped under a single Filler Order. The Filler Order number maps directly to the DICOM Accession Number in the DICOM imaging and report data. A widely deployed alternative approach maps the requested procedure identifiers directly to the DICOM Accession Number. The Requested Procedure ID in such implementations may or may not be different from the Accession Number, but is of little identifying importance because there is only one Requested Procedure per Accession Number. There is no identifier that formally connects the requested procedures ordered in this group.

- 8. **MAY** contain zero or more [0..*] **inFulfillmentOf** (CONF:1198-30936).
 - a. The inFulfillmentOf, if present, **SHALL** contain exactly one [1..1] **order** (CONF:1198-30937).
 - i. This order **SHALL** contain at least one [1..*] **id** (CONF:1198-30938).
Note: DICOM Accession Number in the DICOM imaging and report data

1.1.8.4 documentationOf

Each serviceEvent indicates an imaging procedure that the provider describes and interprets in the content of the DIR. The main activity being described by this document is the interpretation of the imaging procedure. This is shown by setting the value of the @classCode attribute of the serviceEvent element to ACT, and indicating the duration over which care was provided in the effectiveTime element. Within each documentationOf element, there is one serviceEvent element. This event is the unit imaging procedure corresponding to a billable item. The type of imaging procedure may be further described in the serviceEvent/code element. This guide makes no specific recommendations about the vocabulary to use for describing this event. In IHE Scheduled Workflow environments, one serviceEvent/id element contains the DICOM Study Instance UID from the Modality Worklist, and the second serviceEvent/id element contains the DICOM Requested Procedure ID from the Modality Worklist. These two ids are in a single serviceEvent. The effectiveTime for the serviceEvent covers the duration of the imaging procedure being reported. This event should have one or more performers, which may participate at the same or different periods of time. Service events map to DICOM Requested Procedures. That is, serviceEvent/id is the ID of the Requested Procedure.

9. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:1198-8416) such that it
 - a. **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:1198-8431) such that it
 - i. **SHALL** contain exactly one [1..1] **@classCode="ACT"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-8430).
 - ii. **SHOULD** contain zero or more [0..*] **id** (CONF:1198-8418).
 - iii. **SHALL** contain exactly one [1..1] **code** (CONF:1198-8419).
 1. The value of serviceEvent/code **SHALL NOT** conflict with the ClinicalDocument/code. When transforming from DICOM SR documents that do not contain a procedure code, an appropriate nullFlavor **SHALL** be used on serviceEvent/code (CONF:1198-8420).

The performer is the Physician Reading Study Performer defined in serviceEvent and is usually different from the attending physician. The reading physician interprets the images and evidence of the study (DICOM Definition).

- iv. **SHOULD** contain zero or more [0..*] Physician Reading Study Performer (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.6.2.1:2014-06-09) (CONF:1198-8422).

1.1.8.5 relatedDocument

A DIR may have three types of parent document: • A superseded version that the present document wholly replaces (typeCode = RPLC). DIRs may go through stages of revision prior to being legally authenticated. Such early stages may be drafts from transcription, those created by residents, or other preliminary versions. Policies not covered by this specification may govern requirements for retention of such earlier versions. Except for forensic purposes, the latest version in a chain of revisions represents the complete and current report. • An original version that the present document appends (typeCode = APND). When a DIR is legally authenticated, it can be amended by a separate addendum document that references the original. • A source document from which the present document is transformed (typeCode = XFRM). A DIR may be created by transformation from a DICOM Structured Report (SR) document or from another DIR. An example of the latter case is the creation of a derived document for inclusion of imaging results in a clinical document.

10. **MAY** contain zero or one [0..1] **relatedDocument** (CONF:1198-8432).
 - a. The relatedDocument, if present, **SHALL** contain exactly one [1..1] **parentDocument** (CONF:1198-32089).
 - i. This parentDocument **SHALL** contain exactly one [1..1] **id** (CONF:1198-32090).
 1. OIDs **SHALL** be represented in dotted decimal notation, where each decimal number is either 0 or starts with a nonzero digit. More formally, an OID **SHALL** be in the form of the regular expression: ([0-2])(.[1-9][0-9]*|0)+ (CONF:1198-10031).
 2. OIDs **SHALL** be no more than 64 characters in length (CONF:1198-10032).

- b. When a Diagnostic Imaging Report has been transformed from a DICOM SR document, relatedDocument/@typeCode **SHALL** be XFRM, and relatedDocument/parentDocument/id **SHALL** contain the SOP Instance UID of the original DICOM SR document (CONF:1198-8433).

1.1.8.6 componentOf

The id element of the encompassingEncounter represents the identifier for the encounter. When the diagnostic imaging procedure is performed in the context of a hospital stay or an outpatient visit for which there is an Encounter Number, that number should be present as the ID of the encompassingEncounter. The effectiveTime represents the time interval or point in time in which the encounter took place. The encompassing encounter might be that of the hospital or office visit in which the diagnostic imaging procedure was performed. If the effective time is unknown, a nullFlavor attribute can be used.

11. **MAY** contain zero or one [0..1] **componentOf** (CONF:1198-30939).

The id element of the encompassingEncounter represents the identifier for the encounter. When the diagnostic imaging procedure is performed in the context of a hospital stay or an outpatient visit for which there is an Encounter Number, that number should be present as the ID of the encompassingEncounter.

The effectiveTime represents the time interval or point in time in which the encounter took place. The encompassing encounter might be that of the hospital or office visit in which the diagnostic imaging procedure was performed. If the effective time is unknown, a nullFlavor attribute can be used.

- a. The componentOf, if present, **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:1198-30940).
 - i. This encompassingEncounter **SHALL** contain at least one [1..*] **id** (CONF:1198-30941).
 1. In the case of transformed DICOM SR documents, an appropriate null flavor **MAY** be used if the id is unavailable (CONF:1198-30942).
 - ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **US Realm Date and Time (DT.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.3) (CONF:1198-30943).
 - iii. This encompassingEncounter **MAY** contain zero or one [0..1] **responsibleParty** (CONF:1198-30945).
 1. The responsibleParty, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-30946).
 - a. **SHOULD** contain zero or one [0..1] assignedPerson **OR** contain zero or one [0..1] representedOrganization (CONF:1198-30947).
 - iv. This encompassingEncounter **SHOULD** contain zero or one [0..1] **Physician of Record Participant (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.6.2.2:2014-06-09) (CONF:1198-30948).

1.1.8.7 component

12. **SHALL** contain exactly one [1..1] **component** (CONF:1198-14907).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:1198-30695).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30696) such that it
 1. **SHALL** contain exactly one [1..1] [Findings Section \(DIR\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.6.1.2) (CONF:1198-30697).
 - ii. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-30698) such that it
 1. **SHALL** contain exactly one [1..1] [DICOM Object Catalog Section - DCM 121181](#) (identifier: urn:oid:2.16.840.1.113883.10.20.6.1.1) (CONF:1198-30699).
 - a. The DICOM Object Catalog section (templateId 2.16.840.1.113883.10.20.6.1.1), if present, **SHALL** be the first section in the document Body (CONF:1198-31206).
 - iii. This structuredBody **MAY** contain zero or more [0..*] **component** (CONF:1198-31055) such that it
 1. **SHALL** contain exactly one [1..1] **section** (CONF:1198-31056).
 - a. This section **SHALL** contain exactly one [1..1] **code** (CONF:1198-31057).

For sections listed in the DIR Section Type Codes table, the code element must contain a LOINC code or DCM code for sections that have no LOINC equivalent

- i. This code **SHALL** contain exactly one [1..1] **@code**, which **SHOULD** be selected from ValueSet [DIRSectionTypeCodes](#) urn:oid:2.16.840.1.113883.11.20.9.59 **DYNAMIC** (CONF:1198-31207).
Note: The section/code **SHOULD** be selected from LOINC or DICOM for sections not listed in the DIR Section Type Codes table

There is no equivalent to section/title in DICOM SR, so for a CDA to SR transformation, the section/code will be transferred and the title element will be dropped.

- b. This section **SHOULD** contain zero or one [0..1] **title** (CONF:1198-31058).
- c. This section **SHOULD** contain zero or one [0..1] **text** (CONF:1198-31059).
 - i. If clinical statements are present, the section/text **SHALL** represent faithfully all such statements and **MAY** contain additional text (CONF:1198-31060).
 - ii. All text elements **SHALL** contain content. Text elements **SHALL** contain PCDATA or child elements (CONF:1198-31061).

- iii. The text elements (and their children) **MAY** contain Web Access to DICOM Persistent Object (WADO) references to DICOM objects by including a linkHtml element where @href is a valid WADO URL and the text content of linkHtml is the visible text of the hyperlink (CONF:1198-31062).
- d. This section **MAY** contain zero or more [0..*] **subject** (CONF:1198-31215) such that it
 - i. **SHALL** contain exactly one [1..1] Fetus Subject Context (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.3) (CONF:1198-31216).

This author element is used when the author of a section is different from the author(s) listed in the Header

- e. This section **MAY** contain zero or more [0..*] **author** (CONF:1198-31217) such that it
 - i. **SHALL** contain exactly one [1..1] Observer Context (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.4) (CONF:1198-31218).

If the service context of a section is different from the value specified in documentationOf/serviceEvent, then the section **SHALL** contain one or more entries containing Procedure Context (templateId 2.16.840.1.113883.10.20.6.2.5), which will reset the context for any clinical statements nested within those elements

- f. This section **MAY** contain zero or more [0..*] **entry** (CONF:1198-31213) such that it
 - i. **SHALL** contain exactly one [1..1] Procedure Context (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.5) (CONF:1198-31214).
- g. This section **MAY** contain zero or more [0..*] **entry** (CONF:1198-31357) such that it
 - i. **SHALL** contain exactly one [1..1] Text Observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.12) (CONF:1198-31358).
- h. This section **MAY** contain zero or more [0..*] **entry** (CONF:1198-31359) such that it
 - i. **SHALL** contain exactly one [1..1] Code Observations (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.13) (CONF:1198-31360).
- i. This section **MAY** contain zero or more [0..*] **entry** (CONF:1198-31361) such that it

- i. **SHALL** contain exactly one [1..1] Quantity Measurement Observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.14) (CONF:1198-31362).
- j. This section **MAY** contain zero or more [0..*] **entry** (CONF:1198-31363) such that it
 - i. **SHALL** contain exactly one [1..1] SOP Instance Observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.8) (CONF:1198-31364).
- k. This section **MAY** contain zero or more [0..*] **component** (CONF:1198-31208).
 - i. **SHALL** contain child elements (CONF:1198-31210).
- l. All sections defined in the DIR Section Type Codes table **SHALL** be top-level sections (CONF:1198-31211).
- m. **SHALL** contain at least one text element or one or more component elements (CONF:1198-31212).

Table 33: LOINC Imaging Document Codes

Value Set: LOINC Imaging Document Codes urn:oid:1.3.6.1.4.1.12009.10.2.5			
Value Set Source: http://search.loinc.org			
Code	Code System	Code System OID	Print Name
24754-4	LOINC	urn:oid:2.16.840.1.11388 3.6.1	Administration of vasodilator into catheter of Vein
26376-4	LOINC	urn:oid:2.16.840.1.11388 3.6.1	Administration of vasodilator into catheter of Vein - bilateral
26377-2	LOINC	urn:oid:2.16.840.1.11388 3.6.1	Administration of vasodilator into catheter of Vein - left
26378-0	LOINC	urn:oid:2.16.840.1.11388 3.6.1	Administration of vasodilator into catheter of Vein - right
30649-8	LOINC	urn:oid:2.16.840.1.11388 3.6.1	Peripheral artery Fluoroscopic angiogram Additional angioplasty W contrast IA
30641-5	LOINC	urn:oid:2.16.840.1.11388 3.6.1	Vein Fluoroscopic angiogram Additional angioplasty W contrast IV
36760-7	LOINC	urn:oid:2.16.840.1.11388 3.6.1	AV shunt Fluoroscopic angiogram Angioplasty W contrast
36762-3	LOINC	urn:oid:2.16.840.1.11388 3.6.1	Extremity vessel Fluoroscopic angiogram Angioplasty W contrast
69067-7	LOINC	urn:oid:2.16.840.1.11388 3.6.1	Unspecified body region Fluoroscopic angiogram Angioplasty W contrast
24543-1	LOINC	urn:oid:2.16.840.1.11388 3.6.1	Aorta Fluoroscopic angiogram Angioplasty W contrast IA
...			

Table 34: DIRSectionTypeCodes

Value Set: DIRSectionTypeCodes urn:oid:2.16.840.1.113883.11.20.9.59
 The Section Type codes used by DIR are all narrative document sections. The codes in this table are drawn from LOINC (<http://www.loinc.org/>) and DICOM (<http://medical.nema.org/>). The section/code should be selected from LOINC or DICOM for sections not listed in this table.
 Value Set Source: <http://www.loinc.org/>

Code	Code System	Code System OID	Print Name
121181	DCM	urn:oid:1.2.840.10008.2.16.4	DICOM Object Catalog
121060	DCM	urn:oid:1.2.840.10008.2.16.4	History
121062	DCM	urn:oid:1.2.840.10008.2.16.4	Request
121064	DCM	urn:oid:1.2.840.10008.2.16.4	Current Procedure Descriptions
121066	DCM	urn:oid:1.2.840.10008.2.16.4	Prior Procedure Descriptions
121068	DCM	urn:oid:1.2.840.10008.2.16.4	Previous Findings
121070	DCM	urn:oid:1.2.840.10008.2.16.4	Findings (DIR)
121072	DCM	urn:oid:1.2.840.10008.2.16.4	Impressions
121074	DCM	urn:oid:1.2.840.10008.2.16.4	Recommendations
121076	DCM	urn:oid:1.2.840.10008.2.16.4	Conclusions
...			

Figure 28: DIR Participant Example

```

<participant typeCode="REF">
  <associatedEntity classCode="PROV">
    <id nullFlavor="NI" />
    <addr nullFlavor="NI" />
    <telecom nullFlavor="NI" />
    <associatedPerson>
      <name>
        <given>Amanda</given>
        <family>Assigned</family>
        <suffix>MD</suffix>
      </name>
    </associatedPerson>
  </associatedEntity>
</participant>

```

1.1.9 Discharge Summary (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.8:2015-08-01 (open)]

Table 35: Discharge Summary (V3) Contexts

Contained By:	Contains:
	<ul style="list-style-type: none"> Admission Diagnosis Section (V3) Admission Medications Section (entries optional) (V3) Allergies and Intolerances Section (entries optional) (V3) Chief Complaint and Reason for Visit Section Chief Complaint Section Discharge Diagnosis Section (V3) Discharge Medications Section (entries optional) (V3) Discharge Medications Section (entries required) (V3) Family History Section (V3) Functional Status Section (V2) History of Past Illness Section (V3) History of Present Illness Section Hospital Consultations Section Hospital Course Section Hospital Discharge Instructions Section Hospital Discharge Physical Section Hospital Discharge Studies Summary Section Immunizations Section (entries optional) (V3) Nutrition Section Plan of Treatment Section (V2) Problem Section (entries optional) (V3) Procedures Section (entries optional) (V2) Reason for Visit Section Review of Systems Section Social History Section (V3) Vital Signs Section (entries optional) (V3)

The Discharge Summary is a document which synthesizes a patient's admission to a hospital, LTPAC provider, or other setting. It provides information for the continuation of care following discharge. The Joint Commission requires the following information to be included in the Discharge Summary (<http://www.jointcommission.org/>):

- The reason for hospitalization (the admission)
- The procedures performed, as applicable
- The care, treatment, and services provided
- The patient's condition and disposition at discharge
- Information provided to the patient and family
- Provisions for follow-up care

The best practice for a Discharge Summary is to include the discharge disposition in the display of the header.

Table 36: Discharge Summary (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.1.8:2015-08-01)					
templateId	1..1	SHALL		1198-8463	
@root	1..1	SHALL		1198-10044	2.16.840.1.113883.10.20.22.1.8
@extension	1..1	SHALL		1198-32517	2015-08-01
code	1..1	SHALL		1198-17178	
@code	1..1	SHALL		1198-17179	urn:oid:2.16.840.1.113883.11.20.4.1 (DischargeSummaryDocumentTypeCode)
participant	0..*	MAY		1198-8467	
componentOf	1..1	SHALL		1198-8471	
encompassingEncounter	1..1	SHALL		1198-8472	
effectiveTime	1..1	SHALL		1198-32611	
low	1..1	SHALL		1198-8473	
high	1..1	SHALL		1198-8475	
dischargeDispositionCode	1..1	SHALL		1198-8476	urn:oid:2.16.840.1.113883.3.88.12.80.33 (NUBC UB-04 FL17 Patient Status)
responsibleParty	0..1	MAY		1198-8479	
assignedEntity	1..1	SHALL		1198-32613	
encounterParticipant	0..*	MAY		1198-8478	
assignedEntity	1..1	SHALL		1198-32615	
component	1..1	SHALL		1198-9539	
structuredBody	1..1	SHALL		1198-30518	
component	1..1	SHALL		1198-30519	
section	1..1	SHALL		1198-30520	Allergies and Intolerances Section (entries optional) (V3) (identifier:

					urn:hl7ii:2.16.840.1.113883.10.20.22.2.6:2015-08-01
component	1..1	SHALL		1198-30521	
section	1..1	SHALL		1198-30522	Hospital Course Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.5)
component	1..1	SHALL		1198-30523	
section	1..1	SHALL		1198-30524	Discharge Diagnosis Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.24:2015-08-01)
component	0..1	SHOULD		1198-30525	
section	1..1	SHALL		1198-30526	Discharge Medications Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.11:2015-08-01)
component	1..1	SHALL		1198-30527	
section	1..1	SHALL		1198-30528	Plan of Treatment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09)
component	0..1	MAY		1198-30529	
section	1..1	SHALL		1198-30530	Chief Complaint Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1)
component	0..1	MAY		1198-30531	
section	1..1	SHALL		1198-30532	Chief Complaint and Reason for Visit Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.13)
component	0..1	MAY		1198-30533	
section	1..1	SHALL		1198-30534	Nutrition Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.57)
component	0..1	MAY		1198-30535	
section	1..1	SHALL		1198-30536	Family History Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2015-08-01)
component	0..1	MAY		1198-	

				30537	
section	1..1	SHALL		1198-30538	Functional Status Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.14:2014-06-09)
component	0..1	MAY		1198-30539	
section	1..1	SHALL		1198-30540	History of Past Illness Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.20:2015-08-01)
component	0..1	MAY		1198-30541	
section	1..1	SHALL		1198-30542	History of Present Illness Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.4)
component	0..1	MAY		1198-30543	
section	1..1	SHALL		1198-30544	Admission Diagnosis Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.43:2015-08-01)
component	0..1	MAY		1198-30545	
section	1..1	SHALL		1198-30546	Admission Medications Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.44:2015-08-01)
component	0..1	MAY		1198-30547	
section	1..1	SHALL		1198-30548	Hospital Consultations Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.42)
component	0..1	MAY		1198-30549	
section	1..1	SHALL		1198-30550	Hospital Discharge Instructions Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.41)
component	0..1	MAY		1198-30551	
section	1..1	SHALL		1198-30552	Hospital Discharge Physical Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.26)
component	0..1	MAY		1198-30553	
section	1..1	SHALL		1198-	Hospital Discharge Studies

				30554	Summary Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.16)
component	0..1	MAY		1198-30555	
section	1..1	SHALL		1198-30556	Immunizations Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.2:2015-08-01)
component	0..1	MAY		1198-30557	
section	1..1	SHALL		1198-30558	Problem Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.5:2015-08-01)
component	0..1	MAY		1198-30559	
section	1..1	SHALL		1198-30560	Procedures Section (entries optional) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.7:2014-06-09)
component	0..1	MAY		1198-30561	
section	1..1	SHALL		1198-30562	Reason for Visit Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.12)
component	0..1	MAY		1198-30563	
section	1..1	SHALL		1198-30564	Review of Systems Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.18)
component	0..1	MAY		1198-30565	
section	1..1	SHALL		1198-30566	Social History Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01)
component	0..1	MAY		1198-30567	
section	1..1	SHALL		1198-30568	Vital Signs Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4:2015-08-01)
component	0..1	MAY		1198-31586	
section	1..1	SHALL		1198-31587	Discharge Medications Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2015-08-01)

1.1.10 Properties

1. Conforms to [US Realm Header \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8463) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.8" (CONF:1198-10044).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32517).

The Discharge Summary recommends use of a single document type code, 18842-5 "Discharge summary", with further specification provided by author or performer, setting, or specialty. When pre-coordinated codes are used, any coded values describing the author or performer of the service act or the practice setting must be consistent with the LOINC document type.

3. **SHALL** contain exactly one [1..1] **code** (CONF:1198-17178).
 - a. This code **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [DischargeSummaryDocumentTypeCode](#) urn:oid:2.16.840.1.113883.11.20.4.1 **DYNAMIC** (CONF:1198-17179).

1.1.10.1 participant

The participant element in the Discharge Summary header follows the General Header Constraints for participants. Discharge Summary does not specify any use for functionCode for participants. Local policies will determine how this element should be used in implementations.

4. **MAY** contain zero or more [0..*] **participant** (CONF:1198-8467).
 - a. When participant/@typeCode is IND, associatedEntity/@classCode **SHALL** be selected from ValueSet 2.16.840.1.113883.11.20.9.33 INDRoleclassCodes STATIC 2011-09-30 (CONF:1198-8469).

1.1.10.2 componentOf

The Discharge Summary is always associated with a Hospital Admission using the encompassingEncounter element in the header.

5. **SHALL** contain exactly one [1..1] **componentOf** (CONF:1198-8471).
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:1198-8472).
 - i. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-32611).

The admission date is recorded in the componentOf/encompassingEncounter/effectiveTime/low.

1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1198-8473).

The discharge date is recorded in the componentOf/encompassingEncounter/effectiveTime/high.

2. This effectiveTime **SHALL** contain exactly one [1..1] **high** (CONF:1198-8475).

The dischargeDispositionCode records the disposition of the patient at time of discharge. Access to the National Uniform Billing Committee (NUBC) code system requires a membership. The following conformance statement aligns with HITSP C80 requirements.

The dischargeDispositionCode, @displayName, or NUBC UB-04 Print Name, must be displayed when the document is rendered.

- ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **dischargeDispositionCode**, which **SHOULD** be selected from ValueSet [NUBC UB-04 FL17 Patient Status](#) urn:oid:2.16.840.1.113883.3.88.12.80.33 **DYNAMIC** (CONF:1198-8476).

The responsibleParty element represents only the party responsible for the encounter, not necessarily the entire episode of care.

- iii. This encompassingEncounter **MAY** contain zero or one [0..1] **responsibleParty** (CONF:1198-8479).
 1. The responsibleParty, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-32613).
 - a. This assignedEntity **SHALL** contain an assignedPerson or a representedOrganization or both (CONF:1198-32898).

The encounterParticipant element represents persons who participated in the encounter and not necessarily the entire episode of care.

- iv. This encompassingEncounter **MAY** contain zero or more [0..*] **encounterParticipant** (CONF:1198-8478).
 1. The encounterParticipant, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-32615).
 - a. This assignedEntity **SHALL** contain an assignedPerson or a representedOrganization or both (CONF:1198-32899).

1.1.10.3 component

6. **SHALL** contain exactly one [1..1] **component** (CONF:1198-9539).

In this template (templateId 2.16.840.1.113883.10.20.22.1.8.2), coded entries are optional.

- a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:1198-30518).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30519) such that it
 1. **SHALL** contain exactly one [1..1] [Allergies and Intolerances Section \(entries optional\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.6:2015-08-01) (CONF:1198-30520).

- ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30521) such that it
 - 1. **SHALL** contain exactly one [1..1] Hospital Course Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.5) (CONF:1198-30522).
- iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30523) such that it
 - 1. **SHALL** contain exactly one [1..1] Discharge Diagnosis Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.24:2015-08-01) (CONF:1198-30524).
- iv. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-30525) such that it
 - 1. **SHALL** contain exactly one [1..1] Discharge Medications Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.11:2015-08-01) (CONF:1198-30526).
- v. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30527) such that it
 - 1. **SHALL** contain exactly one [1..1] Plan of Treatment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09) (CONF:1198-30528).
- vi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30529) such that it
 - 1. **SHALL** contain exactly one [1..1] Chief Complaint Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1) (CONF:1198-30530).
- vii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30531) such that it
 - 1. **SHALL** contain exactly one [1..1] Chief Complaint and Reason for Visit Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.13) (CONF:1198-30532).
- viii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30533) such that it
 - 1. **SHALL** contain exactly one [1..1] Nutrition Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.57) (CONF:1198-30534).
- ix. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30535) such that it
 - 1. **SHALL** contain exactly one [1..1] Family History Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2015-08-01) (CONF:1198-30536).

- x. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30537) such that it
 - 1. **SHALL** contain exactly one [1..1] [Functional Status Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.14:2014-06-09) (CONF:1198-30538).
- xi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30539) such that it
 - 1. **SHALL** contain exactly one [1..1] [History of Past Illness Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.20:2015-08-01) (CONF:1198-30540).
- xii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30541) such that it
 - 1. **SHALL** contain exactly one [1..1] [History of Present Illness Section](#) (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.4) (CONF:1198-30542).
- xiii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30543) such that it
 - 1. **SHALL** contain exactly one [1..1] [Admission Diagnosis Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.43:2015-08-01) (CONF:1198-30544).
- xiv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30545) such that it
 - 1. **SHALL** contain exactly one [1..1] [Admission Medications Section \(entries optional\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.44:2015-08-01) (CONF:1198-30546).
- xv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30547) such that it
 - 1. **SHALL** contain exactly one [1..1] [Hospital Consultations Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.42) (CONF:1198-30548).
- xvi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30549) such that it
 - 1. **SHALL** contain exactly one [1..1] [Hospital Discharge Instructions Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.41) (CONF:1198-30550).
- xvii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30551) such that it
 - 1. **SHALL** contain exactly one [1..1] [Hospital Discharge Physical Section](#) (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.26) (CONF:1198-30552).

- xviii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30553) such that it
1. **SHALL** contain exactly one [1..1] [Hospital Discharge Studies Summary Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.16) (CONF:1198-30554).
- xix. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30555) such that it
1. **SHALL** contain exactly one [1..1] [Immunizations Section \(entries optional\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.2:2015-08-01) (CONF:1198-30556).
- xx. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30557) such that it
1. **SHALL** contain exactly one [1..1] [Problem Section \(entries optional\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.5:2015-08-01) (CONF:1198-30558).
- xxi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30559) such that it
1. **SHALL** contain exactly one [1..1] [Procedures Section \(entries optional\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.7:2014-06-09) (CONF:1198-30560).
- xxii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30561) such that it
1. **SHALL** contain exactly one [1..1] [Reason for Visit Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.12) (CONF:1198-30562).
- xxiii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30563) such that it
1. **SHALL** contain exactly one [1..1] [Review of Systems Section](#) (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.18) (CONF:1198-30564).
- xxiv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30565) such that it
1. **SHALL** contain exactly one [1..1] [Social History Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01) (CONF:1198-30566).
- xxv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30567) such that it
1. **SHALL** contain exactly one [1..1] [Vital Signs Section \(entries optional\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4:2015-08-01) (CONF:1198-30568).

xxvi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-31586) such that it

1. **SHALL** contain exactly one [1..1] Discharge Medications Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.11.1:2015-08-01) (CONF:1198-31587).

xxvii. This structuredBody **SHALL NOT** contain a Chief Complaint and Reason for Visit Section (2.16.840.1.113883.10.20.22.2.13) when either a Chief Complaint Section (1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1) or a Reason for Visit Section (2.16.840.1.113883.10.20.22.2.12) is present (CONF:1198-30569).

Table 37: DischargeSummaryDocumentTypeCode

Value Set: DischargeSummaryDocumentTypeCode urn:oid:2.16.840.1.113883.11.20.4.1 A value set of LOINC document codes for discharge summaries.			
Specific URL Pending Value Set Source: http://www.loinc.org/			
Code	Code System	Code System OID	Print Name
18842-5	LOINC	urn:oid:2.16.840.1.113883.6.1	Discharge summary
11490-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Physician Discharge summary
28655-9	LOINC	urn:oid:2.16.840.1.113883.6.1	Physician attending Discharge summary
29761-4	LOINC	urn:oid:2.16.840.1.113883.6.1	Dentist Discharge summary
34745-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Nurse Discharge summary
34105-7	LOINC	urn:oid:2.16.840.1.113883.6.1	Hospital Discharge summary
34106-5	LOINC	urn:oid:2.16.840.1.113883.6.1	Physician Hospital Discharge summary
...			

Table 38: NUBC UB-04 FL17 Patient Status

Value Set: NUBC UB-04 FL17 Patient Status urn:oid:2.16.840.1.113883.3.88.12.80.33			
National Uniform Billing Committee (NUBC) code system.			
Value Set Source: http://www.nubc.org			
Code	Code System	Code System OID	Print Name
01	nubc-UB-04-Manual-code set	urn:oid:2.16.840.1.113883.6.301	Discharged to Home or Self Care (Routine Discharge)
01	nubc-UB-04-Manual-code set	urn:oid:2.16.840.1.113883.6.301	Discharged/transferred to a Short-Term General Hospital for Inpatient Care
03	nubc-UB-04-Manual-code set	urn:oid:2.16.840.1.113883.6.301	Discharged/transferred to Skilled Nursing Facility (SNF) with Medicare Certification in Anticipation of Skilled Care
04	nubc-UB-04-Manual-code set	urn:oid:2.16.840.1.113883.6.301	Discharged/transferred to a Facility that Provides Custodial or Supportive Care
05	nubc-UB-04-Manual-code set	urn:oid:2.16.840.1.113883.6.301	Discharged/transferred to a Designated Cancer Center or Children's Hospital
05	nubc-UB-04-Manual-code set	urn:oid:2.16.840.1.113883.6.301	Discharged/transferred to Home Under Care of an Organized Home Health Service Organization in Anticipation of Covered Skilled Care
06	nubc-UB-04-Manual-code set	urn:oid:2.16.840.1.113883.6.301	Discharged/transferred to Home Under Care of an Organized Home Health Service Organization in Anticipation of Covered Skilled Care
07	nubc-UB-04-Manual-code set	urn:oid:2.16.840.1.113883.6.301	Left Against Medical Advice or Discontinued Care
08	nubc-UB-04-Manual-code set	urn:oid:2.16.840.1.113883.6.301	Reserved for Assignment by the NUBC
09	nubc-UB-04-Manual-code set	urn:oid:2.16.840.1.113883.6.301	Admitted as an Inpatient to this Hospital
...			

Figure 29: Discharge Summary encompassing Encounter Example

```

<componentOf>
  <encompassingEncounter>
    <id extension="9937012" root="2.16.840.1.113883.19" />
    <code codeSystem="2.16.840.1.113883.6.12" codeSystemName="CPT-4" code="99213"
displayName="Evaluation and Management" />
    <effectiveTime>
      <low value="20090227130000+0500" />
      <high value="20090227130000+0500" />
    </effectiveTime>
    <dischargeDispositionCode code="01" codeSystem="2.16.840.1.113883.12.112"
displayName="Routine Discharge" codeSystemName="HL7 Discharge Disposition" />
    <location>
      <healthCareFacility>
        <id root="2.16.540.1.113883.19.2" />
      </healthCareFacility>
    </location>
  </encompassingEncounter>
</componentOf>

```

1.1.11 History and Physical (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.3:2015-08-01 (open)]

Table 39: History and Physical (V3) Contexts

Contained By:	Contains:
	Allergies and Intolerances Section (entries optional) (V3) Assessment and Plan Section (V2) Assessment Section Chief Complaint and Reason for Visit Section Chief Complaint Section Family History Section (V3) General Status Section History of Past Illness Section (V3) History of Present Illness Section Immunizations Section (entries optional) (V3) Instructions Section (V2) Medications Section (entries optional) (V2) Physical Exam Section (V3) Plan of Treatment Section (V2) Problem Section (entries optional) (V3) Procedures Section (entries optional) (V2) Reason for Visit Section Results Section (entries optional) (V3) Review of Systems Section Social History Section (V3) US Realm Date and Time (DT.US.FIELDDED)

Contained By:	Contains:
	Vital Signs Section (entries optional) (V3)

A History and Physical (H&P) note is a medical report that documents the current and past conditions of the patient. It contains essential information that helps determine an individual's health status.

The first portion of the report is a current collection of organized information unique to an individual. This is typically supplied by the patient or the caregiver, concerning the current medical problem or the reason for the patient encounter. This information is followed by a description of any past or ongoing medical issues, including current medications and allergies. Information is also obtained about the patient's lifestyle, habits, and diseases among family members.

The next portion of the report contains information obtained by physically examining the patient and gathering diagnostic information in the form of laboratory tests, imaging, or other diagnostic procedures.

The report ends with the clinician's assessment of the patient's situation and the intended plan to address those issues.

A History and Physical Examination is required upon hospital admission as well as before operative procedures. An initial evaluation in an ambulatory setting is often documented in the form of an H&P note.

Table 40: History and Physical (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.3:2015-08-01)					
templateId	1..1	SHALL		1198-8283	
@root	1..1	SHALL		1198-10046	2.16.840.1.113883.10.20.22.1.3
@extension	1..1	SHALL		1198-32518	2015-08-01
code	1..1	SHALL		1198-17185	
@code	1..1	SHALL		1198-17186	urn:oid:2.16.840.1.113883.1.11.20.22 (HPDocumentType)
informationRecipient	0..*	MAY		1198-32482	
intendedRecipient	1..1	SHALL		1198-32483	
participant	0..*	MAY		1198-8286	
inFulfillmentOf	0..*	MAY		1198-8336	
componentOf	1..1	SHALL		1198-8338	
encompassingEncounter	1..1	SHALL		1198-8339	
id	1..*	SHALL		1198-8340	
effectiveTime	1..1	SHALL		1198-8341	US Realm Date and Time (DT.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.3)
responsibleParty	0..1	MAY		1198-8345	
encounterParticipant	0..*	MAY		1198-8342	
location	0..1	MAY		1198-8344	
component	1..1	SHALL		1198-8349	
structuredBody	1..1	SHALL		1198-30570	
component	1..1	SHALL		1198-30571	
section	1..1	SHALL		1198-30572	Allergies and Intolerances Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2

					0.22.2.6:2015-08-01
component	0..1	MAY		1198-30573	
section	1..1	SHALL		1198-30574	Assessment Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.8)
component	0..1	MAY		1198-30575	
section	1..1	SHALL		1198-30576	Plan of Treatment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09)
component	0..1	MAY		1198-30577	
section	1..1	SHALL		1198-30578	Assessment and Plan Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.9:2014-06-09)
component	0..1	MAY		1198-30579	
section	1..1	SHALL		1198-30580	Chief Complaint Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1)
component	0..1	MAY		1198-30581	
section	1..1	SHALL		1198-30582	Chief Complaint and Reason for Visit Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.13)
component	1..1	SHALL		1198-30583	
section	1..1	SHALL		1198-30584	Family History Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2015-08-01)
component	1..1	SHALL		1198-30585	
section	1..1	SHALL		1198-30586	General Status Section (identifier: urn:oid:2.16.840.1.113883.10.20.2.5)
component	1..1	SHALL		1198-30587	
section	1..1	SHALL		1198-30588	History of Past Illness Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.20:2015-08-01)
component	0..1	SHOULD		1198-30589	

section	1..1	SHALL		1198-30590	History of Present Illness Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.4)
component	0..1	MAY		1198-30591	
section	1..1	SHALL		1198-30592	Immunizations Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.2:2015-08-01)
component	0..1	MAY		1198-30593	
section	1..1	SHALL		1198-31385	Instructions Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.45:2014-06-09)
component	1..1	SHALL		1198-30595	
section	1..1	SHALL		1198-30596	Medications Section (entries optional) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.1:2014-06-09)
component	1..1	SHALL		1198-30597	
section	1..1	SHALL		1198-30598	Physical Exam Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.2.10:2015-08-01)
component	0..1	MAY		1198-30599	
section	1..1	SHALL		1198-30600	Problem Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.5:2015-08-01)
component	0..1	MAY		1198-30601	
section	1..1	SHALL		1198-30602	Procedures Section (entries optional) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.7:2014-06-09)
component	0..1	MAY		1198-30603	
section	1..1	SHALL		1198-30604	Reason for Visit Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.12)
component	1..1	SHALL		1198-30605	
section	1..1	SHALL		1198-30606	Results Section (entries optional) (V3) (identifier:

					urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2015-08-01
component	1..1	SHALL		1198-30607	
section	1..1	SHALL		1198-30608	Review of Systems Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.18)
component	1..1	SHALL		1198-30609	
section	1..1	SHALL		1198-30610	Social History Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01)
component	1..1	SHALL		1198-30611	
section	1..1	SHALL		1198-30612	Vital Signs Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4:2015-08-01)

1.1.12 Properties

1. Conforms to [US Realm Header \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8283) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.3" (CONF:1198-10046).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32518).

The H&P Note recommends use of a single document type code, 34117-2

3. **SHALL** contain exactly one [1..1] **code** (CONF:1198-17185).
 - a. This code **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [HPDocumentType](#) urn:oid:2.16.840.1.113883.1.11.20.22 **DYNAMIC** (CONF:1198-17186).
4. **MAY** contain zero or more [0..*] **informationRecipient** (CONF:1198-32482).
 - a. The informationRecipient, if present, **SHALL** contain exactly one [1..1] **intendedRecipient** (CONF:1198-32483).

1.1.12.1 participant

The participant element in the H&P header follows the General Header Constraints for participants. H&P Note does not specify any use for functionCode for participants. Local policies will determine how this element should be used in implementations.

5. **MAY** contain zero or more [0..*] **participant** (CONF:1198-8286).

A special class of participant is the supporting person or organization: an individual or an organization that has a relationship to the patient, including parents, relatives, caregivers,

insurance policyholders, and guarantors. In the case of a supporting person who is also an emergency contact or next-of-kin, a participant element should be present for each role recorded.

- a. When participant/@typeCode is IND, associatedEntity/@classCode **SHALL** be selected from ValueSet 2.16.840.1.113883.11.20.9.33 INDRoleclassCodes **STATIC** 2011-09-30 (CONF:1198-8333).

1.1.12.2 inFulfillmentOf

inFulfillmentOf elements describe the prior orders that are fulfilled (in whole or part) by the service events described in this document. For example, the prior order might be a referral and the H&P Note may be in partial fulfillment of that referral.

6. **MAY** contain zero or more [0..*] inFulfillmentOf (CONF:1198-8336).

1.1.12.3 componentOf

The H&P Note is always associated with an encounter.

7. **SHALL** contain exactly one [1..1] componentOf (CONF:1198-8338).
 - a. This componentOf **SHALL** contain exactly one [1..1] encompassingEncounter (CONF:1198-8339).
 - i. This encompassingEncounter **SHALL** contain at least one [1..*] id (CONF:1198-8340).

The effectiveTime represents the time interval or point in time in which the encounter took place.

- ii. This encompassingEncounter **SHALL** contain exactly one [1..1] US Realm Date and Time (DT.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.3) (CONF:1198-8341).

The responsibleParty element records only the party responsible for the encounter, not necessarily the entire episode of care.

- iii. This encompassingEncounter **MAY** contain zero or one [0..1] responsibleParty (CONF:1198-8345).
 1. The responsibleParty element, if present, **SHALL** contain an assignedEntity element, which **SHALL** contain an assignedPerson element, a representedOrganization element, or both (CONF:1198-8348).

The encounterParticipant elements represent only those participants in the encounter, not necessarily the entire episode of care.

- iv. This encompassingEncounter **MAY** contain zero or more [0..*] encounterParticipant (CONF:1198-8342).
 1. An encounterParticipant element, if present, **SHALL** contain an assignedEntity element, which **SHALL** contain an assignedPerson element, a representedOrganization element, or both (CONF:1198-8343).

- v. This encompassingEncounter **MAY** contain zero or one [0..1] **location** (CONF:1198-8344).

1.1.12.4 component

- 8. **SHALL** contain exactly one [1..1] **component** (CONF:1198-8349).

In this template (templateId 2.16.840.1.113883.10.20.22.1.3.2), coded entries are optional.

- a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:1198-30570).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30571) such that it
 - 1. **SHALL** contain exactly one [1..1] [Allergies and Intolerances Section \(entries optional\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.6:2015-08-01) (CONF:1198-30572).
 - ii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30573) such that it
 - 1. **SHALL** contain exactly one [1..1] [Assessment Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.8) (CONF:1198-30574).
 - iii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30575) such that it
 - 1. **SHALL** contain exactly one [1..1] [Plan of Treatment Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09) (CONF:1198-30576).
 - iv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30577) such that it
 - 1. **SHALL** contain exactly one [1..1] [Assessment and Plan Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.9:2014-06-09) (CONF:1198-30578).
 - v. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30579) such that it
 - 1. **SHALL** contain exactly one [1..1] [Chief Complaint Section](#) (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1) (CONF:1198-30580).
 - vi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30581) such that it
 - 1. **SHALL** contain exactly one [1..1] [Chief Complaint and Reason for Visit Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.13) (CONF:1198-30582).
 - vii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30583) such that it

1. **SHALL** contain exactly one [1..1] [Family History Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2015-08-01) (CONF:1198-30584).
- viii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30585) such that it
 1. **SHALL** contain exactly one [1..1] [General Status Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.2.5) (CONF:1198-30586).
- ix. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30587) such that it
 1. **SHALL** contain exactly one [1..1] [History of Past Illness Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.20:2015-08-01) (CONF:1198-30588).
- x. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-30589) such that it
 1. **SHALL** contain exactly one [1..1] [History of Present Illness Section](#) (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.4) (CONF:1198-30590).
- xi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30591) such that it
 1. **SHALL** contain exactly one [1..1] [Immunizations Section \(entries optional\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.2:2015-08-01) (CONF:1198-30592).
- xii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30593) such that it
 1. **SHALL** contain exactly one [1..1] [Instructions Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.45:2014-06-09) (CONF:1198-31385).
- xiii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30595) such that it
 1. **SHALL** contain exactly one [1..1] [Medications Section \(entries optional\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.1:2014-06-09) (CONF:1198-30596).
- xiv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30597) such that it
 1. **SHALL** contain exactly one [1..1] [Physical Exam Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.2.10:2015-08-01) (CONF:1198-30598).
- xv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30599) such that it

1. **SHALL** contain exactly one [1..1] [Problem Section \(entries optional\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.5:2015-08-01) (CONF:1198-30600).
- xvi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30601) such that it
1. **SHALL** contain exactly one [1..1] [Procedures Section \(entries optional\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.7:2014-06-09) (CONF:1198-30602).
- xvii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30603) such that it
1. **SHALL** contain exactly one [1..1] [Reason for Visit Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.12) (CONF:1198-30604).
- xviii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30605) such that it
1. **SHALL** contain exactly one [1..1] [Results Section \(entries optional\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2015-08-01) (CONF:1198-30606).
- xix. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30607) such that it
1. **SHALL** contain exactly one [1..1] [Review of Systems Section](#) (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.18) (CONF:1198-30608).
- xx. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30609) such that it
1. **SHALL** contain exactly one [1..1] [Social History Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01) (CONF:1198-30610).
- xxi. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30611) such that it
1. **SHALL** contain exactly one [1..1] [Vital Signs Section \(entries optional\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4:2015-08-01) (CONF:1198-30612).
- xxii. This structuredBody **SHALL** contain a Chief Complaint and Reason for Visit Section (2.16.840.1.113883.10.20.22.2.13) or a Chief Complaint Section (1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1) or a Reason for Visit Section (2.16.840.1.113883.10.20.22.2.12) (CONF:1198-30613).
- xxiii. This structuredBody **SHALL** contain an Assessment and Plan Section (V2) (2.16.840.1.113883.10.20.22.2.9:2014-06-09), or an Assessment Section (2.16.840.1.113883.10.20.22.2.8) and a Plan of Treatment Section (V2) (2.16.840.1.113883.10.20.22.2.10:2014-06-09) (CONF:1198-30614).

xxiv. This structuredBody **SHALL NOT** contain an Assessment and Plan Section (V2) (2.16.840.1.113883.10.20.22.2.9:2014-06-09) when either an Assessment Section (2.16.840.1.113883.10.20.22.2.8) or a Plan of Treatment Section (V2) (2.16.840.1.113883.10.20.22.2.10:2014-06-09) is present (CONF:1198-30615).

xxv. This structuredBody **SHALL NOT** contain a Chief Complaint and Reason for Visit Section (2.16.840.1.113883.10.20.22.2.13) when either a Chief Complaint Section (1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1) or a Reason for Visit Section (2.16.840.1.113883.10.20.22.2.12) is present (CONF:1198-30616).

Table 41: HPDocumentType

Value Set: HPDocumentType urn:oid:2.16.840.1.113883.1.11.20.22			
Specific URL Pending			
Value Set Source: http://www.loinc.org/			
Code	Code System	Code System OID	Print Name
34117-2	LOINC	urn:oid:2.16.840.1.113883.6.1	History and physical note
11492-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Provider-unspecified, History and physical note
28626-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Physician History and physical note
34774-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Surgery History and physical note
34115-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Medical student Hospital History and physical note
34116-4	LOINC	urn:oid:2.16.840.1.113883.6.1	Physician Nursing facility History and physical note
34095-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Comprehensive history and physical note
34096-8	LOINC	urn:oid:2.16.840.1.113883.6.1	Nursing facility Comprehensive history and physical note
51849-8	LOINC	urn:oid:2.16.840.1.113883.6.1	Admission history and physical note
47039-3	LOINC	urn:oid:2.16.840.1.113883.6.1	Hospital Admission history and physical note
...			

Figure 30: H&P encompassing Encounter Example

```

<componentOf>
  <encompassingEncounter>
    <id extension="9937012" root="2.16.840.1.113883.19" />
    <code codeSystem="2.16.840.1.113883.6.12" codeSystemName="CPT-4"
      code="99213" displayName="Evaluation and Management" />
    <effectiveTime>
      <low value="20090227130000+0500" />
      <high value="20090227130000+0500" />
    </effectiveTime>
    <location>
      <healthCareFacility>
        <id root="2.16.540.1.113883.19.2" />
      </healthCareFacility>
    </location>
  </encompassingEncounter>
</componentOf>

```

1.1.13 Operative Note (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.7:2015-08-01 (open)]

Table 42: Operative Note (V3) Contexts

Contained By:	Contains:
	Anesthesia Section (V2) Complications Section (V3) Operative Note Fluids Section Operative Note Surgical Procedure Section Plan of Treatment Section (V2) Planned Procedure Section (V2) Postoperative Diagnosis Section Preoperative Diagnosis Section (V3) Procedure Description Section Procedure Disposition Section Procedure Estimated Blood Loss Section Procedure Findings Section (V3) Procedure Implants Section Procedure Indications Section (V2) Procedure Specimens Taken Section Surgical Drains Section US Realm Date and Time (DT.US.FIELDDED)

The Operative Note is a frequently used type of procedure note with specific requirements set forth by regulatory agencies.

The Operative Note is created immediately following a surgical or other high-risk procedure. It records the pre- and post-surgical diagnosis, pertinent events of the procedure, as well as the

condition of the patient following the procedure. The report should be sufficiently detailed to support the diagnoses, justify the treatment, document the course of the procedure, and provide continuity of care.

Table 43: Operative Note (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.7:2015-08-01)					
templateId	1..1	SHALL		1198-8483	
@root	1..1	SHALL		1198-10048	2.16.840.1.113883.10.20.22.1.7
@extension	1..1	SHALL		1198-32519	2015-08-01
code	1..1	SHALL		1198-17187	
@code	1..1	SHALL		1198-17188	urn:oid:2.16.840.1.113883.11.20.1.1 (SurgicalOperationNoteDocumentTypeCode)
documentationOf	1..*	SHALL		1198-8486	
serviceEvent	1..1	SHALL		1198-8493	
effectiveTime	1..1	SHALL		1198-8494	US Realm Date and Time (DT.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.3)
performer	1..1	SHALL		1198-8489	
@typeCode	1..1	SHALL		1198-8495	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PPRF
assignedEntity	1..1	SHALL		1198-10917	
code	1..1	SHALL		1198-8490	urn:oid:2.16.840.1.113883.3.88.1 2.3221.4.2 (Provider Role)
performer	0..*	MAY		1198-32736	
@typeCode	1..1	SHALL		1198-32738	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = SPRF
assignedEntity	1..1	SHALL		1198-32737	
code	1..1	SHALL		1198-32739	urn:oid:2.16.840.1.113883.3.88.1 2.3221.4.2 (Provider Role)
authorization	0..1	MAY		1198-32404	
@typeCode	1..1	SHALL		1198-32408	urn:oid:2.16.840.1.113883.5.100 2 (HL7ActRelationshipType) = AUTH
consent	1..1	SHALL		1198-32405	

@classCode	1..1	SHALL		1198-32409	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CONS
@moodCode	1..1	SHALL		1198-32410	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
statusCode	1..1	SHALL		1198-32411	
component	1..1	SHALL		1198-9585	
structuredBody	1..1	SHALL		1198-30485	
component	1..1	SHALL		1198-30486	
section	1..1	SHALL		1198-30487	Anesthesia Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.25:2014-06-09)
component	1..1	SHALL		1198-30488	
section	1..1	SHALL		1198-30489	Complications Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.37:2015-08-01)
component	1..1	SHALL		1198-30490	
section	1..1	SHALL		1198-30491	Preoperative Diagnosis Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.34:2015-08-01)
component	1..1	SHALL		1198-30492	
section	1..1	SHALL		1198-30493	Procedure Estimated Blood Loss Section (identifier: urn:oid:2.16.840.1.113883.10.20.18.2.9)
component	1..1	SHALL		1198-30494	
section	1..1	SHALL		1198-30495	Procedure Findings Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.28:2015-08-01)
component	1..1	SHALL		1198-30496	
section	1..1	SHALL		1198-30497	Procedure Specimens Taken Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.31)
component	1..1	SHALL		1198-30498	
section	1..1	SHALL		1198-	Procedure Description Section

				30499	(identifier: urn:oid:2.16.840.1.113883.10.20.22.2.27)
component	1..1	SHALL		1198-30500	
section	1..1	SHALL		1198-30501	Postoperative Diagnosis Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.35)
component	0..1	MAY		1198-30502	
section	1..1	SHALL		1198-30503	Procedure Implants Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.40)
component	0..1	MAY		1198-30504	
section	1..1	SHALL		1198-30505	Operative Note Fluids Section (identifier: urn:oid:2.16.840.1.113883.10.20.7.12)
component	0..1	MAY		1198-30506	
section	1..1	SHALL		1198-30507	Operative Note Surgical Procedure Section (identifier: urn:oid:2.16.840.1.113883.10.20.7.14)
component	0..1	MAY		1198-30508	
section	1..1	SHALL		1198-30509	Plan of Treatment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09)
component	0..1	MAY		1198-30510	
section	1..1	SHALL		1198-30511	Planned Procedure Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.30:2014-06-09)
component	0..1	MAY		1198-30512	
section	1..1	SHALL		1198-30513	Procedure Disposition Section (identifier: urn:oid:2.16.840.1.113883.10.20.18.2.12)
component	0..1	MAY		1198-30514	
section	1..1	SHALL		1198-30515	Procedure Indications Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09)

					0.22.2.29:2014-06-09
component	0..1	MAY		1198-30516	
section	1..1	SHALL		1198-30517	Surgical Drains Section (identifier: urn:oid:2.16.840.1.113883.10.20.7.13

1.1.14 Properties

1. Conforms to [US Realm Header \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8483) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.7" (CONF:1198-10048).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32519).

The Operative Note recommends use of a single document type code, 11504-8 "Provider-unspecified Operation Note", with further specification provided by author or performer, setting, or specialty data in the CDA header. Some of the LOINC codes in the Surgical Operation Note Document Type Code table are pre-coordinated with the practice setting or the training or professional level of the author. Use of pre-coordinated codes is not recommended because of potential conflict with other information in the header. When these codes are used, any coded values describing the author or performer of the service act or the practice setting must be consistent with the LOINC document type.

3. **SHALL** contain exactly one [1..1] **code** (CONF:1198-17187).
 - a. This code **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [SurgicalOperationNoteDocumentTypeCode](#) urn:oid:2.16.840.1.113883.11.20.1.1 **DYNAMIC** (CONF:1198-17188).

1.1.14.1 documentationOf

A serviceEvent represents the main act, such as a colonoscopy or an appendectomy, being documented. A serviceEvent can further specialize the act inherent in the ClinicalDocument/code, such as where the ClinicalDocument/code is simply "Surgical Operation Note" and the procedure is "Appendectomy." serviceEvent is required in the Operative Note and it must be equivalent to or further specialize the value inherent in the ClinicalDocument/code; it shall not conflict with the value inherent in the ClinicalDocument/code, as such a conflict would create ambiguity. serviceEvent/effectiveTime can be used to indicate the time the actual event (as opposed to the encounter surrounding the event) took place. If the date and the duration of the procedure is known, serviceEvent/effectiveTime/low is used with a width element that describes the duration; no high element is used. However, if only the date is known, the date is placed in both the low and high elements.

4. **SHALL** contain at least one [1..*] **documentationOf** (CONF:1198-8486).
 - a. Such documentationOfs **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:1198-8493).

- i. This serviceEvent **SHALL** contain exactly one [1..1] [US Realm Date and Time \(DT.US.FIELDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.3) (CONF:1198-8494).
 - 1. The serviceEvent/effectiveTime **SHALL** be present with effectiveTime/low (CONF:1198-8488).
 - 2. If a width is not present, the serviceEvent/effectiveTime **SHALL** include effectiveTime/high (CONF:1198-10058).
 - 3. When only the date and the length of the procedure are known a width element **SHALL** be present and the serviceEvent/effectiveTime/high **SHALL NOT** be present (CONF:1198-10060).

1.1.14.2 performer

This performer represents a clinicians who actually and principally carry out the serviceEvent. Typically, these are clinicians who have surgical privileges in their institutions such as Surgeons, Obstetrician/Gynecologists, and Family Practice Physicians. The performer may also be non-physician providers (NPPs) who have surgical privileges. There may be more than one primary performer in the case of complicated surgeries. There are occasionally co-surgeons. Usually they will be billing separately and will each dictate their own notes. An example may be spinal surgery , where a general surgeon and an orthopedic surgeon both are present and billing off the same Current Procedural Terminology (CPT) codes. Typically two Operative Notes are generated; however, each will list the other as a co-surgeon. Any assistants are identified as a secondary performer (SPRF) in a second performer participant.

- ii. This serviceEvent **SHALL** contain exactly one [1..1] **performer** (CONF:1198-8489) such that it
 - 1. **SHALL** contain exactly one [1..1] @typeCode="PPRF" Primary performer (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1198-8495).
 - 2. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-10917).
 - a. This assignedEntity **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [Provider Role](#) urn:oid:2.16.840.1.113883.3.88.12.3221.4.2 **DYNAMIC** (CONF:1198-8490).

1.1.14.3 performer

This performer represents any assistants.

- iii. This serviceEvent **MAY** contain zero or more [0..*] **performer** (CONF:1198-32736) such that it
 - 1. **SHALL** contain exactly one [1..1] @typeCode="SPRF" Secondary performer (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:1198-32738).
 - 2. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-32737).

- a. This assignedEntity **SHALL** contain exactly one [1..1] code, which **SHALL** be selected from ValueSet [Provider Role](#) urn:oid:2.16.840.1.113883.3.88.12.3221.4.2 **DYNAMIC** (CONF:1198-32739).
- iv. The value of serviceEvent/code **SHALL** be from ICD9 CM Procedures (CodeSystem 2.16.840.1.113883.6.104), CPT-4 (CodeSystem 2.16.840.1.113883.6.12), or values descending from 71388002 (Procedure) from the SNOMED CT (CodeSystem 2.16.840.1.113883.6.96) ValueSet Procedure 2.16.840.1.113883.3.88.12.80.28 **DYNAMIC** (CONF:1198-8487).

Authorization represents consent. Consent, if present, shall be represented by authorization/consent.

- 5. **MAY** contain zero or one [0..1] authorization (CONF:1198-32404).
 - a. The authorization, if present, **SHALL** contain exactly one [1..1] @typeCode="AUTH" authorized by (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-32408).
 - b. The authorization, if present, **SHALL** contain exactly one [1..1] consent (CONF:1198-32405).
 - i. This consent **SHALL** contain exactly one [1..1] @classCode="CONS" consent (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1198-32409).
 - ii. This consent **SHALL** contain exactly one [1..1] @moodCode="EVN" event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1198-32410).
 - iii. This consent **SHALL** contain exactly one [1..1] statusCode (CONF:1198-32411).

1.1.14.4 component

- 6. **SHALL** contain exactly one [1..1] component (CONF:1198-9585).
 - a. This component **SHALL** contain exactly one [1..1] structuredBody (CONF:1198-30485).
 - i. This structuredBody **SHALL** contain exactly one [1..1] component (CONF:1198-30486) such that it
 - 1. **SHALL** contain exactly one [1..1] [Anesthesia Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.25:2014-06-09) (CONF:1198-30487).
 - ii. This structuredBody **SHALL** contain exactly one [1..1] component (CONF:1198-30488) such that it
 - 1. **SHALL** contain exactly one [1..1] [Complications Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.37:2015-08-01) (CONF:1198-30489).
 - iii. This structuredBody **SHALL** contain exactly one [1..1] component (CONF:1198-30490) such that it

1. **SHALL** contain exactly one [1..1] [Preoperative Diagnosis Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.34:2015-08-01) (CONF:1198-30491).
- iv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30492) such that it
 1. **SHALL** contain exactly one [1..1] [Procedure Estimated Blood Loss Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.18.2.9) (CONF:1198-30493).
- v. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30494) such that it
 1. **SHALL** contain exactly one [1..1] [Procedure Findings Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.28:2015-08-01) (CONF:1198-30495).
- vi. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30496) such that it
 1. **SHALL** contain exactly one [1..1] [Procedure Specimens Taken Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.31) (CONF:1198-30497).
- vii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30498) such that it
 1. **SHALL** contain exactly one [1..1] [Procedure Description Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.27) (CONF:1198-30499).
- viii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30500) such that it
 1. **SHALL** contain exactly one [1..1] [Postoperative Diagnosis Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.35) (CONF:1198-30501).
- ix. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30502) such that it
 1. **SHALL** contain exactly one [1..1] [Procedure Implants Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.40) (CONF:1198-30503).
- x. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30504) such that it
 1. **SHALL** contain exactly one [1..1] [Operative Note Fluids Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.7.12) (CONF:1198-30505).
- xi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30506) such that it

1. **SHALL** contain exactly one [1..1] [Operative Note Surgical Procedure Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.7.14) (CONF:1198-30507).
- xii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30508) such that it
 1. **SHALL** contain exactly one [1..1] [Plan of Treatment Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09) (CONF:1198-30509).
- xiii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30510) such that it
 1. **SHALL** contain exactly one [1..1] [Planned Procedure Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.30:2014-06-09) (CONF:1198-30511).
- xiv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30512) such that it
 1. **SHALL** contain exactly one [1..1] [Procedure Disposition Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.18.2.12) (CONF:1198-30513).
- xv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30514) such that it
 1. **SHALL** contain exactly one [1..1] [Procedure Indications Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.29:2014-06-09) (CONF:1198-30515).
- xvi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30516) such that it
 1. **SHALL** contain exactly one [1..1] [Surgical Drains Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.7.13) (CONF:1198-30517).

Table 44: SurgicalOperationNoteDocumentTypeCode

Value Set: SurgicalOperationNoteDocumentTypeCode urn:oid:2.16.840.1.113883.11.20.1.1			
Specific URL Pending			
Value Set Source: http://www.loinc.org/			
Code	Code System	Code System OID	Print Name
11504-8	LOINC	urn:oid:2.16.840.1.113883.6.1	Provider-unspecified Operation note
34137-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Outpatient Surgical operation note
28583-3	LOINC	urn:oid:2.16.840.1.113883.6.1	Dentist Operation note
28624-5	LOINC	urn:oid:2.16.840.1.113883.6.1	Podiatry Operation note
28573-4	LOINC	urn:oid:2.16.840.1.113883.6.1	Physician, Operation note
34877-1	LOINC	urn:oid:2.16.840.1.113883.6.1	Urology Surgical operation note
34874-8	LOINC	urn:oid:2.16.840.1.113883.6.1	Surgery Surgical operation note
34870-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Plastic surgery Surgical operation note
34868-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Orthopaedic surgery Surgical operation note
34818-5	LOINC	urn:oid:2.16.840.1.113883.6.1	Otolaryngology Surgical operation note

Table 45: Provider Role

Value Set: Provider Role urn:oid:2.16.840.1.113883.3.88.12.3221.4.2			
The Provider type vocabulary classifies providers according to the type of license or accreditation they hold or the service they provide.			
Value Set Source: http://www.nucc.org/index.php?option=com_content&view=article&id=14&Itemid=125			
Code	Code System	Code System OID	Print Name
CP	Provider Role (HL7)	urn:oid:2.16.840.1.113883.3.88.12.3221.4	Consulting Provider
PP	Provider Role (HL7)	urn:oid:2.16.840.1.113883.3.88.12.3221.4	Primary Care Provider
RP	Provider Role (HL7)	urn:oid:2.16.840.1.113883.3.88.12.3221.4	Referring Provider

Figure 31: Operative Note performer Example

```

<performer typeCode="PPRF">
  <assignedEntity>
    <id extension="1" root="2.16.840.1.113883.19" />
    <code code="2086S0120X" codeSystem="2.16.840.1.113883.6.101" codeSystemName="NUCC"
displayName="Pediatric Surgeon" />
    <addr>
      <streetAddressLine>1013 Healthcare Drive</streetAddressLine>
      <city>Ann Arbor</city>
      <state>MI</state>
      <postalCode>99999</postalCode>
      <country>US</country>
    </addr>
    <telecom value="tel:(555)555-1013" />
    <assignedPerson>
      <name>
        <prefix>Dr.</prefix>
        <given>Carl</given>
        <family>Cutter</family>
      </name>
    </assignedPerson>
  </assignedEntity>
</performer>

```

Figure 32: Operative Note serviceEvent Example

```

<serviceEvent classCode="PROC">
  <code code="801460020" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"
displayName="Laparoscopic Appendectomy" />
  <effectiveTime>
    <low value="201003292240" />
    <width value="15" unit="m" />
  </effectiveTime>
  ...
</serviceEvent>

```

1.1.15 Procedure Note (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.6:2015-08-01 (open)]

Table 46: Procedure Note (V3) Contexts

Contained By:	Contains:
	Allergies and Intolerances Section (entries optional) (V3) Anesthesia Section (V2) Assessment and Plan Section (V2) Assessment Section

Contained By:	Contains:
	Chief Complaint and Reason for Visit Section Chief Complaint Section Complications Section (V3) Family History Section (V3) History of Past Illness Section (V3) History of Present Illness Section Medical (General) History Section Medications Administered Section (V2) Medications Section (entries optional) (V2) Physical Exam Section (V3) Plan of Treatment Section (V2) Planned Procedure Section (V2) Postprocedure Diagnosis Section (V3) Procedure Description Section Procedure Disposition Section Procedure Estimated Blood Loss Section Procedure Findings Section (V3) Procedure Implants Section Procedure Indications Section (V2) Procedure Specimens Taken Section Procedures Section (entries optional) (V2) Reason for Visit Section Review of Systems Section Social History Section (V3) US Realm Date and Time (DT.US.FIELDDED)

A Procedure Note encompasses many types of non-operative procedures including interventional cardiology, gastrointestinal endoscopy, osteopathic manipulation, and many other specialty fields. Procedure Notes are differentiated from Operative Notes because they do not involve incision or excision as the primary act.

The Procedure Note is created immediately following a non-operative procedure. It records the indications for the procedure and, when applicable, postprocedure diagnosis, pertinent events of the procedure, and the patient's tolerance for the procedure. It should be detailed enough to justify the procedure, describe the course of the procedure, and provide continuity of care.

Table 47: Procedure Note (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.6:2015-08-01)					
templateId	1..1	SHALL		1198-8496	
@root	1..1	SHALL		1198-10050	2.16.840.1.113883.10.20.22.1.6
@extension	1..1	SHALL		1198-32520	2015-08-01
code	1..1	SHALL		1198-17182	
@code	1..1	SHALL		1198-17183	urn:oid:2.16.840.1.113883.11.20.6.1 (ProcedureNoteDocumentTypeCodes)
participant	0..*	MAY		1198-8504	
@typeCode	1..1	SHALL		1198-8505	urn:oid:2.16.840.1.113883.5.88 (participationFunction) = IND
functionCode	1..1	SHALL		1198-8506	urn:oid:2.16.840.1.113883.5.88 (participationFunction) = PCP
associatedEntity/@classCode	1..1	SHALL		1198-8507	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PROV
associatedPerson	1..1	SHALL		1198-8508	
documentationOf	1..*	SHALL		1198-8510	
serviceEvent	1..1	SHALL		1198-10061	
effectiveTime	1..1	SHALL		1198-10062	US Realm Date and Time (DT.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.3)
low	1..1	SHALL		1198-26449	
performer	1..1	SHALL		1198-8520	
@typeCode	1..1	SHALL		1198-8521	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PPRF
assignedEntity	1..1	SHALL		1198-14911	
code	0..1	SHOULD		1198-14912	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
performer	0..*	MAY		1198-32732	

@typeCode	1..1	SHALL		1198-32734	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = SPRF
assignedEntity	1..1	SHALL		1198-32733	
code	0..1	SHOULD		1198-32735	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
authorization	0..1	MAY		1198-32412	
@typeCode	1..1	SHALL		1198-32413	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = AUTH
consent	1..1	SHALL		1198-32414	
@classCode	1..1	SHALL		1198-32415	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CONS
@moodCode	1..1	SHALL		1198-32416	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
statusCode	1..1	SHALL		1198-32417	
componentOf	0..1	SHOULD		1198-30871	
encompassingEncounter	1..1	SHALL		1198-30872	
id	0..*	SHOULD		1198-32395	
code	1..1	SHALL		1198-30873	
encounterParticipant	0..1	MAY		1198-30874	
@typeCode	1..1	SHALL		1198-30875	REF
location	1..*	SHALL		1198-30876	
healthCareFacility	1..1	SHALL		1198-30877	
id	1..*	SHALL		1198-30878	
component	1..1	SHALL		1198-9588	
structuredBody	1..1	SHALL		1198-30352	
component	1..1	SHALL		1198-30353	
section	1..1	SHALL		1198-30387	Complications Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.37:2015-08-01)

component	1..1	SHALL		1198-30355	
section	1..1	SHALL		1198-30356	Procedure Description Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.27)
component	1..1	SHALL		1198-30357	
section	1..1	SHALL		1198-30358	Procedure Indications Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.29:2014-06-09)
component	1..1	SHALL		1198-30359	
section	1..1	SHALL		1198-30360	Postprocedure Diagnosis Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.36:2015-08-01)
component	0..1	MAY		1198-30361	
section	1..1	SHALL		1198-30362	Assessment Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.8)
component	0..1	MAY		1198-30363	
section	1..1	SHALL		1198-30364	Assessment and Plan Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.9:2014-06-09)
component	0..1	MAY		1198-30365	
section	1..1	SHALL		1198-30366	Plan of Treatment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09)
component	0..1	MAY		1198-30367	
section	1..1	SHALL		1198-30368	Allergies and Intolerances Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.6:2015-08-01)
component	0..1	MAY		1198-30369	
section	1..1	SHALL		1198-30370	Anesthesia Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.25:2014-06-09)
component	0..1	MAY		1198-30371	
section	1..1	SHALL		1198-	Chief Complaint Section

				30372	(identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1)
component	0..1	MAY		1198-30373	
section	1..1	SHALL		1198-30374	Chief Complaint and Reason for Visit Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.13)
component	0..1	MAY		1198-30375	
section	1..1	SHALL		1198-30376	Family History Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2015-08-01)
component	0..1	MAY		1198-30377	
section	1..1	SHALL		1198-30378	History of Past Illness Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.20:2015-08-01)
component	0..1	MAY		1198-30379	
section	1..1	SHALL		1198-30380	History of Present Illness Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.4)
component	0..1	MAY		1198-30381	
section	1..1	SHALL		1198-30382	Medical (General) History Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.39)
component	0..1	MAY		1198-30383	
section	1..1	SHALL		1198-30384	Medications Section (entries optional) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.1:2014-06-09)
component	0..1	MAY		1198-30388	
section	1..1	SHALL		1198-30389	Medications Administered Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.38:2014-06-09)
component	0..1	MAY		1198-30390	
section	1..1	SHALL		1198-30391	Physical Exam Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2

					0.2.10:2015-08-01
component	0..1	MAY		1198-30392	
section	1..1	SHALL		1198-30393	Planned Procedure Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.30:2014-06-09)
component	0..1	MAY		1198-30394	
section	1..1	SHALL		1198-30395	Procedure Disposition Section (identifier: urn:oid:2.16.840.1.113883.10.20.18.2.12)
component	0..1	MAY		1198-30396	
section	1..1	SHALL		1198-30397	Procedure Estimated Blood Loss Section (identifier: urn:oid:2.16.840.1.113883.10.20.18.2.9)
component	0..1	MAY		1198-30398	
section	1..1	SHALL		1198-30399	Procedure Findings Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.28:2015-08-01)
component	0..1	MAY		1198-30400	
section	1..1	SHALL		1198-30401	Procedure Implants Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.40)
component	0..1	MAY		1198-30402	
section	1..1	SHALL		1198-30403	Procedure Specimens Taken Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.31)
component	0..1	MAY		1198-30404	
section	1..1	SHALL		1198-30405	Procedures Section (entries optional) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.7:2014-06-09)
component	0..1	MAY		1198-30406	
section	1..1	SHALL		1198-30407	Reason for Visit Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.12)
component	0..1	MAY		1198-	

				30408	
section	1..1	SHALL		1198-30409	Review of Systems Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.18)
component	0..1	MAY		1198-30410	
section	1..1	SHALL		1198-30411	Social History Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01)

1.1.16 Properties

1. Conforms to [US Realm Header \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8496) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.6" (CONF:1198-10050).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32520).

The Procedure Note recommends use of a single document type code, 28570-0 "Procedure Note", with further specification provided by author or performer, setting, or specialty. When pre-coordinated codes are used, any coded values describing the author or performer of the service act or the practice setting must be consistent with the LOINC document type.

3. **SHALL** contain exactly one [1..1] **code** (CONF:1198-17182).
 - a. This code **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [ProcedureNoteDocumentTypeCodes](#) urn:oid:2.16.840.1.113883.11.20.6.1 **DYNAMIC** (CONF:1198-17183).

1.1.16.1 participant

The participant element in the Procedure Note header follows the General Header Constraints for participants.

4. **MAY** contain zero or more [0..*] **participant** (CONF:1198-8504) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="IND" Individual (CodeSystem: participationFunction urn:oid:2.16.840.1.113883.5.88 **STATIC**) (CONF:1198-8505).
 - b. **SHALL** contain exactly one [1..1] **functionCode**="PCP" Primary Care Physician (CodeSystem: participationFunction urn:oid:2.16.840.1.113883.5.88 **STATIC**) (CONF:1198-8506).
 - c. **SHALL** contain exactly one [1..1] **associatedEntity/@classCode**="PROV" Provider (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1198-8507).
 - i. This associatedEntity/@classCode **SHALL** contain exactly one [1..1] **associatedPerson** (CONF:1198-8508).

1.1.16.2 documentationOf

A serviceEvent is required in the Procedure Note to represent the main act, such as a colonoscopy or a cardiac stress study, being documented. It must be equivalent to or further specialize the value inherent in the ClinicalDocument/@code (such as where the ClinicalDocument/@code is simply "Procedure Note" and the procedure is "colonoscopy"), and it shall not conflict with the value inherent in the ClinicalDocument/@code, as such a conflict would create ambiguity. A serviceEvent/effectiveTime element indicates the time the actual event (as opposed to the encounter surrounding the event) took place.

serviceEvent/effectiveTime may be represented two different ways in the Procedure Note. For accuracy to the second, the best method is effectiveTime/low together with effectiveTime/high. If a more general time, such as minutes or hours, is acceptable OR if the duration is unknown, an effectiveTime/low with a width element may be used. If the duration is unknown, the appropriate HL7 null value such as "NI" or "NA" must be used for the width element.

5. **SHALL** contain at least one [1..*] **documentationOf** (CONF:1198-8510) such that it
 - a. **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:1198-10061).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] US Realm Date and Time (DT.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.3) (CONF:1198-10062).
 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1198-26449).
 2. The serviceEvent/effectiveTime **SHALL** be present with effectiveTime/low (CONF:1198-8513).
 3. If a width is not present, the serviceEvent/effectiveTime **SHALL** include effectiveTime/high (CONF:1198-8514).
 4. When only the date and the length of the procedure are known a width element **SHALL** be present and the serviceEvent/effectiveTime/high **SHALL NOT** be present (CONF:1198-8515).

1.1.16.3 performer

This performer participant represents clinicians who actually and principally carry out the serviceEvent. Typically, these are clinicians who have the appropriate privileges in their institutions such as gastroenterologists, interventional radiologists, and family practice physicians. Performers may also be non-physician providers (NPPs) who have other significant roles in the procedure such as a radiology technician, dental assistant, or nurse. Any assistants are identified as a secondary performer (SPRF) in a second performer participant.

- ii. This serviceEvent **SHALL** contain exactly one [1..1] **performer** (CONF:1198-8520) such that it
 1. **SHALL** contain exactly one [1..1] **@typeCode="PPRF"** Primary Performer (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1198-8521).
 2. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-14911).

- a. This assignedEntity **SHOULD** contain zero or one [0..1] code, which **SHALL** be selected from ValueSet [Healthcare Provider Taxonomy \(HIPAA\)](#) urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1198-14912).

1.1.16.4 performer

This performer identifies any assistants.

- iii. This serviceEvent **MAY** contain zero or more [0..*] performer (CONF:1198-32732) such that it
 - 1. **SHALL** contain exactly one [1..1] @typeCode="SPRF" Secondary Performer (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:1198-32734).
 - 2. **SHALL** contain exactly one [1..1] assignedEntity (CONF:1198-32733).
 - a. This assignedEntity **SHOULD** contain zero or one [0..1] code, which **SHALL** be selected from ValueSet [Healthcare Provider Taxonomy \(HIPAA\)](#) urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1198-32735).
- iv. The value of Clinical Document /documentationOf/serviceEvent/code **SHALL** be from ICD9 CM Procedures (codeSystem 2.16.840.1.113883.6.104), CPT-4 (codeSystem 2.16.840.1.113883.6.12), or values descending from 71388002 (Procedure) from the SNOMED CT (codeSystem 2.16.840.1.113883.6.96) ValueSet 2.16.840.1.113883.3.88.12.80.28 Procedure **DYNAMIC** (CONF:1198-8511).

Authorization represents consent. Consent, if present, shall be represented by authorization/consent.

- 6. **MAY** contain zero or one [0..1] authorization (CONF:1198-32412).
 - a. The authorization, if present, **SHALL** contain exactly one [1..1] @typeCode="AUTH" authorized by (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-32413).
 - b. The authorization, if present, **SHALL** contain exactly one [1..1] consent (CONF:1198-32414).
 - i. This consent **SHALL** contain exactly one [1..1] @classCode="CONS" consent (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1198-32415).
 - ii. This consent **SHALL** contain exactly one [1..1] @moodCode="EVN" event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1198-32416).
 - iii. This consent **SHALL** contain exactly one [1..1] statusCode (CONF:1198-32417).

1.1.16.5 componentOf

7. **SHOULD** contain zero or one [0..1] **componentOf** (CONF:1198-30871).
 - a. The componentOf, if present, **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:1198-30872).
 - i. This encompassingEncounter **SHOULD** contain zero or more [0..*] **id** (CONF:1198-32395).
 - ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **code** (CONF:1198-30873).
 - iii. This encompassingEncounter **MAY** contain zero or one [0..1] **encounterParticipant** (CONF:1198-30874) such that it
 1. **SHALL** contain exactly one [1..1] **@typeCode="REF"** Referrer (CONF:1198-30875).
 - iv. This encompassingEncounter **SHALL** contain at least one [1..*] **location** (CONF:1198-30876).
 1. Such locations **SHALL** contain exactly one [1..1] **healthCareFacility** (CONF:1198-30877).
 - a. This healthCareFacility **SHALL** contain at least one [1..*] **id** (CONF:1198-30878).

1.1.16.6 component

8. **SHALL** contain exactly one [1..1] **component** (CONF:1198-9588).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:1198-30352).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30353) such that it
 1. **SHALL** contain exactly one [1..1] [Complications Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.37:2015-08-01) (CONF:1198-30387).
 - ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30355) such that it
 1. **SHALL** contain exactly one [1..1] [Procedure Description Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.27) (CONF:1198-30356).
 - iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30357) such that it
 1. **SHALL** contain exactly one [1..1] [Procedure Indications Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.29:2014-06-09) (CONF:1198-30358).
 - iv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30359) such that it
 1. **SHALL** contain exactly one [1..1] [Postprocedure Diagnosis Section \(V3\)](#) (identifier:

- urn:hl7ii:2.16.840.1.113883.10.20.22.2.36:2015-08-01)
(CONF:1198-30360).
- v. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30361) such that it
 - 1. **SHALL** contain exactly one [1..1] [Assessment Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.8) (CONF:1198-30362).
 - vi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30363) such that it
 - 1. **SHALL** contain exactly one [1..1] [Assessment and Plan Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.9:2014-06-09) (CONF:1198-30364).
 - vii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30365) such that it
 - 1. **SHALL** contain exactly one [1..1] [Plan of Treatment Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09) (CONF:1198-30366).
 - viii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30367) such that it
 - 1. **SHALL** contain exactly one [1..1] [Allergies and Intolerances Section \(entries optional\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.6:2015-08-01) (CONF:1198-30368).
 - ix. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30369) such that it
 - 1. **SHALL** contain exactly one [1..1] [Anesthesia Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.25:2014-06-09) (CONF:1198-30370).
 - x. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30371) such that it
 - 1. **SHALL** contain exactly one [1..1] [Chief Complaint Section](#) (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1) (CONF:1198-30372).
 - xi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30373) such that it
 - 1. **SHALL** contain exactly one [1..1] [Chief Complaint and Reason for Visit Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.13) (CONF:1198-30374).
 - xii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30375) such that it
 - 1. **SHALL** contain exactly one [1..1] [Family History Section \(V3\)](#) (identifier:

- urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2015-08-01)
(CONF:1198-30376).
- xiii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30377) such that it
1. **SHALL** contain exactly one [1..1] [History of Past Illness Section \(V3\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.20:2015-08-01)
(CONF:1198-30378).
- xiv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30379) such that it
1. **SHALL** contain exactly one [1..1] [History of Present Illness Section](#) (identifier:
urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.4) (CONF:1198-30380).
- xv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30381) such that it
1. **SHALL** contain exactly one [1..1] [Medical \(General\) History Section](#) (identifier:
urn:oid:2.16.840.1.113883.10.20.22.2.39) (CONF:1198-30382).
- xvi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30383) such that it
1. **SHALL** contain exactly one [1..1] [Medications Section \(entries optional\) \(V2\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.1:2014-06-09)
(CONF:1198-30384).
- xvii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30388) such that it
1. **SHALL** contain exactly one [1..1] [Medications Administered Section \(V2\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.38:2014-06-09)
(CONF:1198-30389).
- xviii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30390) such that it
1. **SHALL** contain exactly one [1..1] [Physical Exam Section \(V3\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.2.10:2015-08-01)
(CONF:1198-30391).
- xix. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30392) such that it
1. **SHALL** contain exactly one [1..1] [Planned Procedure Section \(V2\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.30:2014-06-09)
(CONF:1198-30393).
- xx. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30394) such that it

1. **SHALL** contain exactly one [1..1] [Procedure Disposition Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.18.2.12) (CONF:1198-30395).
- xxi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30396) such that it
1. **SHALL** contain exactly one [1..1] [Procedure Estimated Blood Loss Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.18.2.9) (CONF:1198-30397).
- xxii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30398) such that it
1. **SHALL** contain exactly one [1..1] [Procedure Findings Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.28:2015-08-01) (CONF:1198-30399).
- xxiii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30400) such that it
1. **SHALL** contain exactly one [1..1] [Procedure Implants Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.40) (CONF:1198-30401).
- xxiv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30402) such that it
1. **SHALL** contain exactly one [1..1] [Procedure Specimens Taken Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.31) (CONF:1198-30403).
- xxv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30404) such that it
1. **SHALL** contain exactly one [1..1] [Procedures Section \(entries optional\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.7:2014-06-09) (CONF:1198-30405).
- xxvi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30406) such that it
1. **SHALL** contain exactly one [1..1] [Reason for Visit Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.12) (CONF:1198-30407).
- xxvii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30408) such that it
1. **SHALL** contain exactly one [1..1] [Review of Systems Section](#) (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.18) (CONF:1198-30409).
- xxviii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30410) such that it
1. **SHALL** contain exactly one [1..1] [Social History Section \(V3\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.10) (CONF:1198-30410).

urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01)
(CONF:1198-30411).

xxix. This structuredBody **SHALL** contain an Assessment and Plan Section (V2) (2.16.840.1.113883.10.20.22.2.9:2014-06-09), or an Assessment Section (2.16.840.1.113883.10.20.22.2.8) and a Plan of Treatment Section (V2) (2.16.840.1.113883.10.20.22.2.10:2014-06-09) (CONF:1198-30412).

xxx. This structuredBody **SHALL NOT** contain an Assessment and Plan Section (V2) (2.16.840.1.113883.10.20.22.2.9:2014-06-09) when either an Assessment Section (2.16.840.1.113883.10.20.22.2.8) or a Plan of Treatment Section (V2) (2.16.840.1.113883.10.20.22.2.10:2014-06-09) is present (CONF:1198-30414).

xxxi. This structuredBody **SHALL NOT** contain a Chief Complaint and Reason for Visit Section (2.16.840.1.113883.10.20.22.2.13) when either a Chief Complaint Section (1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1) or a Reason for Visit Section (2.16.840.1.113883.10.20.22.2.12) is present (CONF:1198-30415).

Table 48: ProcedureNoteDocumentTypeCodes

Value Set: ProcedureNoteDocumentTypeCodes urn:oid:2.16.840.1.113883.11.20.6.1 A value set of LOINC document codes for Procedure Notes.			
Specific URL Pending			
Value Set Source: http://search.loinc.org			
Code	Code System	Code System OID	Print Name
28570-0	LOINC	urn:oid:2.16.840.1.113883.3.6.1	Provider-unspecified Procedure note
11505-5	LOINC	urn:oid:2.16.840.1.113883.3.6.1	Physician procedure note
18744-3	LOINC	urn:oid:2.16.840.1.113883.3.6.1	Bronchoscopy study
18745-0	LOINC	urn:oid:2.16.840.1.113883.3.6.1	Cardiac catheterization study
18746-8	LOINC	urn:oid:2.16.840.1.113883.3.6.1	Colonoscopy study
18751-8	LOINC	urn:oid:2.16.840.1.113883.3.6.1	Endoscopy study
18753-4	LOINC	urn:oid:2.16.840.1.113883.3.6.1	Flexible sigmoidoscopy study
18836-7	LOINC	urn:oid:2.16.840.1.113883.3.6.1	Cardiac stress study Procedure
28577-5	LOINC	urn:oid:2.16.840.1.113883.3.6.1	Dentist procedure note
28625-2	LOINC	urn:oid:2.16.840.1.113883.3.6.1	Podiatry procedure note
...			

Figure 33: Procedure Note performer Example

```

<performer typeCode="PPRF">
  <assignedEntity>
    <id extension="IO00017" root="2.16.840.1.113883.19.5" />
    <code code="207RG0100X" codeSystem="2.16.840.1.113883.6.96" codeSystemName="NUCC"
    displayName="Gastroenterologist" />
    <addr>
      <streetAddressLine>1001 Hospital Lane</streetAddressLine>
      <city>Ann Arbor</city>
      <state>MI</state>
      <postalCode>99999</postalCode>
      <country>US</country>
    </addr>
    <telecom value="tel:(999)555-1212" />
    <assignedPerson>
      <name>
        <prefix>Dr.</prefix>
        <given>Tony</given>
        <family>Tum</family>
      </name>
    </assignedPerson>
  </assignedEntity>
</performer>

```

Figure 34: Procedure Note serviceEvent Example

```

<documentationOf>
  <serviceEvent classCode="PROC">
    <code code="118155006" codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT" displayName="Gastrointestinal tract endoscopy" />
    <effectiveTime>
      <low value="201003292240" />
      <width value="15" unit="m" />
    </effectiveTime>
    ...
  </serviceEvent>
</documentationOf>

```

1.1.17 Progress Note (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.9:2015-08-01 (open)]

Table 49: Progress Note (V3) Contexts

Contained By:	Contains:
	Allergies and Intolerances Section (entries optional) (V3) Assessment and Plan Section (V2) Assessment Section Chief Complaint Section

Contained By:	Contains:
	Instructions Section (V2) Interventions Section (V3) Medications Section (entries optional) (V2) Nutrition Section Objective Section Physical Exam Section (V3) Plan of Treatment Section (V2) Problem Section (entries optional) (V3) Results Section (entries optional) (V3) Review of Systems Section Subjective Section US Realm Date and Time (DT.US.FIELDDED) Vital Signs Section (entries optional) (V3)

This template represents a patient’s clinical status during a hospitalization, outpatient visit, treatment with a LTPAC provider, or other healthcare encounter.

Taber’s medical dictionary defines a Progress Note as “An ongoing record of a patient's illness and treatment. Physicians, nurses, consultants, and therapists record their notes concerning the progress or lack of progress made by the patient between the time of the previous note and the most recent note.”

Mosby’s medical dictionary defines a Progress Note as “Notes made by a nurse, physician, social worker, physical therapist, and other health care professionals that describe the patient's condition and the treatment given or planned.”

A Progress Note is not a re-evaluation note. A Progress Note is not intended to be a Progress Report for Medicare. Medicare B Section 1833(e) defines the requirements of a Medicare Progress Report.

Table 50: Progress Note (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.9:2015-08-01)					
templateId	1..1	SHALL		1198-7588	
@root	1..1	SHALL		1198-10052	2.16.840.1.113883.10.20.22.1.9
@extension	1..1	SHALL		1198-32521	2015-08-01
code	1..1	SHALL		1198-17189	
@code	1..1	SHALL		1198-17190	urn:oid:2.16.840.1.113883.11.20.8.1 (ProgressNoteDocumentTypeCode)
documentationOf	0..1	SHOULD		1198-7603	
serviceEvent	1..1	SHALL		1198-7604	
@classCode	1..1	SHALL		1198-26420	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PCPR
templateId	1..1	SHALL		1198-9480	
@root	1..1	SHALL		1198-10068	2.16.840.1.113883.10.20.21.3.1
effectiveTime	0..1	SHOULD		1198-9481	US Realm Date and Time (DT.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.3)
componentOf	1..1	SHALL		1198-7595	
encompassingEncounter	1..1	SHALL		1198-7596	
id	1..*	SHALL		1198-7597	
effectiveTime	1..1	SHALL		1198-7598	US Realm Date and Time (DT.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.3)
low	1..1	SHALL		1198-7599	
location	1..1	SHALL		1198-30879	
healthCareFacility	1..1	SHALL		1198-30880	
id	1..*	SHALL		1198-30881	

component	1..1	SHALL		1198-9591	
structuredBody	1..1	SHALL		1198-30617	
component	0..1	MAY		1198-30618	
section	1..1	SHALL		1198-30619	Assessment Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.8)
component	0..1	MAY		1198-30620	
section	1..1	SHALL		1198-30621	Plan of Treatment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09)
component	0..1	MAY		1198-30622	
section	1..1	SHALL		1198-30623	Assessment and Plan Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.9:2014-06-09)
component	0..1	MAY		1198-30624	
section	1..1	SHALL		1198-30625	Allergies and Intolerances Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.6:2015-08-01)
component	0..1	MAY		1198-30626	
section	1..1	SHALL		1198-30627	Chief Complaint Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1)
component	0..1	MAY		1198-30628	
section	1..1	SHALL		1198-30629	Interventions Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.21.2.3:2015-08-01)
component	0..1	MAY		1198-30639	
section	1..1	SHALL		1198-31386	Instructions Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.45:2014-06-09)
component	0..1	MAY		1198-30641	
section	1..1	SHALL		1198-30642	Medications Section (entries optional) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.45:2014-06-09)

					0.22.2.1:2014-06-09
component	0..1	MAY		1198-30643	
section	1..1	SHALL		1198-30644	Objective Section (identifier: urn:oid:2.16.840.1.113883.10.20.21.2.1)
component	0..1	MAY		1198-30645	
section	1..1	SHALL		1198-30646	Physical Exam Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.2.10:2015-08-01)
component	0..1	MAY		1198-30647	
section	1..1	SHALL		1198-30648	Problem Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.5:2015-08-01)
component	0..1	MAY		1198-30649	
section	1..1	SHALL		1198-30650	Results Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2015-08-01)
component	0..1	MAY		1198-30651	
section	1..1	SHALL		1198-30652	Review of Systems Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.18)
component	0..1	MAY		1198-30653	
section	1..1	SHALL		1198-30654	Subjective Section (identifier: urn:oid:2.16.840.1.113883.10.20.21.2.2)
component	0..1	MAY		1198-30655	
section	1..1	SHALL		1198-30656	Vital Signs Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4:2015-08-01)
component	0..1	MAY		1198-32626	
section	1..1	SHALL		1198-32627	Nutrition Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.57)

1.1.18 Properties

1. Conforms to [US Realm Header \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7588) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.9" (CONF:1198-10052).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32521).

The Progress Note recommends use of a single document type code, 11506-3 "Subsequent evaluation note", with further specification provided by author or performer, setting, or specialty. When pre-coordinated codes are used, any coded values describing the author or performer of the service act or the practice setting must be consistent with the LOINC document type.

3. **SHALL** contain exactly one [1..1] **code** (CONF:1198-17189).
 - a. This code **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [ProgressNoteDocumentTypeCode](#) urn:oid:2.16.840.1.113883.11.20.8.1 **DYNAMIC** (CONF:1198-17190).

1.1.18.1 documentationOf

A documentationOf can contain a serviceEvent to further specialize the act inherent in the ClinicalDocument/code. In a Progress Note, a serviceEvent can represent the event of writing the Progress Note. The serviceEvent/effectiveTime is the time period the note documents.

4. **SHOULD** contain zero or one [0..1] **documentationOf** (CONF:1198-7603).
 - a. The documentationOf, if present, **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:1198-7604).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] **@classCode**="PCPR" Care Provision (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-26420).
 - ii. This serviceEvent **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-9480) such that it
 1. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.21.3.1" (CONF:1198-10068).
 - iii. This serviceEvent **SHOULD** contain zero or one [0..1] [US Realm Date and Time \(DT.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.3) (CONF:1198-9481).
 1. The serviceEvent/effectiveTime element **SHOULD** be present with effectiveTime/low element (CONF:1198-9482).
 2. If a width element is not present, the serviceEvent **SHALL** include effectiveTime/high (CONF:1198-10066).

1.1.18.2 componentOf

The Progress Note is always associated with an encounter by the componentOf/encompassingEncounter element in the header. The effectiveTime element for an encompassingEncounter represents the time or time interval in which the encounter took

place. A single encounter may contain multiple Progress Notes; hence the effectiveTime elements for a Progress Note (recorded in serviceEvent) and for an encounter (recorded in encompassingEncounter) represent different time intervals. All visits take place at a specific location. When available, the location ID is included in the encompassingEncounter/location/healthCareFacility/id element.

5. **SHALL** contain exactly one [1..1] **componentOf** (CONF:1198-7595).
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:1198-7596).
 - i. This encompassingEncounter **SHALL** contain at least one [1..*] **id** (CONF:1198-7597).
 - ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **US Realm Date and Time (DT.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.3) (CONF:1198-7598).
 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1198-7599).
 - iii. This encompassingEncounter **SHALL** contain exactly one [1..1] **location** (CONF:1198-30879).
 1. This location **SHALL** contain exactly one [1..1] **healthCareFacility** (CONF:1198-30880).
 - a. This healthCareFacility **SHALL** contain at least one [1..*] **id** (CONF:1198-30881).

1.1.18.3 component

6. **SHALL** contain exactly one [1..1] **component** (CONF:1198-9591).

In this template (templateId 2.16.840.1.113883.10.20.22.1.9.2), coded entries are optional

- a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:1198-30617).
 - i. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30618) such that it
 1. **SHALL** contain exactly one [1..1] **Assessment Section** (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.8) (CONF:1198-30619).
 - ii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30620) such that it
 1. **SHALL** contain exactly one [1..1] **Plan of Treatment Section (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09) (CONF:1198-30621).
 - iii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30622) such that it
 1. **SHALL** contain exactly one [1..1] **Assessment and Plan Section (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.9:2014-06-09) (CONF:1198-30623).

- iv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30624) such that it
 - 1. **SHALL** contain exactly one [1..1] Allergies and Intolerances Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.6:2015-08-01) (CONF:1198-30625).
- v. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30626) such that it
 - 1. **SHALL** contain exactly one [1..1] Chief Complaint Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1) (CONF:1198-30627).
- vi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30628) such that it
 - 1. **SHALL** contain exactly one [1..1] Interventions Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.21.2.3:2015-08-01) (CONF:1198-30629).
- vii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30639) such that it
 - 1. **SHALL** contain exactly one [1..1] Instructions Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.45:2014-06-09) (CONF:1198-31386).
- viii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30641) such that it
 - 1. **SHALL** contain exactly one [1..1] Medications Section (entries optional) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.1:2014-06-09) (CONF:1198-30642).
- ix. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30643) such that it
 - 1. **SHALL** contain exactly one [1..1] Objective Section (identifier: urn:oid:2.16.840.1.113883.10.20.21.2.1) (CONF:1198-30644).
- x. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30645) such that it
 - 1. **SHALL** contain exactly one [1..1] Physical Exam Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.2.10:2015-08-01) (CONF:1198-30646).
- xi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30647) such that it
 - 1. **SHALL** contain exactly one [1..1] Problem Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.5:2015-08-01) (CONF:1198-30648).

- xii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30649) such that it
 - 1. **SHALL** contain exactly one [1..1] Results Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2015-08-01) (CONF:1198-30650).
- xiii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30651) such that it
 - 1. **SHALL** contain exactly one [1..1] Review of Systems Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.18) (CONF:1198-30652).
- xiv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30653) such that it
 - 1. **SHALL** contain exactly one [1..1] Subjective Section (identifier: urn:oid:2.16.840.1.113883.10.20.21.2.2) (CONF:1198-30654).
- xv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30655) such that it
 - 1. **SHALL** contain exactly one [1..1] Vital Signs Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4:2015-08-01) (CONF:1198-30656).
- xvi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-32626) such that it
 - 1. **SHALL** contain exactly one [1..1] Nutrition Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.57) (CONF:1198-32627).
- xvii. This structuredBody **SHALL** contain an Assessment and Plan Section (V2) (2.16.840.1.113883.10.20.22.2.9:2014-06-09), or an Assessment Section (2.16.840.1.113883.10.20.22.2.8) and a Plan of Treatment Section (V2) (2.16.840.1.113883.10.20.22.2.10:2014-06-09) (CONF:1198-30657).
- xviii. This structuredBody **SHALL NOT** contain an Assessment and Plan Section (V2) (2.16.840.1.113883.10.20.22.2.9:2014-06-09) when either an Assessment Section (2.16.840.1.113883.10.20.22.2.8) or a Plan of Treatment Section (V2) (2.16.840.1.113883.10.20.22.2.10:2014-06-09) is present (CONF:1198-30658).

Table 51: ProgressNoteDocumentTypeCode

Value Set: ProgressNoteDocumentTypeCode urn:oid:2.16.840.1.113883.11.20.8.1			
Specific URL Pending			
Value Set Source: http://www.loinc.org/			
Code	Code System	Code System OID	Print Name
11506-3	LOINC	urn:oid:2.16.840.1.113883.6.1	Provider-unspecified Progress note
18733-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Physician attending Progress note
28569-2	LOINC	urn:oid:2.16.840.1.113883.6.1	Physician consulting Progress note
28617-9	LOINC	urn:oid:2.16.840.1.113883.6.1	Dentistry Progress note
34900-1	LOINC	urn:oid:2.16.840.1.113883.6.1	General medicine Progress note
34904-3	LOINC	urn:oid:2.16.840.1.113883.6.1	Mental health Progress note
28623-7	LOINC	urn:oid:2.16.840.1.113883.6.1	Nurse Progress note
11507-1	LOINC	urn:oid:2.16.840.1.113883.6.1	Occupational therapy Progress note
11508-9	LOINC	urn:oid:2.16.840.1.113883.6.1	Physical therapy Progress note
11509-7	LOINC	urn:oid:2.16.840.1.113883.6.1	Podiatry Progress note
...			

Figure 35: Progress Note serviceEvent Example

```

<documentationOf>
  <serviceEvent classCode="PCPR">
    <templateId root="2.16.840.1.113883.10.20.21.3.1" />
    <effectiveTime>
      <low value="200503291200" />
      <high value="200503291400" />
    </effectiveTime>
    ...
  </serviceEvent>
</documentationOf>

```

Figure 36: Progress Note encompassing Encounter Example

```

<componentOf>
  <encompassingEncounter>
    <id extension="9937012" root="2.16.840.1.113883.19" />
    <code codeSystem="2.16.840.1.113883.6.12" codeSystemName="CPT-4" code="99213"
      displayName="Evaluation and Management" />
    <effectiveTime>
      <low value="20090227130000+0500" />
      <high value="20090227130000+0500" />
    </effectiveTime>
    <location>
      <healthCareFacility>
        <id root="2.16.540.1.113883.19.2" />
      </healthCareFacility>
    </location>
  </encompassingEncounter>
</componentOf>

```

1.1.19 Referral Note (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.14:2015-08-01 (open)]

Table 52: Referral Note (V2) Contexts

Contained By:	Contains:
	<ul style="list-style-type: none"> Advance Directives Section (entries optional) (V3) Allergies and Intolerances Section (entries required) (V3) Assessment and Plan Section (V2) Assessment Section Family History Section (V3) Functional Status Section (V2) General Status Section History of Past Illness Section (V3) History of Present Illness Section Immunizations Section (entries required) (V3) Medical Equipment Section (V2) Medications Section (entries required) (V2) Mental Status Section (V2) Nutrition Section Physical Exam Section (V3) Plan of Treatment Section (V2) Problem Section (entries required) (V3) Procedures Section (entries optional) (V2) Reason for Referral Section (V2) Results Section (entries required) (V3) Review of Systems Section Social History Section (V3)

Contained By:	Contains:
	US Realm Patient Name (PTN.US.FIELDDED) US Realm Person Name (PN.US.FIELDDED) Vital Signs Section (entries required) (V3)

A Referral Note communicates pertinent information from a provider who is requesting services of another provider of clinical or non-clinical services. The information in this document includes the reason for the referral and additional information that would augment decision making and care delivery.

Examples of referral situations are when a patient is referred from a family physician to a cardiologist for cardiac evaluation or when patient is sent by a cardiologist to an emergency department for angina or when a patient is referred by a nurse practitioner to an audiologist for hearing screening or when a patient is referred by a hospitalist to social services.

Table 53: Referral Note (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.1.14:2015-08-01)					
templateId	1..1	SHALL		1198-28947	
@root	1..1	SHALL		1198-28948	2.16.840.1.113883.10.20.22.1.14
@extension	1..1	SHALL		1198-32911	2015-08-01
code	1..1	SHALL		1198-28949	urn:oid:2.16.840.1.113883.1.11.20.2.3 (ReferralDocumentType)
informationRecipient	1..1	SHALL		1198-31589	
intendedRecipient	1..1	SHALL		1198-31590	
addr	0..*	SHOULD		1198-31591	
telecom	0..*	SHOULD		1198-31592	
informationRecipient	1..1	SHALL		1198-31593	
name	1..*	SHALL		1198-31594	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
participant	0..*	SHOULD		1198-31642	
@typeCode	1..1	SHALL		1198-31924	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = IND
associatedEntity	1..1	SHALL		1198-31643	
@classCode	1..1	SHALL		1198-31925	urn:oid:2.16.840.1.113883.11.20.9.33 (INDRoleclassCodes)
associatedPerson	1..1	SHALL		1198-31644	
name	1..*	SHALL		1198-31645	US Realm Patient Name (PTN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1)
participant	0..*	SHOULD		1198-31647	
@typeCode	1..1	SHALL		1198-31648	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CALLBCK
associatedEntity	1..1	SHALL		1198-31649	

@classCode	1..1	SHALL		1198-32419	urn:oid:2.16.840.1.113883.5.110 (RoleClass) = ASSIGNED
id	1..*	SHALL		1198-31650	
addr	0..*	SHOULD		1198-31651	
telecom	1..*	SHALL		1198-31652	
associatedPerson	1..1	SHALL		1198-31653	
name	1..*	SHALL		1198-31654	
scopingOrganization	0..1	MAY		1198-31655	
component	1..1	SHALL		1198-29062	
structuredBody	1..1	SHALL		1198-29063	
component	0..1	SHOULD		1198-29066	
section	1..1	SHALL		1198-29067	Plan of Treatment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.10:2014-06-09)
component	0..1	MAY		1198-29068	
section	1..1	SHALL		1198-29069	Advance Directives Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.21:2015-08-01)
component	0..1	MAY		1198-29074	
section	1..1	SHALL		1198-29075	History of Present Illness Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.4)
component	0..1	MAY		1198-29076	
section	1..1	SHALL		1198-29077	Family History Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.15:2015-08-01)
component	0..1	MAY		1198-29082	
section	1..1	SHALL		1198-29083	Immunizations Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.2.1:2015-08-01)
component	1..1	SHALL		1198-	

				29086	
section	1..1	SHALL		1198-29087	Problem Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.5.1:2015-08-01)
component	0..1	MAY		1198-29088	
section	1..1	SHALL		1198-29089	Procedures Section (entries optional) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.7:2014-06-09)
component	0..1	SHOULD		1198-29090	
section	1..1	SHALL		1198-29091	Results Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.3.1:2015-08-01)
component	0..1	MAY		1198-29092	
section	1..1	SHALL		1198-29093	Review of Systems Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.18)
component	0..1	MAY		1198-29094	
section	1..1	SHALL		1198-29095	Social History Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.17:2015-08-01)
component	0..1	MAY		1198-29096	
section	1..1	SHALL		1198-29097	Vital Signs Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.4.1:2015-08-01)
component	0..1	SHOULD		1198-29098	
section	1..1	SHALL		1198-29099	Functional Status Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.14:2014-06-09)
component	0..1	MAY		1198-29100	
section	1..1	SHALL		1198-29101	Physical Exam Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.2.10:2015-08-01)
component	0..1	SHOULD		1198-30780	
section	1..1	SHALL		1198-	Nutrition Section (identifier:

				30781	urn:oid:2.16.840.1.113883.10.20.22.2.57
component	0..1	SHOULD		1198-30796	
section	1..1	SHALL		1198-30926	Mental Status Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.56:2015-08-01)
component	0..1	MAY		1198-30798	
section	1..1	SHALL		1198-30799	Medical Equipment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.23:2014-06-09)
component	1..1	SHALL		1198-30911	
section	1..1	SHALL		1198-30912	Allergies and Intolerances Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.6.1:2015-08-01)
component	0..1	MAY		1198-30913	
section	1..1	SHALL		1198-30914	Assessment Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.8)
component	0..1	MAY		1198-30915	
section	1..1	SHALL		1198-30916	Assessment and Plan Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.9:2014-06-09)
component	0..1	MAY		1198-30917	
section	1..1	SHALL		1198-30918	History of Past Illness Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.20:2015-08-01)
component	0..1	MAY		1198-30919	
section	1..1	SHALL		1198-30920	General Status Section (identifier: urn:oid:2.16.840.1.113883.10.20.2.5)
component	1..1	SHALL		1198-30922	
section	1..1	SHALL		1198-30923	Medications Section (entries required) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.1.1:2014-06-09)
component	1..1	SHALL		1198-30924	

section	1..1	SHALL		1198-30925	Reason for Referral Section (V2) (identifier: urn:hl7ii:1.3.6.1.4.1.19376.1.5.3.1.3.1:2014-06-09)
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1. Conforms to [US Realm Header \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-28947) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.14" (CONF:1198-28948).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32911).

The Referral Note recommends use of the document type code 57133-1 "Referral Note", with further specification provided by author or performer, setting, or specialty. When pre-coordinated codes are used, any coded values describing the author or performer of the service act or the practice setting must be consistent with the LOINC document type. For example, an Obstetrics and Gynecology Referral note would not be authored by a Pediatric Cardiologist. The type of referral and the target of the referral are specified via the participant (and not via the author).

3. **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [ReferralDocumentType](#) urn:oid:2.16.840.1.113883.1.11.20.2.3 **DYNAMIC** (CONF:1198-28949).
4. **SHALL** contain exactly one [1..1] **informationRecipient** (CONF:1198-31589).
 - a. This informationRecipient **SHALL** contain exactly one [1..1] **intendedRecipient** (CONF:1198-31590).
 - i. This intendedRecipient **SHOULD** contain zero or more [0..*] **addr** (CONF:1198-31591).
 - ii. This intendedRecipient **SHOULD** contain zero or more [0..*] **telecom** (CONF:1198-31592).
 - iii. This intendedRecipient **SHALL** contain exactly one [1..1] **informationRecipient** (CONF:1198-31593).
 1. This informationRecipient **SHALL** contain at least one [1..*] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-31594).
5. **SHOULD** contain zero or more [0..*] **participant** (CONF:1198-31642) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="IND" Indirect (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:1198-31924).
 - b. **SHALL** contain exactly one [1..1] **associatedEntity** (CONF:1198-31643).
 - i. This associatedEntity **SHALL** contain exactly one [1..1] **@classCode**, which **SHALL** be selected from ValueSet [INDRoleclassCodes](#) urn:oid:2.16.840.1.113883.11.20.9.33 **DYNAMIC** (CONF:1198-31925).
 - ii. This associatedEntity **SHALL** contain exactly one [1..1] **associatedPerson** (CONF:1198-31644).

1. This associatedPerson **SHALL** contain at least one [1..*] [US Realm Patient Name \(PTN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1) (CONF:1198-31645).

This participant represents the clinician to contact for questions about the referral note. This call back contact individual may be a different person than the individual(s) identified in the author or legalAuthenticator participant.

6. **SHOULD** contain zero or more [0..*] **participant** (CONF:1198-31647) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="CALLBCK"** call back contact (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **DYNAMIC**) (CONF:1198-31648).
 - b. **SHALL** contain exactly one [1..1] **associatedEntity** (CONF:1198-31649).
 - i. This associatedEntity **SHALL** contain exactly one [1..1] **@classCode="ASSIGNED"** assigned entity (CodeSystem: RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:1198-32419).
 - ii. This associatedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-31650).
 - iii. This associatedEntity **SHOULD** contain zero or more [0..*] **addr** (CONF:1198-31651).
 - iv. This associatedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1198-31652).
 - v. This associatedEntity **SHALL** contain exactly one [1..1] **associatedPerson** (CONF:1198-31653).
 1. This associatedPerson **SHALL** contain at least one [1..*] **name** (CONF:1198-31654).
 - vi. This associatedEntity **MAY** contain zero or one [0..1] **scopingOrganization** (CONF:1198-31655).
7. **SHALL** contain exactly one [1..1] **component** (CONF:1198-29062).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:1198-29063).
 - i. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-29066) such that it
 1. **SHALL** contain exactly one [1..1] [Plan of Treatment Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09) (CONF:1198-29067).
 - ii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-29068) such that it
 1. **SHALL** contain exactly one [1..1] [Advance Directives Section \(entries optional\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.21:2015-08-01) (CONF:1198-29069).
 - iii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-29074) such that it

1. **SHALL** contain exactly one [1..1] [History of Present Illness Section](#) (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.4) (CONF:1198-29075).
- iv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-29076) such that it
 1. **SHALL** contain exactly one [1..1] [Family History Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2015-08-01) (CONF:1198-29077).
- v. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-29082) such that it
 1. **SHALL** contain exactly one [1..1] [Immunizations Section \(entries required\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.2.1:2015-08-01) (CONF:1198-29083).
- vi. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-29086) such that it
 1. **SHALL** contain exactly one [1..1] [Problem Section \(entries required\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.5.1:2015-08-01) (CONF:1198-29087).
- vii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-29088) such that it
 1. **SHALL** contain exactly one [1..1] [Procedures Section \(entries optional\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.7:2014-06-09) (CONF:1198-29089).
- viii. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-29090) such that it
 1. **SHALL** contain exactly one [1..1] [Results Section \(entries required\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2015-08-01) (CONF:1198-29091).
- ix. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-29092) such that it
 1. **SHALL** contain exactly one [1..1] [Review of Systems Section](#) (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.18) (CONF:1198-29093).
- x. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-29094) such that it
 1. **SHALL** contain exactly one [1..1] [Social History Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01) (CONF:1198-29095).
- xi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-29096) such that it

1. **SHALL** contain exactly one [1..1] [Vital Signs Section \(entries required\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2015-08-01) (CONF:1198-29097).
- xii. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-29098) such that it
 1. **SHALL** contain exactly one [1..1] [Functional Status Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.14:2014-06-09) (CONF:1198-29099).
- xiii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-29100) such that it
 1. **SHALL** contain exactly one [1..1] [Physical Exam Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.2.10:2015-08-01) (CONF:1198-29101).
- xiv. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-30780) such that it
 1. **SHALL** contain exactly one [1..1] [Nutrition Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.57) (CONF:1198-30781).
- xv. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-30796) such that it
 1. **SHALL** contain exactly one [1..1] [Mental Status Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.56:2015-08-01) (CONF:1198-30926).
- xvi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30798) such that it
 1. **SHALL** contain exactly one [1..1] [Medical Equipment Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.23:2014-06-09) (CONF:1198-30799).
- xvii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30911) such that it
 1. **SHALL** contain exactly one [1..1] [Allergies and Intolerances Section \(entries required\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.6.1:2015-08-01) (CONF:1198-30912).
- xviii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30913) such that it
 1. **SHALL** contain exactly one [1..1] [Assessment Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.8) (CONF:1198-30914).
- xix. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30915) such that it

1. **SHALL** contain exactly one [1..1] [Assessment and Plan Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.9:2014-06-09) (CONF:1198-30916).
- xx. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30917) such that it
 1. **SHALL** contain exactly one [1..1] [History of Past Illness Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.20:2015-08-01) (CONF:1198-30918).
- xxi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30919) such that it
 1. **SHALL** contain exactly one [1..1] [General Status Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.2.5) (CONF:1198-30920).
- xxii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30922) such that it
 1. **SHALL** contain exactly one [1..1] [Medications Section \(entries required\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.1.1:2014-06-09) (CONF:1198-30923).
- xxiii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30924) such that it
 1. **SHALL** contain exactly one [1..1] [Reason for Referral Section \(V2\)](#) (identifier: urn:hl7ii:1.3.6.1.4.1.19376.1.5.3.1.3.1:2014-06-09) (CONF:1198-30925).
- xxiv. This structuredBody **SHALL** contain an Assessment and Plan Section (V2) (2.16.840.1.113883.10.20.22.2.9:2014-06-09), or an Assessment Section (2.16.840.1.113883.10.20.22.2.8) and a Plan of Treatment Section (V2) (2.16.840.1.113883.10.20.22.2.10:2014-06-09) (CONF:1198-29102).
- xxv. This structuredBody **SHALL NOT** contain an Assessment and Plan Section (V2) (2.16.840.1.113883.10.20.22.2.9:2014-06-09) when either an Assessment Section (2.16.840.1.113883.10.20.22.2.8) or a Plan of Treatment Section (V2) (2.16.840.1.113883.10.20.22.2.10:2014-06-09) is present (CONF:1198-29103).

Table 54: ReferralDocumentType

Value Set: ReferralDocumentType urn:oid:2.16.840.1.113883.1.11.20.2.3			
A referral note provides a consulting physician specified patient information about the patient referred. Specific URL Pending			
Value Set Source: http://www.loinc.org/			
Code	Code System	Code System OID	Print Name
57133-1	LOINC	urn:oid:2.16.840.1.113883.6.1	Referral note
57170-3	LOINC	urn:oid:2.16.840.1.113883.6.1	Cardiovascular disease Referral note
57178-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Critical Care Medicine Referral note
57134-9	LOINC	urn:oid:2.16.840.1.113883.6.1	Dentistry Referral note
57135-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Dermatology Referral note
57136-4	LOINC	urn:oid:2.16.840.1.113883.6.1	Diabetology Referral note
57137-2	LOINC	urn:oid:2.16.840.1.113883.6.1	Endocrinology Referral note
57138-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Gastroenterology Referral note
57139-8	LOINC	urn:oid:2.16.840.1.113883.6.1	General medicine Referral note
57171-1	LOINC	urn:oid:2.16.840.1.113883.6.1	Geriatric medicine Referral note
...			

Figure 37: Referral Note informationRecipient Example

```
<informationRecipient>
  <intendedRecipient>
    <informationRecipient>
      <name>
        <given>Nancy</given>
        <family>Nightingale</family>
        <suffix qualifier="AC">RN</suffix>
      </name>
    </informationRecipient>
  <receivedOrganization>
    <name>Community Health and Hospitals</name>
    <telecom value="tel:+1(555)-555-1002" use="WP" />
    <addr use="WP">
      <streetAddressLine>Cardiac Stepdown Unit, 4B </streetAddressLine>
      <streetAddressLine>1002 Healthcare Drive </streetAddressLine>
      <city>Ann Arbor</city>
      <state>MI</state>
      <postalCode>97857</postalCode>
      <country>US</country>
    </addr>
  </receivedOrganization>
</intendedRecipient>
</informationRecipient>
```

Figure 38: Referral Note Caregiver Example

```
<participant typeCode="IND">
  <functionCode code="407543004" displayName="Primary Carer"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED-CT" />
  <!-- Caregiver -->
  <associatedEntity classCode="CAREGIVER">
    <code code="MTH" codeSystem="2.16.840.1.113883.5.111" />
    <addr>
      <streetAddressLine>17 Daws Rd.</streetAddressLine>
      <city>Ann Arbor</city>
      <state>MI</state>
      <postalCode>97857</postalCode>
      <country>US</country>
    </addr>
    <telecom value="tel: 1+(555)555-1212" use="WP" />
    <associatedPerson>
      <name>
        <prefix>Mrs.</prefix>
        <given>Martha</given>
        <family>Jones</family>
      </name>
    </associatedPerson>
  </associatedEntity>
</participant>
```

Figure 39: Referral Note Callback Contact Example

```

<participant typeCode="CALLBCK">
  <time value="20050329224411+0500" />
  <associatedEntity classCode="ASSIGNED">
    <id extension="99999999" root="2.16.840.1.113883.4.6" />
    <code code="200000000X" codeSystem="2.16.840.1.113883.6.101"
displayName="Allopathic & Osteopathic Physicians" />
    <addr>
      <streetAddressLine>1002 Healthcare Drive </streetAddressLine>
      <city>Ann Arbor</city>
      <state>MI</state>
      <postalCode>97857</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:555-555-1002" />
    <associatedPerson>
      <name>
        <given>Henry</given>
        <family>Seven</family>
        <suffix>DO</suffix>
      </name>
    </associatedPerson>
  </associatedEntity>
</participant>

```

1.1.20 Transfer Summary (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.13:2015-08-01 (open)]

Table 55: Transfer Summary (V2) Contexts

Contained By:	Contains:
	<ul style="list-style-type: none"> Admission Diagnosis Section (V3) Admission Medications Section (entries optional) (V3) Advance Directives Section (entries required) (V3) Allergies and Intolerances Section (entries required) (V3) Assessment and Plan Section (V2) Assessment Section Course of Care Section Discharge Diagnosis Section (V3) Encounters Section (entries required) (V3) Family History Section (V3) Functional Status Section (V2) General Status Section History of Past Illness Section (V3) History of Present Illness Section Immunizations Section (entries optional) (V3) Medical Equipment Section (V2)

Contained By:	Contains:
	Medications Section (entries required) (V2) Mental Status Section (V2) Nutrition Section Payers Section (V3) Physical Exam Section (V3) Plan of Treatment Section (V2) Problem Section (entries required) (V3) Procedures Section (entries required) (V2) Reason for Referral Section (V2) Results Section (entries required) (V3) Review of Systems Section Social History Section (V3) Vital Signs Section (entries required) (V3)

This document describes constraints on the Clinical Document Architecture (CDA) header and body elements for a Transfer Summary. The Transfer Summary standardizes critical information for exchange of information between providers of care when a patient moves between health care settings.

Standardization of information used in this form will promote interoperability; create information suitable for reuse in quality measurement, public health, research, and for reimbursement.

Table 56: Transfer Summary (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.1.13:2015-08-01)					
templateId	1..1	SHALL		1198-28239	
@root	1..1	SHALL		1198-28240	2.16.840.1.113883.10.20.22.1.13
@extension	1..1	SHALL		1198-32907	2015-08-01
code	1..1	SHALL		1198-28243	urn:oid:2.16.840.1.113883.1.11.20.2.4 (TransferDocumentType)
title	1..1	SHALL		1198-29838	
participant	0..*	SHOULD		1198-31599	
@typeCode	1..1	SHALL		1198-31872	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = IND
associatedEntity	1..1	SHALL		1198-31600	
@classCode	1..1	SHALL		1198-31873	urn:oid:2.16.840.1.113883.11.20.9.33 (INDRoleclassCodes)
associatedPerson	1..1	SHALL		1198-31601	
name	1..*	SHALL		1198-31602	
participant	0..*	SHOULD		1198-31626	
@typeCode	1..1	SHALL		1198-31627	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CALLBCK
associatedEntity	1..1	SHALL		1198-31628	
@classCode	1..1	SHALL		1198-31641	urn:oid:2.16.840.1.113883.5.110 (RoleClass) = ASSIGNED
id	1..*	SHALL		1198-31629	
addr	0..*	SHOULD		1198-31630	
telecom	1..*	SHALL		1198-31631	
associatedPerson	1..1	SHALL		1198-31632	
name	1..*	SHALL		1198-31633	
scopingOrganization	0..1	MAY		1198-31634	

documentationOf	1..1	SHALL		1198-31570	
serviceEvent	1..1	SHALL		1198-31571	
@classCode	1..1	SHALL		1198-31572	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PCPR
code	0..1	MAY		1198-32650	
performer	1..*	SHALL		1198-31574	
@typeCode	1..1	SHALL		1198-31575	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF
functionCode	0..1	MAY		1198-32651	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
component	1..1	SHALL		1198-28251	
structuredBody	1..1	SHALL		1198-28252	
component	0..1	SHOULD		1198-28253	
section	1..1	SHALL		1198-28254	Advance Directives Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.21.1:2015-08-01)
component	1..1	SHALL		1198-28255	
section	1..1	SHALL		1198-28256	Allergies and Intolerances Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.6.1:2015-08-01)
component	0..1	MAY		1198-28257	
section	1..1	SHALL		1198-28258	Physical Exam Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.2.10:2015-08-01)
component	0..1	MAY		1198-28261	
section	1..1	SHALL		1198-28262	Encounters Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.22.1:2015-08-01)
component	0..1	MAY		1198-28263	
section	1..1	SHALL		1198-28264	Family History Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2015-08-01)

component	0..1	SHOULD		1198-28265	
section	1..1	SHALL		1198-28266	Functional Status Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.14:2014-06-09)
component	0..1	SHOULD		1198-28271	
section	1..1	SHALL		1198-28272	Discharge Diagnosis Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.24:2015-08-01)
component	0..1	MAY		1198-28273	
section	1..1	SHALL		1198-28274	Immunizations Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.2:2015-08-01)
component	0..1	MAY		1198-28275	
section	1..1	SHALL		1198-28276	Medical Equipment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.23:2014-06-09)
component	1..1	SHALL		1198-28277	
section	1..1	SHALL		1198-28278	Medications Section (entries required) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.1.1:2014-06-09)
component	0..1	MAY		1198-28279	
section	1..1	SHALL		1198-28280	Payers Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.18:2015-08-01)
component	0..1	MAY		1198-28281	
section	1..1	SHALL		1198-28282	Plan of Treatment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.10:2014-06-09)
component	1..1	SHALL		1198-28283	
section	1..1	SHALL		1198-28284	Problem Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.5.1:2015-08-01)
component	0..1	SHOULD		1198-28285	
section	1..1	SHALL		1198-	Procedures Section (entries

				28286	required) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.7.1:2014-06-09
component	1..1	SHALL		1198-28287	
section	1..1	SHALL		1198-28288	Results Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.3.1:2015-08-01
component	0..1	SHOULD		1198-28289	
section	1..1	SHALL		1198-28290	Social History Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.17:2015-08-01
component	1..1	SHALL		1198-28291	
section	1..1	SHALL		1198-28292	Vital Signs Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.4.1:2015-08-01
component	0..1	SHOULD		1198-28327	
section	1..1	SHALL		1198-28328	Mental Status Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.2.56:2015-08-01
component	0..1	MAY		1198-28838	
section	1..1	SHALL		1198-28839	General Status Section (identifier: urn:oid:2.16.840.1.113883.10.20.2.5
component	0..1	MAY		1198-30239	
section	1..1	SHALL		1198-30240	Review of Systems Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.18
component	0..1	SHOULD		1198-30776	
section	1..1	SHALL		1198-30777	Nutrition Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.57
component	1..1	SHALL		1198-31342	
section	1..1	SHALL		1198-31343	Reason for Referral Section (V2) (identifier: urn:hl7ii:1.3.6.1.4.1.19376.1.5.3.1.3.1:2014-06-09
component	0..1	MAY		1198-	

				31561	
section	1..1	SHALL		1198-31562	History of Past Illness Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.20:2015-08-01)
component	0..1	SHOULD		1198-31563	
section	1..1	SHALL		1198-31564	History of Present Illness Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.4)
component	0..1	MAY		1198-31565	
section	1..1	SHALL		1198-31566	Assessment and Plan Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.9:2014-06-09)
component	0..1	MAY		1198-31567	
section	1..1	SHALL		1198-31568	Assessment Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.8)
component	0..1	MAY		1198-32445	
section	1..1	SHALL		1198-32446	Admission Medications Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.44:2015-08-01)
component	0..1	MAY		1198-32447	
section	1..1	SHALL		1198-32448	Admission Diagnosis Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.43:2015-08-01)
component	0..1	MAY		1198-32648	
section	1..1	SHALL		1198-32649	Course of Care Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.64)

1. Conforms to [US Realm Header \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-28239) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.13" (CONF:1198-28240).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32907).

The Transfer Summary recommends use of the document type code 18761-7 "Provider Unspecified Transfer Summary", with further specification provided by author or performer,

setting, or specialty. When pre-coordinated codes are used, any coded values describing the author or performer of the service act or the practice setting must be consistent with the LOINC document type. For example, an Obstetrics and Gynecology Transfer Summary note would not be authored by a Pediatric Cardiologist.

Pre-coordinated codes are those that indicate the specialty or service provided in the LOINC Long Common Name (Print Name in the TransferDocumentType valueSet table).

When using a generic type of code such as 18761-7 (Provider - Unspecified Transfer Summary), the types of services involved in the care are handled in documentationOf/serviceEvent with the use of serviceEvent/code (e.g., use a SNOMED CT procedure code such as 69031006 (Excision of breast tissue) while performers/providers involved in the care can be identified using the functionCode (bound to Healthcare Provider Taxonomy role codes).

3. **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [TransferDocumentType](#) urn:oid:2.16.840.1.113883.1.11.20.2.4 **DYNAMIC** (CONF:1198-28243).
4. **SHALL** contain exactly one [1..1] **title** (CONF:1198-29838).
5. **SHOULD** contain zero or more [0..*] **participant** (CONF:1198-31599) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="IND"** indirect (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:1198-31872).
 - b. **SHALL** contain exactly one [1..1] **associatedEntity** (CONF:1198-31600).
 - i. This associatedEntity **SHALL** contain exactly one [1..1] **@classCode** (ValueSet: [INDRoleclassCodes](#) urn:oid:2.16.840.1.113883.11.20.9.33 **DYNAMIC**) (CONF:1198-31873).
 - ii. This associatedEntity **SHALL** contain exactly one [1..1] **associatedPerson** (CONF:1198-31601).
 1. This associatedPerson **SHALL** contain at least one [1..*] **name** (CONF:1198-31602).
6. **SHOULD** contain zero or more [0..*] **participant** (CONF:1198-31626) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="CALLBCK"** Call back contact (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:1198-31627).
 - b. **SHALL** contain exactly one [1..1] **associatedEntity** (CONF:1198-31628).
 - i. This associatedEntity **SHALL** contain exactly one [1..1] **@classCode="ASSIGNED"** assigned entity (CodeSystem: RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:1198-31641).
 - ii. This associatedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-31629).
 - iii. This associatedEntity **SHOULD** contain zero or more [0..*] **addr** (CONF:1198-31630).
 - iv. This associatedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1198-31631).
 - v. This associatedEntity **SHALL** contain exactly one [1..1] **associatedPerson** (CONF:1198-31632).
 1. This associatedPerson **SHALL** contain at least one [1..*] **name** (CONF:1198-31633).

- vi. This associatedEntity **MAY** contain zero or one [0..1] **scopingOrganization** (CONF:1198-31634).
- 7. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:1198-31570).

The serviceEvent in a Transfer Note contains the representation of providers who are wholly or partially responsible for the safety and well-being of a subject of care.

- a. This documentationOf **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:1198-31571).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] **@classCode="PCPR" Care Provision** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1198-31572).

Use serviceEvent/code when using a generic document type code such as 18761-7 (Provider-Unspecified Transfer Summary) to represent the service.

- ii. This serviceEvent **MAY** contain zero or one [0..1] **code** (CONF:1198-32650).
- iii. This serviceEvent **SHALL** contain at least one [1..*] **performer** (CONF:1198-31574) such that it
 - 1. **SHALL** contain exactly one [1..1] **@typeCode="PRF" Participation of Physical Performer** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **DYNAMIC**) (CONF:1198-31575).

Use performer/functionCode when using a generic document type code such as 18761-7 (Provider-Unspecified Transfer Summary) to represent the provider.

- 2. **MAY** contain zero or one [0..1] **functionCode**, which **SHOULD** be selected from ValueSet [Healthcare Provider Taxonomy \(HIPAA\)](#) (urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC**) (CONF:1198-32651).
- 8. **SHALL** contain exactly one [1..1] **component** (CONF:1198-28251).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:1198-28252).
 - i. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-28253) such that it
 - 1. **SHALL** contain exactly one [1..1] [Advance Directives Section \(entries required\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.21.1:2015-08-01) (CONF:1198-28254).
 - ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-28255) such that it
 - 1. **SHALL** contain exactly one [1..1] [Allergies and Intolerances Section \(entries required\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.6.1:2015-08-01) (CONF:1198-28256).
 - iii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28257) such that it
 - 1. **SHALL** contain exactly one [1..1] [Physical Exam Section \(V3\)](#) (identifier:)

- urn:hl7ii:2.16.840.1.113883.10.20.2.10:2015-08-01)
(CONF:1198-28258).
- iv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28261) such that it
1. **SHALL** contain exactly one [1..1] [Encounters Section \(entries required\) \(V3\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.22.1:2015-08-01)
(CONF:1198-28262).
- v. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28263) such that it
1. **SHALL** contain exactly one [1..1] [Family History Section \(V3\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2015-08-01)
(CONF:1198-28264).
- vi. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-28265) such that it
1. **SHALL** contain exactly one [1..1] [Functional Status Section \(V2\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.14:2014-06-09)
(CONF:1198-28266).
- vii. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-28271) such that it
1. **SHALL** contain exactly one [1..1] [Discharge Diagnosis Section \(V3\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.24:2015-08-01)
(CONF:1198-28272).
- viii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28273) such that it
1. **SHALL** contain exactly one [1..1] [Immunizations Section \(entries optional\) \(V3\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.2:2015-08-01)
(CONF:1198-28274).
- ix. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28275) such that it
1. **SHALL** contain exactly one [1..1] [Medical Equipment Section \(V2\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.23:2014-06-09)
(CONF:1198-28276).
- x. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-28277) such that it
1. **SHALL** contain exactly one [1..1] [Medications Section \(entries required\) \(V2\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.1.1:2014-06-09)
(CONF:1198-28278).
- xi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28279) such that it

1. **SHALL** contain exactly one [1..1] [Payers Section \(V3\)](#)
(identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2015-08-01)
(CONF:1198-28280).
- xii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28281) such that it
 1. **SHALL** contain exactly one [1..1] [Plan of Treatment Section \(V2\)](#)
(identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09)
(CONF:1198-28282).
- xiii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-28283) such that it
 1. **SHALL** contain exactly one [1..1] [Problem Section \(entries required\) \(V3\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.5.1:2015-08-01)
(CONF:1198-28284).
- xiv. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-28285) such that it
 1. **SHALL** contain exactly one [1..1] [Procedures Section \(entries required\) \(V2\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.7.1:2014-06-09)
(CONF:1198-28286).
- xv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-28287) such that it
 1. **SHALL** contain exactly one [1..1] [Results Section \(entries required\) \(V3\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2015-08-01)
(CONF:1198-28288).
- xvi. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-28289) such that it
 1. **SHALL** contain exactly one [1..1] [Social History Section \(V3\)](#)
(identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01)
(CONF:1198-28290).
- xvii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-28291) such that it
 1. **SHALL** contain exactly one [1..1] [Vital Signs Section \(entries required\) \(V3\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2015-08-01)
(CONF:1198-28292).
- xviii. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-28327) such that it
 1. **SHALL** contain exactly one [1..1] [Mental Status Section \(V2\)](#)
(identifier:
urn:hl7ii:2.16.840.1.113883.10.20.22.2.56:2015-08-01)
(CONF:1198-28328).

- xix. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-28838) such that it
1. **SHALL** contain exactly one [1..1] [General Status Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.2.5) (CONF:1198-28839).
- xx. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30239) such that it
1. **SHALL** contain exactly one [1..1] [Review of Systems Section](#) (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.18) (CONF:1198-30240).
- xxi. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-30776) such that it
1. **SHALL** contain exactly one [1..1] [Nutrition Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.57) (CONF:1198-30777).
- xxii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-31342) such that it
1. **SHALL** contain exactly one [1..1] [Reason for Referral Section \(V2\)](#) (identifier: urn:hl7ii:1.3.6.1.4.1.19376.1.5.3.1.3.1:2014-06-09) (CONF:1198-31343).
- xxiii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-31561) such that it
1. **SHALL** contain exactly one [1..1] [History of Past Illness Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.20:2015-08-01) (CONF:1198-31562).
- xxiv. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-31563) such that it
1. **SHALL** contain exactly one [1..1] [History of Present Illness Section](#) (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.4) (CONF:1198-31564).
- xxv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-31565) such that it
1. **SHALL** contain exactly one [1..1] [Assessment and Plan Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.9:2014-06-09) (CONF:1198-31566).
- xxvi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-31567) such that it
1. **SHALL** contain exactly one [1..1] [Assessment Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.8) (CONF:1198-31568).
- xxvii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-32445) such that it

1. **SHALL** contain exactly one [1..1] [Admission Medications Section \(entries optional\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.44:2015-08-01) (CONF:1198-32446).
- xxviii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-32447) such that it
1. **SHALL** contain exactly one [1..1] [Admission Diagnosis Section \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.43:2015-08-01) (CONF:1198-32448).
- xxix. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-32648) such that it
1. **SHALL** contain exactly one [1..1] [Course of Care Section](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.64) (CONF:1198-32649).
- xxx. This structuredBody **SHALL** contain an Assessment and Plan Section (V2) (2.16.840.1.113883.10.20.22.2.9:2014-06-09), or an Assessment Section (2.16.840.1.113883.10.20.22.2.8) and a Plan of Treatment Section (V2) (2.16.840.1.113883.10.20.22.2.10:2014-06-09) (CONF:1198-31582).
- xxxi. This structuredBody **SHALL NOT** contain an Assessment and Plan Section (V2) (2.16.840.1.113883.10.20.22.2.9:2014-06-09) when either an Assessment Section (2.16.840.1.113883.10.20.22.2.8) or a Plan of Treatment Section (V2) (2.16.840.1.113883.10.20.22.2.10:2014-06-09) is present (CONF:1198-31583).

Table 57: TransferDocumentType

<p>Value Set: TransferDocumentType urn:oid:2.16.840.1.113883.1.11.20.2.4</p> <p>A transfer document is exchanged between care providers when a patient transfers from one care setting to another.</p> <p>This value set includes all LOINC codes whose Component = Transfer Summary Note* and SCALE_TYPE = Doc.</p> <p>Value Set Source: http://search.loinc.org/search.zul?query=transfer+summary+note</p>			
Code	Code System	Code System OID	Print Name
18761-7	LOINC	urn:oid:2.16.840.1.113883.6.1	Provider-unspecified Transfer summary
68618-8	LOINC	urn:oid:2.16.840.1.113883.6.1	Adolescent medicine Transfer summarization note
68632-9	LOINC	urn:oid:2.16.840.1.113883.6.1	Allergy and immunology Transfer summarization note
68647-7	LOINC	urn:oid:2.16.840.1.113883.6.1	Child and adolescent psychiatry Transfer summarization note
68660-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Clinical genetics Transfer summarization note
34755-9	LOINC	urn:oid:2.16.840.1.113883.6.1	Critical Care Medicine Transfer summarization note
68669-1	LOINC	urn:oid:2.16.840.1.113883.6.1	Developmental-behavioral pediatrics Transfer summarization note
34770-8	LOINC	urn:oid:2.16.840.1.113883.6.1	General medicine Transfer summarization note
68680-8	LOINC	urn:oid:2.16.840.1.113883.6.1	Multi-specialty program Transfer summarization note
68704-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Neurology with special qualifications in child neurology Transfer summary note
...			

Figure 40: Transfer Summary participant (Support) Example

```
<participant typeCode="IND">
  <time xsi:type="IVL_TS">
    <low value="19590101" />
    <high value="20111025" />
  </time>
  <associatedEntity classCode="ECON">
    <code code="MTH" codeSystem="2.16.840.1.113883.5.111" />
    <addr>
      <streetAddressLine>17 Daws Rd.</streetAddressLine>
      <city>Ann Arbor</city>
      <state>MI</state>
      <postalCode>97857</postalCode>
      <country>US</country>
    </addr>
    <telecom value="tel:(999)555-1212" use="WP" />
    <associatedPerson>
      <name>
        <prefix>Mrs.</prefix>
        <given>Martha</given>
        <family>Jones</family>
      </name>
    </associatedPerson>
  </associatedEntity>
</participant>
<participant typeCode="IND">
  <functionCode code="407543004" displayName="Primary Carer"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED-CT" />
  <time xsi:type="IVL_TS">
    <low value="19590101" />
    <high value="20111025" />
  </time>
  <associatedEntity classCode="CAREGIVER">
    <code code="MTH" codeSystem="2.16.840.1.113883.5.111" />
    <addr>
      <streetAddressLine>17 Daws Rd.</streetAddressLine>
      <city>Ann Arbor</city>
      <state>MI</state>
      <postalCode>97857</postalCode>
      <country>US</country>
    </addr>
    <telecom value="tel:(999)555-1212" use="WP" />
    <associatedPerson>
      <name>
        <prefix>Mrs.</prefix>
        <given>Martha</given>
        <family>Jones</family>
      </name>
    </associatedPerson>
  </associatedEntity>
</participant>
```

Figure 41: Transfer Summary Callback Contact Example

```
<participant typeCode="CALLBCK">
  <time value="20050329224411+0500" />
  <associatedEntity classCode="ASSIGNED">
    <id extension="99999999" root="2.16.840.1.113883.4.6" />
    <code code="200000000X" codeSystem="2.16.840.1.113883.6.101"
displayName="Allopathic & Osteopathic Physicians" />
    <addr>
      <streetAddressLine>1002 Healthcare Drive </streetAddressLine>
      <city>Ann Arbor</city>
      <state>MI</state>
      <postalCode>97857</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:555-555-1002" />
    <associatedPerson>
      <name>
        <given>Henry</given>
        <family>Seven</family>
      </name>
    </associatedPerson>
  </associatedEntity>
</participant>
```

1.1.21 Unstructured Document (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.10:2015-08-01 (open)]

An Unstructured Document (UD) document type can (1) include unstructured content, such as a graphic, directly in a text element with a mediaType attribute, or (2) reference a single document file, such as a word-processing document using a text/reference element.

For guidance on how to handle multiple files, on the selection of media types for this IG, and on the identification of external files, see the examples that follow the constraints below.

IHE's XDS-SD (Cross-Transaction Specifications and Content Specifications, Scanned Documents Module) profile addresses a similar, more restricted use case, specifically for scanned documents or documents electronically created from existing text sources, and limits content to PDF-A or text. This Unstructured Documents template is applicable not only for scanned documents in non-PDF formats, but also for clinical documents produced through word processing applications, etc.

For conformance with both specifications, implementers need to ensure that their documents at a minimum conform with the SHALL constraints from either specification.

Table 58: Unstructured Document (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.10:2015-08-01)					
templateId	1..1	SHALL		1198-7710	
@root	1..1	SHALL		1198-10054	2.16.840.1.113883.10.20.22.1.10
@extension	1..1	SHALL		1198-32522	2015-08-01
recordTarget	1..*	SHALL		1198-31089	
patientRole	1..1	SHALL		1198-31090	
id	1..*	SHALL		1198-31091	
custodian	1..1	SHALL		1198-31096	
assignedCustodian	1..1	SHALL		1198-31097	
representedCustodianOrganization	1..1	SHALL		1198-31098	
component	1..1	SHALL		1198-31085	
nonXMLBody	1..1	SHALL		1198-31086	
text	1..1	SHALL		1198-31087	

1.1.22 Properties

1. Conforms to [US Realm Header \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7710) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.10" (CONF:1198-10054).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32522).

1.1.22.1 recordTarget

3. **SHALL** contain at least one [1..*] **recordTarget** (CONF:1198-31089).
 - a. Such recordTargets **SHALL** contain exactly one [1..1] **patientRole** (CONF:1198-31090).
 - i. This patientRole **SHALL** contain at least one [1..*] **id** (CONF:1198-31091).

1.1.22.2 custodian

4. **SHALL** contain exactly one [1..1] **custodian** (CONF:1198-31096).
 - a. This custodian **SHALL** contain exactly one [1..1] **assignedCustodian** (CONF:1198-31097).
 - i. This assignedCustodian **SHALL** contain exactly one [1..1] **representedCustodianOrganization** (CONF:1198-31098).
5. **SHALL** contain exactly one [1..1] **component** (CONF:1198-31085).

1.1.22.3 nonXMLBody

An Unstructured Document must include a nonXMLBody component with a single text element. The text element can reference an external file using a reference element, or include unstructured content directly with a mediaType attribute. The nonXMLBody/text element also has a "compression" attribute that can be used to indicate that the unstructured content was compressed before being Base64Encoded. At a minimum, a compression value of "DF" for the deflate compression algorithm (RFC 1951 <http://www.ietf.org/rfc/rfc1951.txt>) must be supported although it is not required that content be compressed.

- a. This component **SHALL** contain exactly one [1..1] **nonXMLBody** (CONF:1198-31086).
 - i. This nonXMLBody **SHALL** contain exactly one [1..1] **text** (CONF:1198-31087).
 1. If the text element does not contain a reference element with a value attribute, then it **SHALL** contain exactly one [1..1] **@representation="B64"** and exactly one [1..1] **@mediaType** (CONF:1198-7624).
 2. The value of **@mediaType**, if present, **SHALL** be drawn from the value set 2.16.840.1.113883.11.20.7.1 SupportedFileFormats STATIC 20100512 (CONF:1198-7623).

Table 59: SupportedFileFormats

Value Set: SupportedFileFormats urn:oid:2.16.840.1.113883.11.20.7.1			
A value set of the file formats supported by the Unstructured Document IG.			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
application/msword	Media Type	urn:oid:2.16.840.1.113883.5.79	MSWORD
application/pdf	Media Type	urn:oid:2.16.840.1.113883.5.79	PDF
text/plain	Media Type	urn:oid:2.16.840.1.113883.5.79	Plain Text
text/rtf	Media Type	urn:oid:2.16.840.1.113883.5.79	RTF Text
text/html	Media Type	urn:oid:2.16.840.1.113883.5.79	HTML Text
image/gif	Media Type	urn:oid:2.16.840.1.113883.5.79	GIF Image
image/tiff	Media Type	urn:oid:2.16.840.1.113883.5.79	TIF Image
image/jpeg	Media Type	urn:oid:2.16.840.1.113883.5.79	JPEG Image
image/png	Media Type	urn:oid:2.16.840.1.113883.5.79	PNG Image

Figure 42: nonXMLBody Example with Embedded Content

```
<component>
  <nonXMLBody>
    <text mediaType="text/rtf" representation="B64">elxydGY...</text>
  </nonXMLBody>
</component>
```

Figure 43: nonXMLBody Example with Referenced Content

```
<component>
  <nonXMLBody>
    <text>
      <reference value="UD_sample.pdf" />
    </text>
  </nonXMLBody>
</component>
```

Figure 44: nonXMLBody Example with Compressed Content

```
<component>
  <nonXMLBody>
    <text mediaType="text/rtf" representation="B64"
compression="DF">dhUkasd437hbjfQS7...</text>
  </nonXMLBody>
</component>
```

1.1.23 US Realm Header for Patient Generated Document (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.29.1:2015-08-01 (open)]

This template is designed to be used in conjunction with the US Realm Header (V2). It includes additional conformances which further constrain the US Realm Header (V2).

The Patient Generated Document Header template is not a separate document type. The document body may contain any structured or unstructured content from C-CDA.

Table 60: US Realm Header for Patient Generated Document (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.29.1:2015-08-01)					
templateId	1..1	SHALL		1198-28458	
@root	1..1	SHALL		1198-28459	2.16.840.1.113883.10.20.29.1
@extension	1..1	SHALL		1198-32917	2015-08-01
recordTarget	1..1	SHALL		1198-28460	
patientRole	1..1	SHALL		1198-28461	
id	1..*	SHALL		1198-28462	
patient	1..1	SHALL		1198-28465	
guardian	0..*	MAY		1198-28469	
id	0..*	SHOULD		1198-28470	
code	0..1	SHOULD		1198-28473	urn:oid:2.16.840.1.113883.11.20.12.1 (Personal And Legal Relationship Role Type)
languageCommunication	0..*	SHOULD		1198-28474	
preferenceInd	0..1	MAY		1198-28475	
providerOrganization	0..1	MAY		1198-28476	
author	1..*	SHALL		1198-28477	
assignedAuthor	1..1	SHALL		1198-28478	
id	1..*	SHALL		1198-28479	
code	0..1	SHOULD		1198-28481	
@code	1..1	SHALL		1198-28676	urn:oid:2.16.840.1.113883.11.20.12.1 (Personal And Legal Relationship Role Type)
dataEnterer	0..1	MAY		1198-28678	
assignedEntity	1..1	SHALL		1198-28679	
code	0..1	MAY		1198-	urn:oid:2.16.840.1.113883.11.20.

				28680	12.1 (Personal And Legal Relationship Role Type)
informant	0..*	MAY		1198-28681	
relatedEntity	1..1	SHALL		1198-28682	
code	0..1	MAY		1198-28683	
@code	0..1	SHOULD		1198-28684	urn:oid:2.16.840.1.113883.11.20.12.1 (Personal And Legal Relationship Role Type)
custodian	1..1	SHALL		1198-28685	
assignedCustodian	1..1	SHALL		1198-28686	
representedCustodianOrganization	1..1	SHALL		1198-28687	
id	1..*	SHALL		1198-28688	
informationRecipient	0..*	MAY		1198-28690	
intendedRecipient	1..1	SHALL		1198-28691	
id	0..*	SHOULD		1198-28692	
@root	0..1	SHOULD		1198-28693	
legalAuthenticator	0..1	MAY		1198-28694	
assignedEntity	1..1	SHALL		1198-28695	
id	1..*	SHALL		1198-28696	
code	0..1	MAY		1198-28697	
@code	0..1	MAY		1198-28698	urn:oid:2.16.840.1.113883.11.20.12.1 (Personal And Legal Relationship Role Type)
authenticator	0..*	MAY		1198-28699	
assignedEntity	1..1	SHALL		1198-28700	
id	1..*	SHALL		1198-28701	
code	0..1	SHOULD		1198-28702	urn:oid:2.16.840.1.113883.11.20.12.1 (Personal And Legal Relationship Role Type)
participant	0..*	MAY		1198-	

				28703	
@typeCode	1..1	SHALL		1198-28704	
associatedEntity	1..1	SHALL		1198-28705	
code	0..1	SHOULD		1198-28706	urn:oid:2.16.840.1.113883.11.20.12.1 (Personal And Legal Relationship Role Type)
inFulfillmentOf	0..*	MAY		1198-28707	
order	1..1	SHALL		1198-28708	
id	1..*	SHALL		1198-28709	
documentationOf	0..*	MAY		1198-28710	
serviceEvent	1..1	SHALL		1198-28711	
code	0..1	SHOULD		1198-28712	
performer	0..*	SHOULD		1198-28713	
functionCode	0..1	MAY		1198-28714	
assignedEntity	1..1	SHALL		1198-28715	
id	1..*	SHALL		1198-28716	
code	0..1	MAY		1198-28718	urn:oid:2.16.840.1.113883.11.20.12.1 (Personal And Legal Relationship Role Type)

1. Conforms to [US Realm Header \(v3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-28458) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.29.1"** (CONF:1198-28459).
 - b. **SHALL** contain exactly one [1..1] **@extension="2015-08-01"** (CONF:1198-32917).

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

If the document receiver is interested in setting up a translator for the encounter with the patient, the receiver of the document will have to infer the need for a translator, based upon the language skills identified for the patient, the patient's language of preference and the predominant language used by the organization receiving the CDA.

HL7 Vocabulary simply describes guardian as a relationship to a ward. This need not be a formal legal relationship. When a guardian relationship exists for the patient, it can be

represented, regardless of who is present at the time the document is generated. This need not be a formal legal relationship. A child's parent can be represented in the guardian role. In this case, the guardian/code element would encode the personal relationship of "mother" for the child's mom or "father" for the child's dad. An elderly person's child can be represented in the guardian role. In this case, the guardian/code element would encode the personal relationship of "daughter" or "son", or if a legal relationship existed, the relationship of "legal guardian" could be encoded.

3. **SHALL** contain exactly one [1..1] **recordTarget** (CONF:1198-28460).
 - a. This recordTarget **SHALL** contain exactly one [1..1] **patientRole** (CONF:1198-28461).
 - i. This patientRole **SHALL** contain at least one [1..*] **id** (CONF:1198-28462).
 - ii. This patientRole **SHALL** contain exactly one [1..1] **patient** (CONF:1198-28465).
 1. This patient **MAY** contain zero or more [0..*] **guardian** (CONF:1198-28469).
 - a. The guardian, if present, **SHOULD** contain zero or more [0..*] **id** (CONF:1198-28470).
 - b. 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:1198-28473).
 2. This patient **SHOULD** contain zero or more [0..*] **languageCommunication** (CONF:1198-28474).
 - a. The languageCommunication, if present, **MAY** contain zero or one [0..1] **preferenceInd** (CONF:1198-28475).

Note: Indicates a preference for information about care delivery and treatments be communicated (or translated if needed) into this language.

If more than one languageCommunication is present, only one languageCommunication element SHALL have a preferenceInd with a value of 1.

If present, this organization represents the provider organization where the person is claiming to be a patient.

- iii. This patientRole **MAY** contain zero or one [0..1] **providerOrganization** (CONF:1198-28476).

Note: If present, this organization represents the provider organization where the person is claiming to be a patient.

The author element represents the creator of the clinical document. The author may be a device, or a person. The person is the patient or the patient's advocate.

4. **SHALL** contain at least one [1..*] **author** (CONF:1198-28477).
 - a. Such authors **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:1198-28478).

- i. This assignedAuthor **SHALL** contain at least one [1..*] **id** (CONF:1198-28479).

When the author is a person who is not acting in the role of a clinician, this code encodes the personal or legal relationship between author and the patient.

- ii. This assignedAuthor **SHOULD** contain zero or one [0..1] **code** (CONF:1198-28481).
 1. The code, if present, **SHALL** contain exactly one [1..1] **@code**, which **SHOULD** be selected from ValueSet [Personal And Legal Relationship Role Type](#)
urn:oid:2.16.840.1.113883.11.20.12.1 **DYNAMIC** (CONF:1198-28676).

The dataEnterer element represents the person who transferred the content, written or dictated by someone else, into the clinical document. The guiding rule of thumb is that an author provides the content found within the header or body of the document, subject to their own interpretation, and the dataEnterer adds that information to the electronic system. In other words, a dataEnterer transfers information from one source to another (e.g., transcription from paper form to electronic system). If the dataEnterer is missing, this role is assumed to be played by the author.

5. **MAY** contain zero or one [0..1] **dataEnterer** (CONF:1198-28678).
 - a. The dataEnterer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-28679).
 - i. This assignedEntity **MAY** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Personal And Legal Relationship Role Type](#)
urn:oid:2.16.840.1.113883.11.20.12.1 **DYNAMIC** (CONF:1198-28680).

The informant element describes the source of the information in a medical document.

Assigned health care providers may be a source of information when a document is created. (e.g., a nurse's aide who provides information about a recent significant health care event that occurred within an acute care facility.) In these cases, the assignedEntity element is used.

When the informant is a personal relation, that informant is represented in the relatedEntity element, even if the personal relation is a medical professional. The code element of the relatedEntity describes the relationship between the informant and the patient. The relationship between the informant and the patient needs to be described to help the receiver of the clinical document understand the information in the document.

Each informant can be either an assignedEntity (a clinician serving the patient) OR a relatedEntity (a person with a personal or legal relationship with the patient). The constraints here apply to relatedEntity.

6. **MAY** contain zero or more [0..*] **informant** (CONF:1198-28681) such that it
 - a. **SHALL** contain exactly one [1..1] **relatedEntity** (CONF:1198-28682).
 - i. This relatedEntity **MAY** contain zero or one [0..1] **code** (CONF:1198-28683).
 1. The code, if present, **SHOULD** contain zero or one [0..1] **@code**, which **SHOULD** be selected from ValueSet [Personal And Legal Relationship Role Type](#)
urn:oid:2.16.840.1.113883.11.20.12.1 **DYNAMIC** (CONF:1198-28684).

The custodian element represents the organization or person that is in charge of maintaining the document. The custodian is the steward that is entrusted with the care of the document. Every CDA document has exactly one custodian. The custodian participation satisfies the CDA definition of Stewardship. Because CDA is an exchange standard and may not represent the original form of the authenticated document (e.g., CDA could include scanned copy of original), 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. Also, the custodian may be the patient or an organization acting on behalf of the patient, such as a PHR organization.

7. **SHALL** contain exactly one [1..1] **custodian** (CONF:1198-28685).
 - a. This custodian **SHALL** contain exactly one [1..1] **assignedCustodian** (CONF:1198-28686).

The representedCustodianOrganization may be the person when the document is not maintained by an organization.

- i. This assignedCustodian **SHALL** contain exactly one [1..1] **representedCustodianOrganization** (CONF:1198-28687).

The combined @root and @extension attributes record the custodian organization's identity in a secure, trusted, and unique way.

1. This representedCustodianOrganization **SHALL** contain at least one [1..*] **id** (CONF:1198-28688).

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

8. **MAY** contain zero or more [0..*] **informationRecipient** (CONF:1198-28690).
 - a. The informationRecipient, if present, **SHALL** contain exactly one [1..1] **intendedRecipient** (CONF:1198-28691).

The combined @root and @extension attributes to record the information recipient's identity in a secure, trusted, and unique way.

- i. This intendedRecipient **SHOULD** contain zero or more [0..*] **id** (CONF:1198-28692).

For a provider, the id/@root = "2.16.840.1.113883.4.6" indicates the National Provider Identifier where id/@extension is the NPI number for the provider.

The ids **MAY** reference the id of a person or organization entity specified elsewhere in the document.

1. The id, if present, **SHOULD** contain zero or one [0..1] **@root** (CONF:1198-28693).

In a patient authored document, the legalAuthenticator identifies the single person legally responsible for the document and must be present if the document has been legally authenticated. (Note that per the following section, there may also be one or more document authenticators.)

Based on local practice, patient authored documents may be provided without legal authentication. This implies that a patient authored 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. All patient documents have the potential for legal authentication, given the appropriate legal authority.

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

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

9. **MAY** contain zero or one [0..1] **legalAuthenticator** (CONF:1198-28694).
 - a. The legalAuthenticator, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-28695).

The combined @root and @extension attributes to record the information recipient's identity in a secure, trusted, and unique way.

- i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-28696).
- ii. This assignedEntity **MAY** contain zero or one [0..1] **code** (CONF:1198-28697).
 1. The code, if present, **MAY** contain zero or one [0..1] **@code**, which **SHOULD** be selected from ValueSet [Personal And Legal Relationship Role Type](#)
urn:oid:2.16.840.1.113883.11.20.12.1 **DYNAMIC** (CONF:1198-28698).

10. **MAY** contain zero or more [0..*] **authenticator** (CONF:1198-28699).
 - a. The authenticator, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-28700).

The combined @root and @extension attributes to record the authenticator's identity in a secure, trusted, and unique way.

- i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-28701).
- ii. This assignedEntity **SHOULD** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Personal And Legal Relationship Role Type](#)
urn:oid:2.16.840.1.113883.11.20.12.1 **DYNAMIC** (CONF:1198-28702).

The participant element identifies other supporting participants, including parents, relatives, caregivers, insurance policyholders, guarantors, and other participants 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)

11. **MAY** contain zero or more [0..*] **participant** (CONF:1198-28703).

Unless otherwise specified by the document specific header constraints, when participant/@typeCode is IND, associatedEntity/@classCode SHALL be selected from ValueSet 2.16.840.1.113883.11.20.9.33 INDRoleclassCodes STATIC 2011-09-30

- a. The participant, if present, **SHALL** contain exactly one [1..1] **@typeCode** (CONF:1198-28704).
 - b. The participant, if present, **SHALL** contain exactly one [1..1] **associatedEntity** (CONF:1198-28705).
 - i. This associatedEntity **SHOULD** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet Personal And Legal Relationship Role Type urn:oid:2.16.840.1.113883.11.20.12.1 **DYNAMIC** (CONF:1198-28706).
12. **MAY** contain zero or more [0..*] **inFulfillmentOf** (CONF:1198-28707).
- a. The inFulfillmentOf, if present, **SHALL** contain exactly one [1..1] **order** (CONF:1198-28708).

A scheduled appointment or service event in a practice management system may be represented using this id element.

- i. This order **SHALL** contain at least one [1..*] **id** (CONF:1198-28709).
13. **MAY** contain zero or more [0..*] **documentationOf** (CONF:1198-28710).
- a. The documentationOf, if present, **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:1198-28711).

The code should be selected from a value set established by the document-level template for a specific type of Patient Generated Document.

- i. This serviceEvent **SHOULD** contain zero or one [0..1] **code** (CONF:1198-28712).
- ii. This serviceEvent **SHOULD** contain zero or more [0..*] **performer** (CONF:1198-28713).

The functionCode SHALL be selected from value set ParticipationType 2.16.840.1.113883.1.11.10901

When indicating the performer was the primary care physician the functionCode shall be ="PCP"

- 1. The performer, if present, **MAY** contain zero or one [0..1] **functionCode** (CONF:1198-28714).
- 2. The performer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-28715).

The combined @root and @extension attributes record the performer's identity in a secure, trusted, and unique way.

- a. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-28716).

If the assignedEntity is an individual, the code SHOULD be selected from value set PersonalandLegalRelationshipRoleType value set

- b. This assignedEntity **MAY** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet Personal And Legal Relationship Role Type urn:oid:2.16.840.1.113883.11.20.12.1 **DYNAMIC** (CONF:1198-28718).

Figure 45: Patient Generated Document 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>
        <id root="2.16.840.1.113883.4.1" extension="111-22-3333" />
        <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>
        </addr>
      </guardian>
    </patient>
  </patientRole>
</recordTarget>
```

```

        <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="1.1.1.1.1.1.1.2" />
    <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>

```

Figure 46: Patient Generated Document author Example

```
<author>
  <time value="20121126145000-0500" />
  <assignedAuthor>
    <!-- Identifier based on the person's Direct Address which is a secure and trusted
mechanism for identifying
    a person discretely. The root of the id is the OID of the HISP Assigning Authority for
the Direct Address-->
      <id extension="adameveryman@direct.sampleHISP.com" root="2.16.123.123.12345.1234"
/>
    <!--
      The PGD Header Template includes further conformance constraints on the code element
to encode the personal or legal
      relationship of the author when they are person who is not acting in the role of a
clinician..
    -->
    <code code="ONESELF" displayName="Self" codeSystem="2.16.840.1.113883.5.111"
codeSystemName="HL7 Role code" />
    <addr use="HP">
      <!-- HP is "primary home" from codeSystem 2.16.840.1.113883.5.1119 -->
      <streetAddressLine>2222 Home Street</streetAddressLine>
      <city>Boston</city>
      <state>MA</state>
      <postalCode>02368</postalCode>
      <!-- US is "United States" from ISO 3166-1 Country Codes: 1.0.3166.1 -->
      <country>US</country>
    </addr>
    <!-- HP is "primary home" from HL7 AddressUse 2.16.840.1.113883.5.1119 -->
    <telecom value="tel:(555)555-2004" use="HP" />
    <assignedPerson>
      <name>
        <given>Adam</given>
        <family>Everyman</family>
      </name>
    </assignedPerson>
  </assignedAuthor>
</author>
```

Figure 47: Patient Generated Document author device Example

```
<!-- The Author below documents the system used to create the Patient Generated Document.
In this scenario the Patient is using a fictitious PHR Service called
MyPersonalHealthRecord.com.
It is a service which consumers purchase to receive and create their electronic health
records.
It is not a Patient Portal that is tethered to some other EMR or medical insurance
records system.
The service is developed by a company call ACME PHR Solutions, Inc. -->
<author>
  <time value="20121126145000-0500" />
  <assignedAuthor>
    <id extension="777.11" root="2.16.840.1.113883.19" />
    <addr nullFlavor="NA" />
    <telecom nullFlavor="NA" />
    <assignedAuthoringDevice>
      <manufacturerModelName>ACME PHR</manufacturerModelName>
      <softwareName>MyPHR v1.0</softwareName>
    </assignedAuthoringDevice>
    <representedOrganization>
      <id extension="999" root="1.2.3.4.5.6.7.8.9.12345" />
      <name>ACME PHR Solutions, Inc.</name>
      <telecom use="WP" value="tel:123-123-12345" />
      <addr>
        <streetAddressLine>4 Future Way</streetAddressLine>
        <city>Provenance</city>
        <state>RI</state>
        <postalCode>02919</postalCode>
      </addr>
    </representedOrganization>
  </assignedAuthor>
</author>
```

Figure 48: Patient Generated Document dataEnterer Example

```
<dataEnterer>
  <assignedEntity>
    <!-- Identifier based on the person's Direct Address which is a secure and trusted
mechanism for identifying
a person discretely. The root of the id is the OID of the HISP Assigning Authority for
the Direct Address-->
    <id extension="adameveryman@direct.sampleHISP.com" root="2.16.123.123.12345.1234"
/>
    <code code="ONESELF" displayName="Self" codeSystem="2.16.840.1.113883.5.111"
codeSystemName="HL7 Role code" />
    <addr use="HP">
      <!-- HP is "primary home" from codeSystem 2.16.840.1.113883.5.1119 -->
      <streetAddressLine>2222 Home Street</streetAddressLine>
      <city>Boston</city>
      <state>MA</state>
      <postalCode>02368</postalCode>
      <!-- US is "United States" from ISO 3166-1 Country Codes: 1.0.3166.1 -->
      <country>US</country>
    </addr>
    <!-- HP is "primary home" from HL7 AddressUse 2.16.840.1.113883.5.1119 -->
    <telecom value="tel:(555)555-2004" use="HP" />
    <assignedPerson>
      <name>
        <given>Adam</given>
        <family>Everyman</family>
      </name>
    </assignedPerson>
  </assignedEntity>
</dataEnterer>
```

Figure 49: Patient Generated Document informant Example <informant>

```
<informant>
  <assignedEntity>
    <!-- id using HL7 example OID. -->
    <id extension="999.1" root="2.16.840.1.113883.19" />
    <code code="ONESELF" displayName="Self" codeSystem="2.16.840.1.113883.5.111"
codeSystemName="HL7 Role code" />
    <addr use="HP">
      <!-- HP is "primary home" from codeSystem 2.16.840.1.113883.5.1119 -->
      <streetAddressLine>2222 Home Street</streetAddressLine>
      <city>Boston</city>
      <state>MA</state>
      <postalCode>02368</postalCode>
      <!-- US is "United States" from ISO 3166-1 Country Codes: 1.0.3166.1 -->
      <country>US</country>
    </addr>
    <!-- HP is "primary home" from HL7 AddressUse 2.16.840.1.113883.5.1119 -->
    <telecom value="tel:(555)555-2004" use="HP" />
    <assignedPerson>
      <name>
        <given>Adam</given>
        <family>Everyman</family>
      </name>
    </assignedPerson>
  </assignedEntity>
</informant>
```


Figure 50: Patient Generated Document informant RelEnt Example

```
<informant>
  <!-- An Errata has been accepted to allow relatedEntity under Informant. #XXXX -->
  <relatedEntity classCode="IND">
    <!-- id using HL7 example OID. -->
    <id extension="999.17" root="2.16.840.1.113883.19" />
    <code code="SIS" displayName="Sister" codeSystem="2.16.840.1.113883.11.20.12.1"
codeSystemName="Personal And Legal Relationship Role Type" />
    <addr use="HP">
      <!-- HP is "primary home" from codeSystem 2.16.840.1.113883.5.1119 -->
      <streetAddressLine>2222 Home Street</streetAddressLine>
      <city>Boston</city>
      <state>MA</state>
      <postalCode>02368</postalCode>
      <!-- US is "United States" from ISO 3166-1 Country Codes: 1.0.3166.1 -->
      <country>US</country>
    </addr>
    <!-- HP is "primary home" from HL7 AddressUse 2.16.840.1.113883.5.1119 -->
    <telecom value="tel:(555)555-2004" use="HP" />
    <assignedPerson>
      <name>
        <given>Alice</given>
        <family>Everyman</family>
      </name>
    </assignedPerson>
  </relatedEntity>
</informant>
```

Figure 51: Patient Generated Document custodian Example

```
<custodian>
  <assignedCustodian>
    <representedCustodianOrganization>
      <!-- id using HL7 example OID. -->
      <id extension="999.3" root="2.16.840.1.113883.19" />
      <name>MyPersonalHealthRecord.Com</name>
      <telecom value="tel:(555)555-1212" use="WP" />
      <addr use="WP">
        <streetAddressLine>123 Boylston Street</streetAddressLine>
        <city>Blue Hill</city>
        <state>MA</state>
        <postalCode>02368</postalCode>
        <country>USA</country>
      </addr>
    </representedCustodianOrganization>
  </assignedCustodian>
</custodian>
```

Figure 52: Patient Generated Document informationRecipient

```
<!-- The document is intended for multiple recipients, Adam himself and his PCP physician.
-->
<informationRecipient>
  <intendedRecipient>
    <!-- Identifier based on the person's Direct Address which is a secure and trusted
mechanism for identifying
    a person discretely. The root of the id is the OID of the HISP Assigning Authority for
the Direct Address-->
    <id extension="adameveryman@direct.sampleHISP.com" root="2.16.123.123.12345.1234"
/>
  </intendedRecipient>
  </informationRecipient>
  <receivedOrganization>
    <!-- id using HL7 example OID. -->
    <id extension="999.3" root="2.16.840.1.113883.19" />
    <name>MyPersonalHealthRecord.Com</name>
  </receivedOrganization>
</informationRecipient>
<informationRecipient>
  <intendedRecipient>
    <!-- Unique/Trusted id using HL7 example OID. -->
    <id extension="999.4" root="2.16.840.1.113883.19" />
    <!-- The physician's NPI number -->
    <id extension="1122334455" root="2.16.840.1.113883.4.6" />
    <!-- The physician's Direct Address -->
    <!-- Identifier based on the person's Direct Address which is a secure and trusted
mechanism for identifying
    a person discretely. The root of the id is the OID of the HISP Assigning Authority for
the Direct Address-->
    <id extension="DrP@direct.sampleHISP2.com" root="2.16.123.123.12345.4321" />
    <telecom use="WP" value="tel:(781)555-1212" />
    <telecom use="WP" value="mailto:DrP@direct.sampleHISP2.com" />
  </intendedRecipient>
  <informationRecipient>
    <name>
      <prefix>Dr.</prefix>
      <given>Patricia</given>
      <family>Primary</family>
    </name>
  </informationRecipient>
  <receivedOrganization>
    <!-- Unique/Trusted id using HL7 example OID. -->
    <id extension="999.2" root="2.16.840.1.113883.19" />
    <!-- NPI for the organization -->
    <id extension="1234567890" root="2.16.840.1.113883.4.6" />
    <name>Good Health Internal Medicine</name>
    <telecom use="WP" value="tel:(781)555-1212" />
    <addr>
      <streetAddressLine>100 Health Drive</streetAddressLine>
      <city>Boston</city>
      <state>MA</state>
    </addr>
  </receivedOrganization>
</informationRecipient>
```

```

        <postalCode>02368</postalCode>
        <country>USA</country>
    </addr>
</receivedOrganization>
</intendedRecipient>
</informationRecipient>

```

Figure 53: Patient Generated Document legalAuthenticator Example

```

<legalAuthenticator>
  <time value="20121126145000-0500" />
  <signatureCode code="S" />
  <assignedEntity>
    <!-- Identifier based on the person's Direct Address which is a secure and trusted
mechanism for identifying
a person discretely. The root of the id is the OID of the HISP Assigning Authority for
the Direct Address-->
    <id extension="adameveryman@direct.sampleHISP.com" root="2.16.123.123.12345.1234"
/>
    <addr use="HP">
      <!-- HP is "primary home" from codeSystem 2.16.840.1.113883.5.1119 -->
      <streetAddressLine>2222 Home Street</streetAddressLine>
      <city>Boston</city>
      <state>MA</state>
      <postalCode>02368</postalCode>
      <!-- US is "United States" from ISO 3166-1 Country Codes: 1.0.3166.1 -->
      <country>US</country>
    </addr>
    <!-- HP is "primary home" from HL7 AddressUse 2.16.840.1.113883.5.1119 -->
    <telecom value="tel:(555)555-2004" use="HP" />
    <assignedPerson>
      <name>
        <given>Adam</given>
        <family>Everyman</family>
      </name>
    </assignedPerson>
  </assignedEntity>
</legalAuthenticator>

```

Figure 54: Patient Generated Document authenticator Example

```
<authenticator>
  <time value="20121126145000-0500" />
  <signatureCode code="S" />
  <assignedEntity>
    <!-- Identifier based on the person's Direct Address which is a secure and trusted
mechanism for identifying
a person discretely. The root of the id is the OID of the HISP Assigning Authority for
the Direct Address-->
    <id extension="adameveryman@direct.sampleHISP.com" root="2.16.123.123.12345.1234"
/>
    <addr use="HP">
      <!-- HP is "primary home" from codeSystem 2.16.840.1.113883.5.1119 -->
      <streetAddressLine>2222 Home Street</streetAddressLine>
      <city>Boston</city>
      <state>MA</state>
      <postalCode>02368</postalCode>
      <!-- US is "United States" from ISO 3166-1 Country Codes: 1.0.3166.1 -->
      <country>US</country>
    </addr>
    <!-- HP is "primary home" from HL7 AddressUse 2.16.840.1.113883.5.1119 -->
    <telecom value="tel:(555)555-2004" use="HP" />
    <assignedPerson>
      <name>
        <given>Adam</given>
        <family>Everyman</family>
      </name>
    </assignedPerson>
  </assignedEntity>
</authenticator>
```

Figure 55: Patient Generated Document participant Example

```
<participant typeCode="IND">
  <time xsi:type="IVL_TS">
    <low value="19551125" />
    <high value="20121126" />
  </time>
  <associatedEntity classCode="NOK">
    <code code="MTH" codeSystem="2.16.840.1.113883.5.111" />
    <addr>
      <streetAddressLine>17 Daws Rd.</streetAddressLine>
      <city>Blue Bell</city>
      <state>MA</state>
      <postalCode>02368</postalCode>
      <country>US</country>
    </addr>
    <telecom value="tel:(555)555-2006" use="WP" />
    <associatedPerson>
      <name>
        <prefix>Mrs.</prefix>
        <given>Martha</given>
        <family>Mum</family>
      </name>
    </associatedPerson>
  </associatedEntity>
</participant>
```

Figure 56: Patient Generated Document inFulfillmentOf Example

```
<inFulfillmentOf>
  <order>
    <!-- The root identifies the EMR system at the Good Health Internal Medicine
  Practice -->
    <id extension="Ord12345" root="2.16.840.1.113883.4.6.1234567890.4" />
  </order>
</inFulfillmentOf>
```

2 SECTION-LEVEL TEMPLATES

This chapter contains the section-level templates referenced by one or more of the document types of this consolidated 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 handcrafted 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 Admission Diagnosis Section (V3)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.43:2015-08-01
(open)]

Table 61: Admission Diagnosis Section (V3) Contexts

Contained By:	Contains:
Discharge Summary (V3) (optional) Transfer Summary (V2) (optional)	Hospital Admission Diagnosis (V3)

This section contains a narrative description of the problems or diagnoses identified by the clinician at the time of the patient's admission. This section may contain coded entries representing the admitting diagnoses.

Table 62: Admission Diagnosis Section (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.43:2015-08-01)					
templateId	1..1	SHALL		1198-9930	
@root	1..1	SHALL		1198-10391	2.16.840.1.113883.10.20.22.2.43
@extension	1..1	SHALL		1198-32563	2015-08-01
code	1..1	SHALL		1198-15479	
@code	1..1	SHALL		1198-15480	46241-6
@codeSystem	1..1	SHALL		1198-30865	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
translation	1..1	SHALL		1198-32749	
@code	1..1	SHALL		1198-32750	42347-5
@codeSystem	1..1	SHALL		1198-32751	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-9932	
text	1..1	SHALL		1198-9933	
entry	0..1	SHOULD		1198-9934	
act	1..1	SHALL		1198-15481	Hospital Admission Diagnosis (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.34:2015-08-01)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-9930) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.43" (CONF:1198-10391).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32563).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15479).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="46241-6" Hospital Admission diagnosis (CONF:1198-15480).
 - 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:1198-30865).
 - c. This code **SHALL** contain exactly one [1..1] **translation** (CONF:1198-32749) such that it

- i. **SHALL** contain exactly one [1..1] @code="42347-5" Admission Diagnosis (CONF:1198-32750).
 - ii. **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:1198-32751).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-9932).
 4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-9933).
 5. **SHOULD** contain zero or one [0..1] **entry** (CONF:1198-9934).
 - a. The entry, if present, **SHALL** contain exactly one [1..1] [Hospital Admission Diagnosis \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.34:2015-08-01) (CONF:1198-15481).

Figure 57: Admission Diagnosis Section (V3) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.43" extension="2015-08-01"/>
  <code code="46241-6" codeSystem="2.16.840.1.113883.6.1" displayName="Hospital Admission
  Diagnosis">
    <translation code="42347-5" codeSystem="2.16.840.1.113883.6.1"
  displayName="Admission Diagnosis"></translation>
  </code>
  <title>HOSPITAL ADMISSION DIAGNOSIS</title>
  <text>Appendicitis</text>
  <entry>
    <act classCode="ACT" moodCode="EVN">
      <!--Admission Diagnosis template -->
      ...
    </act>
  </entry>
</section>

```

2.2 Admission Medications Section (entries optional) (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.44:2015-08-01 (open)]

Table 63: Admission Medications Section (entries optional) (V3) Contexts

Contained By:	Contains:
Discharge Summary (V3) (optional) Transfer Summary (V2) (optional)	Admission Medication (V2)

The section contains the medications taken by the patient prior to and at the time of admission to the facility.

Table 64: Admission Medications Section (entries optional) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.44:2015-08-01)					
templateId	1..1	SHALL		1198-10098	
@root	1..1	SHALL		1198-10392	2.16.840.1.113883.10.20.22.2.44
@extension	1..1	SHALL		1198-32560	2015-08-01
code	1..1	SHALL		1198-15482	
@code	1..1	SHALL		1198-15483	42346-7
@codeSystem	1..1	SHALL		1198-32142	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-10100	
text	1..1	SHALL		1198-10101	
entry	0..*	SHOULD		1198-10102	
act	1..1	SHALL		1198-15484	Admission Medication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.36:2014-06-09)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-10098) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.44" (CONF:1198-10392).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32560).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15482).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="42346-7" Medications on Admission (CONF:1198-15483).
 - 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:1198-32142).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-10100).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-10101).
5. **SHOULD** contain zero or more [0..*] **entry** (CONF:1198-10102) such that it
 - a. **SHALL** contain exactly one [1..1] [Admission Medication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.36:2014-06-09) (CONF:1198-15484).

2.3 Advance Directives Section (entries optional) (V3)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.21:2015-08-01
(open)]

Table 65: Advance Directives Section (entries optional) (V3) Contexts

Contained By:	Contains:
Consultation Note (V3) (optional) Continuity of Care Document (CCD) (V3) (optional) Referral Note (V2) (optional)	Advance Directive Observation (V3) Advance Directive Organizer (V2)

This section contains data defining the patient's advance directives and any reference to supporting documentation, including living wills, healthcare proxies, and CPR and resuscitation status. If the referenced documents are available, they can be included in the exchange package.

The most recent directives are required, if known, and should be listed in as much detail as possible.

This section differentiates between "advance directives" and "advance directive documents". The former is the directions to be followed whereas the latter refers to a legal document containing those directions.

Table 66: Advance Directives Section (entries optional) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.21:2015-08-01)					
templateId	1..1	SHALL		1198-7928	
@root	1..1	SHALL		1198-10376	2.16.840.1.113883.10.20.22.2.21
@extension	1..1	SHALL		1198-32497	2015-08-01
code	1..1	SHALL		1198-15340	
@code	1..1	SHALL		1198-15342	42348-3
@codeSystem	1..1	SHALL		1198-30812	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-7930	
text	1..1	SHALL		1198-7931	
entry	0..*	MAY		1198-7957	
observation	1..1	SHALL		1198-15443	Advance Directive Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.48:2015-08-01)
entry	0..*	MAY		1198-32891	
organizer	1..1	SHALL		1198-32892	Advance Directive Organizer (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.108:2015-08-01)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7928) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.21" (CONF:1198-10376).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32497).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15340).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="42348-3" Advance Directives (CONF:1198-15342).
 - 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:1198-30812).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-7930).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7931).
5. **MAY** contain zero or more [0..*] **entry** (CONF:1198-7957) such that it

- a. **SHALL** contain exactly one [1..1] [Advance Directive Observation \(V3\)](#)
(identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.48:2015-08-01)
(CONF:1198-15443).
- 6. **MAY** contain zero or more [0..*] **entry** (CONF:1198-32891) such that it
 - a. **SHALL** contain exactly one [1..1] [Advance Directive Organizer \(V2\)](#)
(identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.108:2015-08-01)
(CONF:1198-32892).

2.3.1 Advance Directives Section (entries required) (V3)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.21.1:2015-08-01
(open)]

Table 67: Advance Directives Section (entries required) (V3) Contexts

Contained By:	Contains:
Transfer Summary (V2) (optional)	Advance Directive Observation (V3) Advance Directive Organizer (V2)

This section contains data defining the patient’s advance directives and any reference to supporting documentation, including living wills, healthcare proxies, and CPR and resuscitation status. If the referenced documents are available, they can be included in the exchange package.

The most recent directives are required, if known, and should be listed in as much detail as possible.

This section differentiates between "advance directives" and "advance directive documents". The former is the directions to be followed whereas the latter refers to a legal document containing those directions.

Table 68: Advance Directives Section (entries required) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.21.1:2015-08-01)					
@nullFlavor	0..1	MAY		1198-32800	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1198-30227	
@root	1..1	SHALL		1198-30228	2.16.840.1.113883.10.20.22.2.21.1
@extension	1..1	SHALL		1198-32512	2015-08-01
code	1..1	SHALL		1198-32929	
@code	1..1	SHALL		1198-32930	42348-3
@codeSystem	1..1	SHALL		1198-32931	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-32932	
text	1..1	SHALL		1198-32933	
entry	1..*	SHALL		1198-30235	
observation	0..1	MAY		1198-30236	Advance Directive Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.48:2015-08-01)
organizer	0..1	MAY		1198-32420	Advance Directive Organizer (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.108:2015-08-01)

1. Conforms to [Advance Directives Section \(entries optional\) \(V3\) template \(identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.21:2015-08-01\)](#).
2. **MAY** contain zero or one [0..1] **@nullFlavor**="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1198-32800).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-30227) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.21.1" (CONF:1198-30228).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32512).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-32929).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="42348-3" Advance Directives (CONF:1198-32930).

- 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:1198-32931).
 - 5. **SHALL** contain exactly one [1..1] **title** (CONF:1198-32932).
 - 6. **SHALL** contain exactly one [1..1] **text** (CONF:1198-32933).
- If section/@nullFlavor is not present **SHALL** contain an Advance Directive Observation (V2) **OR** an Advance Directive Organizer (NEW):
- 7. **SHALL** contain at least one [1..*] **entry** (CONF:1198-30235) such that it
 - a. **MAY** contain zero or one [0..1] Advance Directive Observation (V3)
(identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.48:2015-08-01)
(CONF:1198-30236).
 - b. **MAY** contain zero or one [0..1] Advance Directive Organizer (V2)
(identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.108:2015-08-01)
(CONF:1198-32420).
 - c. This entry **SHALL** contain **EITHER** an Advance Directive Observation (V2) **OR** an Advance Directive Organizer (CONF:1198-32881).

Figure 58: Advance Directives Section (V3) Example

```

<section>
  <!-- C-CDA Advance Directives Section (required entries)template id -->
  <templateId root="2.16.840.1.113883.10.20.22.2.21.1" extension="2015-08-01" />
  <code code="42348-3" codeSystem="2.16.840.1.113883.6.1" />
  <title>ADVANCE DIRECTIVES</title>
  <text>
    Narrative Text
  </text>
  <entry typeCode="DRIV">
    <organizer classCode="CLUSTER" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.108" />
      <!-- ***Advance Directive Organizer template -->
      <id root="af6ebdf2-d996-11e2-a5b8-f23c91aec05e" />
    </organizer>
  </entry>
  <entry typeCode="DRIV">
    <organizer classCode="CLUSTER" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.108" />
      <!-- ***Advance Directive Organizer template -->
      <id root="af6ebdf2-d996-11e2-a5b8-f23c91aec05e" />
    </organizer>
  </entry>
</section>

```

2.4 Allergies and Intolerances Section (entries optional) (V3)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.6:2015-08-01 (open)]

Table 69: Allergies and Intolerances Section (entries optional) (V3) Contexts

Contained By:	Contains:
Discharge Summary (V3) (required) History and Physical (V3) (required) Progress Note (V3) (optional) Procedure Note (V3) (optional)	Allergy Concern Act (V3)

This section lists and describes any medication allergies, adverse reactions, idiosyncratic reactions, anaphylaxis/anaphylactoid reactions to food items, and metabolic variations or adverse reactions/allergies to other substances (such as latex, iodine, tape adhesives). At a minimum, it should list currently active and any relevant historical allergies and adverse reactions.

Table 70: Allergies and Intolerances Section (entries optional) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.2.6:2015-08-01)					
templateId	1..1	SHALL		1198-7800	
@root	1..1	SHALL		1198-10378	2.16.840.1.113883.10.20.22.2.6
@extension	1..1	SHALL		1198-32544	2015-08-01
code	1..1	SHALL		1198-15345	
@code	1..1	SHALL		1198-15346	48765-2
@codeSystem	1..1	SHALL		1198-32139	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-7802	
text	1..1	SHALL		1198-7803	
entry	0..*	SHOULD		1198-7804	
act	1..1	SHALL		1198-15444	Allergy Concern Act (V3) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.30:2015-08-01)

1. **SHALL** contain exactly one [1..1] `templateId` (CONF:1198-7800) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.6" (CONF:1198-10378).
- b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32544).
- 2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15345).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="48765-2" Allergies, adverse reactions, alerts (CONF:1198-15346).
 - 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:1198-32139).
- 3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-7802).
- 4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7803).
- 5. **SHOULD** contain zero or more [0..*] **entry** (CONF:1198-7804) such that it
 - a. **SHALL** contain exactly one [1..1] **Allergy Concern Act (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.30:2015-08-01) (CONF:1198-15444).

2.4.1 Allergies and Intolerances Section (entries required) (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.6.1:2015-08-01 (open)]

Table 71: Allergies and Intolerances Section (entries required) (V3) Contexts

Contained By:	Contains:
Consultation Note (V3) (required) Continuity of Care Document (CCD) (V3) (required) Transfer Summary (V2) (required) Referral Note (V2) (required)	Allergy Concern Act (V3)

This section lists and describes any medication allergies, adverse reactions, idiosyncratic reactions, anaphylaxis/anaphylactoid reactions to food items, and metabolic variations or adverse reactions/allergies to other substances (such as latex, iodine, tape adhesives). At a minimum, it should list currently active and any relevant historical allergies and adverse reactions.

Table 72: Allergies and Intolerances Section (entries required) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.6.1:2015-08-01)					
@nullFlavor	0..1	MAY		1198-32824	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1198-7527	
@root	1..1	SHALL		1198-10379	2.16.840.1.113883.10.20.22.2.6.1
@extension	1..1	SHALL		1198-32545	2015-08-01
code	1..1	SHALL		1198-15349	
@code	1..1	SHALL		1198-15350	48765-2
@codeSystem	1..1	SHALL		1198-32140	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-7534	
text	1..1	SHALL		1198-7530	
entry	1..*	SHALL		1198-7531	
act	1..1	SHALL		1198-15446	Allergy Concern Act (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.30:2015-08-01)

1. Conforms to [Allergies and Intolerances Section \(entries optional\) \(V3\) template \(identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.6:2015-08-01\)](#).
2. **MAY** contain zero or one [0..1] **@nullFlavor**="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1198-32824).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7527) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.6.1" (CONF:1198-10379).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32545).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15349).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="48765-2" Allergies, adverse reactions, alerts (CONF:1198-15350).
 - 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:1198-32140).
5. **SHALL** contain exactly one [1..1] **title** (CONF:1198-7534).
6. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7530).

If section/@nullFlavor is not present:

7. **SHALL** contain at least one [1..*] **entry** (CONF:1198-7531) such that it
 - a. **SHALL** contain exactly one [1..1] [Allergy Concern Act \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.30:2015-08-01) (CONF:1198-15446).

Figure 59: Allergies and Intolerances Section (entries required) (V3) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.6.1" extension="2015-08-01" />
  <code code="48765-2" displayName="Allergies, adverse reactions, alerts"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <title>Allergies</title>
  <text>
    ...
  </text>
  <entry typeCode="DRIV">
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.30" extension="2014-06-09" />
      <!-- Allergy Concern Act template -->
      ...
    </act>
  </entry>
</section>

```

2.5 Anesthesia Section (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.25:2014-06-09 (open)]

Table 73: Anesthesia Section (V2) Contexts

Contained By:	Contains:
Procedure Note (V3) (optional)	Medication Activity (V2)
Operative Note (V3) (required)	Procedure Activity Procedure (V2)

The Anesthesia Section records the type of anesthesia (e.g., general or local) and may state the actual agent used. This may be a subsection of the Procedure Description Section. The full details of anesthesia are usually found in a separate Anesthesia Note.

Table 74: Anesthesia Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.25:2014-06-09)					
templateId	1..1	SHALL		1098-8066	
@root	1..1	SHALL		1098-10380	2.16.840.1.113883.10.20.22.2.25
@extension	1..1	SHALL		1098-32531	2014-06-09
code	1..1	SHALL		1098-15351	
@code	1..1	SHALL		1098-15352	59774-0
@codeSystem	1..1	SHALL		1098-30830	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-8068	
text	1..1	SHALL		1098-8069	
entry	0..*	MAY		1098-8092	
procedure	1..1	SHALL		1098-15447	Procedure Activity Procedure (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09)
entry	0..*	MAY		1098-8094	
substanceAdministration	1..1	SHALL		1098-31127	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:1098-8066) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.25" (CONF:1098-10380).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32531).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15351).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="59774-0" Anesthesia (CONF:1098-15352).
 - 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:1098-30830).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-8068).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-8069).
5. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8092) such that it

- a. **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:1098-15447).
- 6. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8094) 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:1098-31127).

Figure 60: Anesthesia Section (V2) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.25" extension="2014-06-09" />
  <code code="59774-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName=" Anesthesia" />
  <title>Procedure Anesthesia</title>
  <text> Conscious sedation with propofol 200 mg IV </text>
  <entry>
    <procedure classCode="PROC" moodCode="EVN">
      <!-- Procedure activity procedure template -->
      <templateId root="2.16.840.1.113883.10.20.22.4.14" extension="2014-06-09" />
      ...
    </procedure>
  </entry>
  <entry>
    <substanceAdministration classCode="SBADM" moodCode="EVN">
      <!-- Medication activity template -->
      <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09" />
      ...
    </substanceAdministration>
  </entry>
</section>

```

2.6 Assessment and Plan Section (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.9:2014-06-09 (open)]

Table 75: Assessment and Plan Section (V2) Contexts

Contained By:	Contains:
Consultation Note (V3) (optional) History and Physical (V3) (optional) Transfer Summary (V2) (optional) Referral Note (V2) (optional) Progress Note (V3) (optional) Procedure Note (V3) (optional)	Planned Act (V2)

This section represents the clinician’s conclusions and working assumptions that will guide treatment of the patient. The Assessment and Plan Section may be combined or separated to meet local policy requirements.

See also the Assessment Section: templateId 2.16.840.1.113883.10.20.22.2.8 and Plan of Treatment Section (V2): templateId 2.16.840.1.113883.10.20.22.2.10:2014-06-09

Table 76: Assessment and Plan Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.9:2014-06-09)					
templateId	1..1	SHALL		1098-7705	
@root	1..1	SHALL		1098-10381	2.16.840.1.113883.10.20.22.2.9
@extension	1..1	SHALL		1098-32583	2014-06-09
code	1..1	SHALL		1098-15353	
@code	1..1	SHALL		1098-15354	51847-2
@codeSystem	1..1	SHALL		1098-32141	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
text	1..1	SHALL		1098-7707	
entry	0..*	MAY		1098-7708	
act	1..1	SHALL		1098-15448	Planned Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7705) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.9" (CONF:1098-10381).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32583).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15353).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51847-2" Assessment and Plan (CONF:1098-15354).
 - 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:1098-32141).
3. **SHALL** contain exactly one [1..1] **text** (CONF:1098-7707).
4. **MAY** contain zero or more [0..*] **entry** (CONF:1098-7708) such that it
 - a. **SHALL** contain exactly one [1..1] [Planned Act \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09) (CONF:1098-15448).

Figure 61: Assessment and Plan Section (V2) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.9" extension="2014-06-09" />
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" code="51847-2"
displayName="ASSESSMENT AND PLAN" />
  <title>ASSESSMENT AND PLAN</title>
  <text>
    ...
  </text>
  <entry>
    <act moodCode="RQO" classCode="ACT">
      <templateId root="2.16.840.1.113883.10.20.22.4.39" />
      <!-- Planned Act -->
      ...
    </act>
  </entry>
</section>

```

2.7 Assessment Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.22.2.8 (open)]

Table 77: Assessment Section Contexts

Contained By:	Contains:
Consultation Note (V3) (optional) History and Physical (V3) (optional) Transfer Summary (V2) (optional) Referral Note (V2) (optional) Progress Note (V3) (optional) Procedure Note (V3) (optional)	

The Assessment Section (also referred to as “impression” or “diagnoses” outside of the context of CDA) represents the clinician's conclusions and working assumptions that will guide treatment of the patient. The assessment may be a list of specific disease entities or a narrative block.

Table 78: Assessment Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.8)					
templateId	1..1	SHALL		81-7711	
@root	1..1	SHALL		81-10382	2.16.840.1.113883.10.20.22.2.8
code	1..1	SHALL		81-14757	
@code	1..1	SHALL		81-14758	51848-0
@codeSystem	1..1	SHALL		81-26472	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-16774	
text	1..1	SHALL		81-7713	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7711) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.8" (CONF:81-10382).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-14757).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51848-0" Assessments (CONF:81-14758).
 - 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:81-26472).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-16774).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-7713).

Figure 62: Assessment Section Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.8"/>
  <code codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" code="51848-0"
    displayName="ASSESSMENTS"/>
  <title>ASSESSMENTS</title>
  <text>
    ...
  </text>
</section>

```


2.8 Chief Complaint and Reason for Visit Section

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

Table 79: Chief Complaint and Reason for Visit Section Contexts

Contained By:	Contains:
Consultation Note (V3) (optional) Discharge Summary (V3) (optional) History and Physical (V3) (optional) Procedure Note (V3) (optional)	

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 80: 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 63: 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>

```

2.9 Chief Complaint Section

[section: identifier urn:oid:1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1 (open)]

Table 81: Chief Complaint Section Contexts

Contained By:	Contains:
Consultation Note (V3) (optional) Discharge Summary (V3) (optional) History and Physical (V3) (optional) Progress Note (V3) (optional) Procedure Note (V3) (optional)	

This section records the patient's chief complaint (the patient's own description).

Table 82: Chief Complaint Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1)					
templateId	1..1	SHALL		81-7832	
@root	1..1	SHALL	UID	81-10453	1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1
code	1..1	SHALL		81-15451	
@code	1..1	SHALL		81-15452	10154-3
@codeSystem	1..1	SHALL		81-26474	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-7834	
text	1..1	SHALL		81-7835	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7832) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1" (CONF:81-10453).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15451).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="10154-3" Chief Complaint (CONF:81-15452).
 - 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:81-26474).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-7834).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-7835).

Figure 64: Chief Complaint Section Example

```

<section>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1"/>
  <code code="10154-3"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="CHIEF COMPLAINT"/>
  <title> CHIEF COMPLAINT</title>
  <text>Back Pain</text>
</section>

```

2.10 Complications Section (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.37:2015-08-01 (open)]

Table 83: Complications Section (V3) Contexts

Contained By:	Contains:
Procedure Note (V3) (required)	Problem Observation (V3)
Operative Note (V3) (required)	

This section contains problems that occurred during or around the time of a procedure. The complications may be known risks or unanticipated problems.

Table 84: Complications Section (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.37:2015-08-01)					
templateId	1..1	SHALL		1198-8174	
@root	1..1	SHALL		1198-10384	2.16.840.1.113883.10.20.22.2.37
@extension	1..1	SHALL		1198-32538	2015-08-01
code	1..1	SHALL		1198-15453	
@code	1..1	SHALL		1198-15454	55109-3
@codeSystem	1..1	SHALL		1198-30860	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-8176	
text	1..1	SHALL		1198-8177	
entry	0..*	MAY		1198-8795	
observation	1..1	SHALL		1198-15455	Problem Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8174) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.37" (CONF:1198-10384).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32538).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15453).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="55109-3" Complications (CONF:1198-15454).
 - 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:1198-30860).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-8176).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-8177).
5. **MAY** contain zero or more [0..*] **entry** (CONF:1198-8795) such that it
 - a. **SHALL** contain exactly one [1..1] [Problem Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) (CONF:1198-15455).

Note: When no coded entries or negation of entries are present, narrative

section/text will be provided containing details of the complication(s) or that there were no complications.

Figure 65: Complications Section (V3) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.37" extension="2015-08-01" />
  <code code="10830-8" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Complications" />
  <title>Complications</title>
  <text>Asthmatic symptoms while under general anesthesia.</text>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- Problem Observation -->
      ...

    </observation>
  </entry>
</section>

```

2.11 Course of Care Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.22.2.64 (open)]

Table 85: Course of Care Section Contexts

Contained By:	Contains:
Transfer Summary (V2) (optional)	

The Course of Care section describes what happened during the course of an encounter.

Table 86: Course of Care Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.64)					
templateId	1..1	SHALL		1098-32640	
@root	1..1	SHALL		1098-32642	2.16.840.1.113883.10.20.22.2.64
code	1..1	SHALL		1098-32641	
@code	1..1	SHALL		1098-32645	8648-8
@codeSystem	1..1	SHALL		1098-32646	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-32643	
text	1..1	SHALL		1098-32644	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-32640) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.64" (CONF:1098-32642).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-32641).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="8648-8" Hospital Course Narrative (CONF:1098-32645).
 - 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:1098-32646).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-32643).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-32644).

Figure 66: Course of Care Section Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.64"
    extension="2014-06-09" />
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    code="8648-8" displayName="Hospital Course Narrative" />
  <title>Hospital Course of Care</title>
  <text>
    <paragraph>This patient was only recently transferred after a recurrent
      GI bleed as described below.</paragraph>
    <paragraph>He presented to the ER today c/o a dark stool yesterday
      but a normal brown stool today. On exam he was hypotensive in the
      80s resolved after ....</paragraph>
    <paragraph>Lab at discharge: Glucose 112, BUN 16, creatinine 1.1,
      electrolytes normal. H. pylori antibody pending. Admission
      hematocrit 16%, discharge hematocrit 29%. WBC 7300, platelet
      count 256,000. Urinalysis normal. Urine culture: No growth. INR
      1.1, PTT 40.</paragraph>
    <paragraph>He was transfused with 6 units of packed red blood cells
      with ....</paragraph>
    <paragraph>GI evaluation 12 September: Colonoscopy showed single red
      clot in ....</paragraph>
  </text>
</section>

```

2.12 DICOM Object Catalog Section - DCM 121181

[section: identifier urn:oid:2.16.840.1.113883.10.20.6.1.1 (open)]

Table 87: DICOM Object Catalog Section - DCM 121181 Contexts

Contained By:	Contains:
Diagnostic Imaging Report (V3) (optional)	Study Act

DICOM Object Catalog lists all referenced objects and their parent Series and Studies, plus other DICOM attributes required for retrieving the objects.

DICOM Object Catalog sections are not intended for viewing and contain empty section text.

Table 88: DICOM Object Catalog Section - DCM 121181 Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.6.1.1)					
templateId	1..1	SHALL		81-8525	
@root	1..1	SHALL	UID	81-10454	2.16.840.1.113883.10.20.6.1.1
code	1..1	SHALL		81-15456	
@code	1..1	SHALL		81-15457	121181
@codeSystem	1..1	SHALL		81-26475	urn:oid:1.2.840.10008.2.16.4 (DCM) = 1.2.840.10008.2.16.4
entry	1..*	SHALL		81-8530	
act	1..1	SHALL		81-15458	Study Act (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.6)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-8525) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.6.1.1" (CONF:81-10454).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15456).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="121181" Dicom Object Catalog (CONF:81-15457).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="1.2.840.10008.2.16.4" (CodeSystem: DCM urn:oid:1.2.840.10008.2.16.4) (CONF:81-26475).
3. **SHALL** contain at least one [1..*] **entry** (CONF:81-8530).
 - a. Such entries **SHALL** contain exactly one [1..1] **Study Act** (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.6) (CONF:81-15458).
4. A DICOM Object Catalog **SHALL** be present if the document contains references to DICOM Images. If present, it **SHALL** be the first section in the document (CONF:81-8527).

Figure 67: DICOM Object Catalog Section - DCM 121181 Example

```
<section classCode="DOCSECT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.6.1.1"/>
  <code code="121181"
    codeSystem="1.2.840.10008.2.16.4"
    codeSystemName="DCM"
    displayName="DICOM Object Catalog"/>
  <entry>
    <!-- **** Study Act **** -->
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.6.2.6"/>
      <id root="1.2.840.113619.2.62.994044785528.114289542805"/>
      <code code="113014"
        codeSystem="1.2.840.10008.2.16.4"
        codeSystemName="DCM"
        displayName="Study"/>
      <!-- **** Series Act****-->
      <entryRelationship typeCode="COMP">
        <act classCode="ACT" moodCode="EVN">
          <id root="1.2.840.113619.2.62.994044785528.20060823223142485051"/>
          <code code="113015"
            codeSystem="1.2.840.10008.2.16.4"
            codeSystemName="DCM"
            displayName="Series">
            ...
          </code>
          <!-- **** SOP Instance UID *** -->
          <!-- 2 References -->
          <entryRelationship typeCode="COMP">
            <observation classCode="DGIMG" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.6.2.8"/>
              ...
            </observation>
          </entryRelationship>
          <entryRelationship typeCode="COMP">
            <observation classCode="DGIMG" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.6.2.8"/>
              ...
            </observation>
          </entryRelationship>
        </act>
      </entryRelationship>
    </act>
  </entry>
</section>
```

2.13 Discharge Diagnosis Section (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.24:2015-08-01
(open)]

Table 89: Discharge Diagnosis Section (V3) Contexts

Contained By:	Contains:
Discharge Summary (V3) (required) Transfer Summary (V2) (optional)	Hospital Discharge Diagnosis (V3)

This template represents problems or diagnoses present at the time of discharge which occurred during the hospitalization or need to be monitored after hospitalization. This section includes an optional entry to record patient conditions.

Table 90: Discharge Diagnosis Section (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.24:2015-08-01)					
templateId	1..1	SHALL		1198-7979	
@root	1..1	SHALL		1198-10394	2.16.840.1.113883.10.20.22.2.24
@extension	1..1	SHALL		1198-32549	2015-08-01
code	1..1	SHALL		1198-15355	
@code	1..1	SHALL		1198-15356	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 11535-2
@codeSystem	1..1	SHALL		1198-30861	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
translation	1..1	SHALL		1198-32834	
@code	1..1	SHALL		1198-32835	78375-3
@codeSystem	1..1	SHALL		1198-32836	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-7981	
text	1..1	SHALL		1198-7982	
entry	0..1	SHOULD		1198-7983	
act	1..1	SHALL		1198-15489	Hospital Discharge Diagnosis (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.33:2015-08-01)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7979) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.24" (CONF:1198-10394).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32549).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15355).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="11535-2" Hospital Discharge Diagnosis (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1 **STATIC**) (CONF:1198-15356).
 - 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:1198-30861).
 - c. This code **SHALL** contain exactly one [1..1] **translation** (CONF:1198-32834) such that it
 - i. **SHALL** contain exactly one [1..1] **@code**="78375-3" Discharge Diagnosis (CONF:1198-32835).
 - ii. **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:1198-32836).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-7981).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7982).
5. **SHOULD** contain zero or one [0..1] **entry** (CONF:1198-7983).
 - a. The entry, if present, **SHALL** contain exactly one [1..1] [Hospital Discharge Diagnosis \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.33:2015-08-01) (CONF:1198-15489).

Figure 68: Discharge Diagnosis Section (V3) Example

```
<section>
  <!-- Discharge Diagnosis Section Template Id -->
  <templateId root="2.16.840.1.113883.10.20.22.2.24" extension="2015-08-01" />
  <code code="11535-2" displayName="Hospital Discharge Diagnosis"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC">
    <!-- Code being sought for Discharge Diagnosis - note: Concept will not be
Prognosis -->
    <translation code="C-CDV2-DDN" displayName="Discharge Diagnosis"
                  codeSystem="2.16.840.1.113883.6.1"
                  codeSystemName="LOINC"></translation>
  </code>
  <title>Discharge Diagnosis</title>
  <text>Diverticula of intestine</text>
  <entry>
    <act classCode="ACT" moodCode="EVN">
      <!-- Hospital discharge Diagnosis act -->
      ...
    </act>
  </entry>
</section>
```

2.14 Discharge Diet Section (DEPRECATED)

```
[section: identifier urn:hl7ii:1.3.6.1.4.1.19376.1.5.3.1.3.33:2014-06-09
(open) ]
```

This section records a narrative description of the expectations for diet and nutrition, including nutrition prescription, proposals, goals, and order requests for monitoring, tracking, or improving the nutritional status of the patient, used in a discharge from a facility such as an emergency department, hospital, or nursing home.

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: This template has been replaced by the Nutrition Section (2.16.840.1.113883.10.20.22.2.57).

Table 91: Discharge Diet Section (DEPRECATED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:1.3.6.1.4.1.19376.1.5.3.1.3.33:2014-06-09)					
templateId	1..1	SHALL		1098-7975	
@root	1..1	SHALL	UID	1098-10455	1.3.6.1.4.1.19376.1.5.3.1.3.33
@extension	1..1	SHALL		1098-32593	2014-06-09
code	1..1	SHALL		1098-15459	
@code	1..1	SHALL		1098-15460	42344-2
@codeSystem	1..1	SHALL		1098-31140	
title	1..1	SHALL		1098-7977	
text	1..1	SHALL		1098-7978	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7975) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="1.3.6.1.4.1.19376.1.5.3.1.3.33" (CONF:1098-10455).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32593).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15459).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="42344-2" Discharge Diet (CONF:1098-15460).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem** (CONF:1098-31140).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-7977).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-7978).

2.15 Discharge Medications Section (entries optional) (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.11:2015-08-01 (open)]

Table 92: Discharge Medications Section (entries optional) (V3) Contexts

Contained By:	Contains:
Discharge Summary (V3) (optional)	Discharge Medication (V2)

This section contains the medications the patient is intended to take or stop after discharge. Current, active medications must be listed. The section may also include a patient's prescription history and indicate the source of the medication list.

Table 93: Discharge Medications Section (entries optional) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.11:2015-08-01)					
templateId	1..1	SHALL		1198-7816	
@root	1..1	SHALL		1198-10396	2.16.840.1.113883.10.20.22.2.11
@extension	1..1	SHALL		1198-32561	2015-08-01
code	1..1	SHALL		1198-15359	
@code	1..1	SHALL		1198-15360	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 10183-2
@codeSystem	1..1	SHALL		1198-32480	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
translation	1..1	SHALL		1198-32854	
@code	1..1	SHALL		1198-32855	75311-1
@codeSystem	1..1	SHALL		1198-32856	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-7818	
text	1..1	SHALL		1198-7819	
entry	0..*	SHOULD		1198-7820	
act	1..1	SHALL		1198-15490	Discharge Medication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.35:2014-06-09)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7816) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.11" (CONF:1198-10396).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32561).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15359).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="10183-2" Hospital Discharge medications (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1 **STATIC**) (CONF:1198-15360).
 - 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:1198-32480).
 - c. This code **SHALL** contain exactly one [1..1] **translation** (CONF:1198-32854) such that it

- i. **SHALL** contain exactly one [1..1] @code="75311-1" Discharge medications (CONF:1198-32855).
 - ii. **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:1198-32856).
- 3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-7818).
- 4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7819).
- 5. **SHOULD** contain zero or more [0..*] **entry** (CONF:1198-7820) such that it
 - a. **SHALL** contain exactly one [1..1] [Discharge Medication \(V2\)](#) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.35:2014-06-09) (CONF:1198-15490).

2.15.1 Discharge Medications Section (entries required) (V3)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.11.1:2015-08-01 (open)]

Table 94: Discharge Medications Section (entries required) (V3) Contexts

Contained By:	Contains:
Discharge Summary (V3) (optional)	Discharge Medication (V2)

This section contains the medications the patient is intended to take or stop after discharge. Current, active medications must be listed. The section may also include a patient's prescription history and indicate the source of the medication list.

Table 95: Discharge Medications Section (entries required) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.11.1:2015-08-01)					
@nullFlavor	0..1	MAY		1198-32812	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1198-7822	
@root	1..1	SHALL		1198-10397	2.16.840.1.113883.10.20.22.2.11.1
@extension	1..1	SHALL		1198-32562	2015-08-01
code	1..1	SHALL		1198-15361	
@code	1..1	SHALL		1198-15362	10183-2
@codeSystem	1..1	SHALL		1198-32145	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
translation	1..1	SHALL		1198-32857	
@code	1..1	SHALL		1198-32858	75311-1
@codeSystem	1..1	SHALL		1198-32859	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-7824	
text	1..1	SHALL		1198-7825	
entry	1..*	SHALL		1198-7826	
act	1..1	SHALL		1198-15491	Discharge Medication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.35:2014-06-09)

1. Conforms to [Discharge Medications Section \(entries optional\) \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.11.1:2015-08-01).
2. **MAY** contain zero or one [0..1] **@nullFlavor**="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1198-32812).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7822) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.11.1" (CONF:1198-10397).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32562).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15361).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="10183-2" Hospital Discharge Medications (CONF:1198-15362).

- 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:1198-32145).
- c. This code **SHALL** contain exactly one [1..1] **translation** (CONF:1198-32857) such that it
 - i. **SHALL** contain exactly one [1..1] `@code="75311-1"` Discharge Medications (CONF:1198-32858).
 - ii. **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:1198-32859).
- 5. **SHALL** contain exactly one [1..1] **title** (CONF:1198-7824).
- 6. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7825).

If section/@nullFlavor is not present:

- 7. **SHALL** contain at least one [1..*] **entry** (CONF:1198-7826) such that it
 - a. **SHALL** contain exactly one [1..1] Discharge Medication (V2) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.35:2014-06-09) (CONF:1198-15491).

Figure 69: Discharge Medication Section (V3) (entries required) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.11.1" extension="2015-08-01" />
  <code code="10183-2" displayName="Hospital Discharge Medications"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC">
    <translation code="75311-1" displayName="Discharge Medications"
                  codeSystem="2.16.840.1.113883.6.1"
                  codeSystemName="LOINC"></translation>
  </code>
  <title>Discharge Medications</title>
  <text>
    ...
  </text>
  <entry typeCode="DRIV">
    <act classCode="ACT" moodCode="EVN">
      <!-- Discharge Medication Entry -->
      ...
    </act>
  </entry>
  ...
</section>

```

2.16 Encounters Section (entries optional) (V3)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.22:2015-08-01 (open)]

Table 96: Encounters Section (entries optional) (V3) Contexts

Contained By:	Contains:
Continuity of Care Document (CCD) (V3) (optional)	Encounter Activity (V3)

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 97: Encounters Section (entries optional) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.2.22:2015-08-01)					
templateId	1..1	SHALL		1198-7940	
@root	1..1	SHALL		1198-10386	2.16.840.1.113883.10.20.22.2.22
@extension	1..1	SHALL		1198-32547	2015-08-01
code	1..1	SHALL		1198-15461	
@code	1..1	SHALL		1198-15462	46240-8
@codeSystem	1..1	SHALL		1198-31136	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-7942	
text	1..1	SHALL		1198-7943	
entry	0..*	SHOULD		1198-7951	
encounter	1..1	SHALL		1198-15465	Encounter Activity (V3) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.49:2015-08-01

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7940) such that it

- a. **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.10.20.22.2.22"` (CONF:1198-10386).
- b. **SHALL** contain exactly one [1..1] `@extension="2015-08-01"` (CONF:1198-32547).
- 2. **SHALL** contain exactly one [1..1] `code` (CONF:1198-15461).
 - a. This code **SHALL** contain exactly one [1..1] `@code="46240-8"` Encounters (CONF:1198-15462).
 - 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:1198-31136).
- 3. **SHALL** contain exactly one [1..1] `title` (CONF:1198-7942).
- 4. **SHALL** contain exactly one [1..1] `text` (CONF:1198-7943).
- 5. **SHOULD** contain zero or more [0..*] `entry` (CONF:1198-7951) such that it
 - a. **SHALL** contain exactly one [1..1] [Encounter Activity \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2015-08-01) (CONF:1198-15465).

2.16.1 Encounters Section (entries required) (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.22.1:2015-08-01 (open)]

Table 98: Encounters Section (entries required) (V3) Contexts

Contained By:	Contains:
Transfer Summary (V2) (optional)	Encounter Activity (V3)

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, as well as 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 99: Encounters Section (entries required) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.22.1:2015-08-01)					
@nullFlavor	0..1	MAY		1198-32815	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1198-8705	
@root	1..1	SHALL		1198-10387	2.16.840.1.113883.10.20.22.2.22.1
@extension	1..1	SHALL		1198-32548	2015-08-01
code	1..1	SHALL		1198-15466	
@code	1..1	SHALL		1198-15467	46240-8
@codeSystem	1..1	SHALL		1198-31137	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-8707	
text	1..1	SHALL		1198-8708	
entry	1..*	SHALL		1198-8709	
encounter	1..1	SHALL		1198-15468	Encounter Activity (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2015-08-01)

1. Conforms to [Encounters Section \(entries optional\) \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.22:2015-08-01).
2. **MAY** contain zero or one [0..1] **@nullFlavor**="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1198-32815).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8705) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.22.1" (CONF:1198-10387).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32548).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15466).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="46240-8" Encounters (CONF:1198-15467).
 - 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:1198-31137).
5. **SHALL** contain exactly one [1..1] **title** (CONF:1198-8707).
6. **SHALL** contain exactly one [1..1] **text** (CONF:1198-8708).

If section/@nullFlavor is not present:

7. **SHALL** contain at least one [1..*] **entry** (CONF:1198-8709) such that it
 - a. **SHALL** contain exactly one [1..1] [Encounter Activity \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2015-08-01) (CONF:1198-15468).

Figure 70: Encounters Section (entries required) (V3) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.22.1" extension="2015-08-01" />
  <!-- Encounters Section - Entries required -->
  <code code="46240-8" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="History of encounters" />
  <title>Encounters</title>
  <text>
    ...
  </text>
  <entry typeCode="DRIV">
    <encounter classCode="ENC" moodCode="EVN">
      <!-- Encounter Activities -->
      ...
    </encounter>
  </entry>
</section>

```

2.17 Family History Section (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2015-08-01 (open)]

Table 100: Family History Section (V3) Contexts

Contained By:	Contains:
Consultation Note (V3) (optional) Continuity of Care Document (CCD) (V3) (optional) Discharge Summary (V3) (optional) History and Physical (V3) (required) Transfer Summary (V2) (optional) Referral Note (V2) (optional) Procedure Note (V3) (optional)	Family History Organizer (V3)

This section contains data defining the patient’s genetic relatives in terms of possible or relevant health risk factors that have a potential impact on the patient’s healthcare risk profile.

Table 101: Family History Section (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2015-08-01)					
templateId	1..1	SHALL		1198-7932	
@root	1..1	SHALL		1198-10388	2.16.840.1.113883.10.20.22.2.15
@extension	1..1	SHALL		1198-32607	2015-08-01
code	1..1	SHALL		1198-15469	
@code	1..1	SHALL		1198-15470	10157-6
@codeSystem	1..1	SHALL		1198-32481	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-7934	
text	1..1	SHALL		1198-7935	
entry	0..*	MAY		1198-32430	
organizer	1..1	SHALL		1198-32431	Family History Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.45:2015-08-01)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7932) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.15" (CONF:1198-10388).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32607).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15469).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="10157-6" Family History (CONF:1198-15470).
 - 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:1198-32481).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-7934).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7935).
5. **MAY** contain zero or more [0..*] **entry** (CONF:1198-32430) such that it
 - a. **SHALL** contain exactly one [1..1] [Family History Organizer \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.45:2015-08-01) (CONF:1198-32431).

Figure 71: Family History Section (V3) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.15" extension="2015-08-01" />
  <!-- Family history section template -->
  <code code="10157-6" codeSystem="2.16.840.1.113883.6.1" />
  <title>Family history</title>
  <text>
    ...
  </text>
  <entry typeCode="DRIV">
    <organizer moodCode="EVN" classCode="CLUSTER">
      <templateId root="2.16.840.1.113883.10.20.22.4.45" />
      <!-- Family history organizer template -->
      ...

    </organizer>
  </entry>
</section>

```

2.18 Fetus Subject Context

[relatedSubject: identifier urn:oid:2.16.840.1.113883.10.20.6.2.3 (open)]

Table 102: Fetus Subject Context Contexts

Contained By:	Contains:
Diagnostic Imaging Report (V3) (optional)	

For reports on mothers and their fetus(es), information on a mother is mapped to recordTarget, PatientRole, and Patient. Information on the fetus is mapped to subject, relatedSubject, and SubjectPerson at the CDA section level. Both context information on the mother and fetus must be included in the document if observations on fetus(es) are contained in the document.

Table 103: Fetus Subject Context Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
relatedSubject (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.3)					
templateId	1..1	SHALL		81-9189	
@root	1..1	SHALL		81-10535	2.16.840.1.113883.10.20.6.2.3
code	1..1	SHALL		81-9190	
@code	1..1	SHALL		81-26455	121026
@codeSystem	1..1	SHALL		81-26476	urn:oid:1.2.840.10008.2.16.4 (DCM) = 1.2.840.10008.2.16.4
subject	1..1	SHALL		81-9191	
name	1..1	SHALL		81-15347	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-9189) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.6.2.3" (CONF:81-10535).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-9190).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="121026" (CONF:81-26455).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="1.2.840.10008.2.16.4" (CodeSystem: DCM urn:oid:1.2.840.10008.2.16.4) (CONF:81-26476).
3. **SHALL** contain exactly one [1..1] **subject** (CONF:81-9191).

The name element is used to store the DICOM fetus ID, typically a pseudonym such as fetus_1.

- a. This subject **SHALL** contain exactly one [1..1] **name** (CONF:81-15347).

Figure 72: Fetus Subject Context Example

```

<relatedSubject>
  <templateId root="2.16.840.1.113883.10.20.6.2.3"/>
  <code code="121026"
    codeSystem="1.2.840.10008.2.16.4"
    displayName="Fetus"/>
  <subject>
    <name>fetus_1</name>
  </subject>
</relatedSubject>

```


2.19 Findings Section (DIR)

[section: identifier urn:oid:2.16.840.1.113883.10.20.6.1.2 (open)]

Table 104: Findings Section (DIR) Contexts

Contained By:	Contains:
Diagnostic Imaging Report (V3) (required)	

The Findings section contains the main narrative body of the report. While not an absolute requirement for transformed DICOM SR reports, it is suggested that Diagnostic Imaging Reports authored in CDA follow Term Info guidelines for the codes in the various observations and procedures recorded in this section.

Table 105: Findings Section (DIR) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.6.1.2)					
templateId	1..1	SHALL		81-8531	
@root	1..1	SHALL	UID	81-10456	2.16.840.1.113883.10.20.6.1.2

1. **SHALL** contain exactly one [1..1] `templateId` (CONF:81-8531) such that it
 - a. **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.10.20.6.1.2"` (CONF:81-10456).
2. This section **SHOULD** contain only the direct observations in the report, with topics such as Reason for Study, History, and Impression placed in separate sections. However, in cases where the source of report content provides a single block of text not separated into these sections, that text **SHALL** be placed in the Findings section (CONF:81-8532).

Figure 73: Findings Section (DIR) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.6.1.2"/>
  <code code="121070"
        codeSystem="1.2.840.10008.2.16.4"
        codeSystemName="DCM"
        displayName="Findings"/>
  <title>Findings</title>
  <text>
    <paragraph>
      <caption>Finding</caption>
      <content ID="Fndng2">The cardiomediastinum is      . </content>
    </paragraph>
    <paragraph>
      <caption>Diameter</caption>
      <content ID="Diam2">45mm</content>
    </paragraph>
    ...
  </text>
  <entry>
    <templateId root="2.16.840.1.113883.10.20.6.2.12"/>
    ...
  </entry>
</section>

```

2.20 Functional Status Section (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.14:2014-06-09 (open)]

Table 106: Functional Status Section (V2) Contexts

Contained By:	Contains:
Consultation Note (V3) (optional)	Assessment Scale Observation
Continuity of Care Document (CCD) (V3) (optional)	Caregiver Characteristics
Discharge Summary (V3) (optional)	Cognitive Status Problem Observation (DEPRECATED)
Transfer Summary (V2) (optional)	Functional Status Observation (V2)
Referral Note (V2) (optional)	Functional Status Organizer (V2)
	Functional Status Problem Observation (DEPRECATED)
	Non-Medicinal Supply Activity (V2)
	Pressure Ulcer Observation (DEPRECATED)
	Self-Care Activities (ADL and IADL)
	Sensory Status

The Functional Status Section contains observations and assessments of a patient's physical abilities. A patient's functional status may include information regarding the patient's ability to perform Activities of Daily Living (ADLs) in areas such as Mobility (e.g., ambulation), Self-Care

(e.g., bathing, dressing, feeding, grooming) or Instrumental Activities of Daily Living (IADLs) (e.g., shopping, using a telephone, balancing a check book). Problems that impact function (e.g., dyspnea, dysphagia) can be contained in the section.

Table 107: Functional Status Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.14:2014-06-09)					
templateId	1..1	SHALL		1098-7920	
@root	1..1	SHALL		1098-10389	2.16.840.1.113883.10.20.22.2.14
@extension	1..1	SHALL		1098-32567	2014-06-09
code	1..1	SHALL		1098-14578	
@code	1..1	SHALL		1098-14579	47420-5
@codeSystem	1..1	SHALL		1098-30866	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-7922	
text	1..1	SHALL		1098-7923	
entry	0..*	MAY		1098-14414	
organizer	1..1	SHALL		1098-14415	Functional Status Organizer (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.66:2014-06-09)
entry	0..*	MAY		1098-14418	
observation	1..1	SHALL		1098-14419	Functional Status Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.67:2014-06-09)
entry	0..*	MAY		1098-14426	
observation	1..1	SHALL		1098-14427	Caregiver Characteristics (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.72)
entry	0..*	MAY		1098-14580	
observation	1..1	SHALL		1098-14581	Assessment Scale Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.69)
entry	0..*	MAY		1098-14582	
supply	1..1	SHALL		1098-30783	Non-Medicinal Supply Activity (V2) (identifier:

					urn:hl7ii:2.16.840.1.113883.10.20.22.4.50:2014-06-09
entry	0..*	MAY		1098-32792	
observation	1..1	SHALL		1098-31009	Self-Care Activities (ADL and IADL) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.128)
entry	0..*	MAY		1098-16779	
observation	1..1	SHALL		1098-31011	Sensory Status (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.127)
entry	0..*	MAY		1098-14424	
observation	1..1	SHALL		1098-14425	Cognitive Status Problem Observation (DEPRECATED) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.73:2014-06-09)
entry	0..*	MAY		1098-14422	
observation	1..1	SHALL		1098-14423	Functional Status Problem Observation (DEPRECATED) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.68:2014-06-09)
entry	0..*	MAY		1098-16777	
observation	1..1	SHALL		1098-16778	Pressure Ulcer Observation (DEPRECATED) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.70:2014-06-09)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7920) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.14" (CONF:1098-10389).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32567).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-14578).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="47420-5" Functional Status (CONF:1098-14579).
 - 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:1098-30866).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-7922).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-7923).
5. **MAY** contain zero or more [0..*] **entry** (CONF:1098-14414) such that it

- a. **SHALL** contain exactly one [1..1] [Functional Status Organizer \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.66:2014-06-09) (CONF:1098-14415).
- 6. **MAY** contain zero or more [0..*] **entry** (CONF:1098-14418) such that it
 - a. **SHALL** contain exactly one [1..1] [Functional Status Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.67:2014-06-09) (CONF:1098-14419).
- 7. **MAY** contain zero or more [0..*] **entry** (CONF:1098-14426) 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:1098-14427).
- 8. **MAY** contain zero or more [0..*] **entry** (CONF:1098-14580) such that it
 - a. **SHALL** contain exactly one [1..1] [Assessment Scale Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.69) (CONF:1098-14581).
- 9. **MAY** contain zero or more [0..*] **entry** (CONF:1098-14582) such that it
 - a. **SHALL** contain exactly one [1..1] [Non-Medicinal Supply Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.50:2014-06-09) (CONF:1098-30783).
- 10. **MAY** contain zero or more [0..*] **entry** (CONF:1098-32792) such that it
 - a. **SHALL** contain exactly one [1..1] [Self-Care Activities \(ADL and IADL\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.128) (CONF:1098-31009).
- 11. **MAY** contain zero or more [0..*] **entry** (CONF:1098-16779) such that it
 - a. **SHALL** contain exactly one [1..1] [Sensory Status](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.127) (CONF:1098-31011).
- 12. **MAY** contain zero or more [0..*] **entry** (CONF:1098-14424) such that it
 - a. **SHALL** contain exactly one [1..1] [Cognitive Status Problem Observation \(DEPRECATED\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.73:2014-06-09) (CONF:1098-14425).
- 13. **MAY** contain zero or more [0..*] **entry** (CONF:1098-14422) such that it
 - a. **SHALL** contain exactly one [1..1] [Functional Status Problem Observation \(DEPRECATED\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.68:2014-06-09) (CONF:1098-14423).
- 14. **MAY** contain zero or more [0..*] **entry** (CONF:1098-16777) such that it
 - a. **SHALL** contain exactly one [1..1] [Pressure Ulcer Observation \(DEPRECATED\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.70:2014-06-09) (CONF:1098-16778).

Figure 74: Functional Status Section (V2) Example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.14" extension="2014-06-09" />
  <!-- Functional Status Section template V2-->
  <code code="47420-5" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Functional Status" />
  <title>FUNCTIONAL STATUS</title>
  <text>
    ...
  </text>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- Self Care Activities (NEW)-->
      <templateId root="2.16.840.1.113883.10.20.22.4.128" />
      ...
    </observation>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- Sensory and Speech Status (NEW)-->
      <templateId root="2.16.840.1.113883.10.20.22.4.127" />
      ...
    </observation>
  </entry>
  <entry>
    <organizer classCode="CLUSTER" moodCode="EVN">
      <!-- Functional Status Organizer V2-->
      <templateId root="2.16.840.1.113883.10.20.22.4.66" extension="2014-06-09" />
      ....
    </organizer>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- Functional Status Observation V2-->
      <templateId root="2.16.840.1.113883.10.20.22.4.67" 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>
</section>
```

2.21 General Status Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.2.5 (open)]

Table 108: General Status Section Contexts

Contained By:	Contains:
Consultation Note (V3) (optional) History and Physical (V3) (required) Transfer Summary (V2) (optional) Referral Note (V2) (optional)	

The General Status section describes general observations and readily observable attributes of the patient, including affect and demeanor, apparent age compared to actual age, gender, ethnicity, nutritional status based on appearance, body build and habitus (e.g., muscular, cachectic, obese), developmental or other deformities, gait and mobility, personal hygiene, evidence of distress, and voice quality and speech.

Table 109: General Status Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.2.5)					
templateId	1..1	SHALL		81-7985	
@root	1..1	SHALL	UID	81-10457	2.16.840.1.113883.10.20.2.5
code	1..1	SHALL		81-15472	
@code	1..1	SHALL		81-15473	10210-3
@codeSystem	1..1	SHALL		81-26477	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-7987	
text	1..1	SHALL		81-7988	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7985) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.2.5" (CONF:81-10457).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15472).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="10210-3" General Status (CONF:81-15473).
 - 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:81-26477).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-7987).

4. **SHALL** contain exactly one [1..1] **text** (CONF:81-7988).

Figure 75: General Status Section Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.2.5" />
  <code code="10210-3"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        displayName="GENERAL STATUS" />
  <title>GENERAL STATUS</title>
  <text>
    <paragraph>Alert and in good spirits, no acute distress.
    </paragraph>
  </text>
</section>

```

2.22 Goals Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.22.2.60 (open)]

Table 110: Goals Section Contexts

Contained By:	Contains:
Care Plan (V2) (required)	Goal Observation

This template represents patient Goals. A goal is a defined outcome or condition to be achieved in the process of patient care. Goals include patient-defined over-arching goals (e.g., alleviation of health concerns, desired/intended positive outcomes from interventions, longevity, function, symptom management, comfort) and health concern-specific or intervention-specific goals to achieve desired outcomes.

Table 111: Goals Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.60)					
@nullFlavor	0..1	MAY		1098-32819	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1098-29584	
@root	1..1	SHALL		1098-29585	2.16.840.1.113883.10.20.22.2.60
code	1..1	SHALL		1098-29586	
@code	1..1	SHALL		1098-29587	61146-7
@codeSystem	1..1	SHALL		1098-29588	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-30721	
text	1..1	SHALL		1098-30722	
entry	1..*	SHALL		1098-30719	
observation	1..1	SHALL		1098-30720	Goal Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.121)

1. **MAY** contain zero or one [0..1] **@nullFlavor="NI"** No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1098-32819).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-29584) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.2.60"** (CONF:1098-29585).
3. **SHALL** contain exactly one [1..1] **code** (CONF:1098-29586).
 - a. This code **SHALL** contain exactly one [1..1] **@code="61146-7"** Goals (CONF:1098-29587).
 - 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:1098-29588).
4. **SHALL** contain exactly one [1..1] **title** (CONF:1098-30721).
5. **SHALL** contain exactly one [1..1] **text** (CONF:1098-30722).

If section/@nullFlavor is not present:

6. **SHALL** contain at least one [1..*] **entry** (CONF:1098-30719) such that it
 - a. **SHALL** contain exactly one [1..1] [Goal Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.121) (CONF:1098-30720).

Figure 76: Goals Section Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.60" />
  <code code="61146-7" displayName="Goals" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" />
  <title>Goals Section</title>
  <text />
  <entry>
    <observation />
  </entry>
</section>

```

2.23 Health Concerns Section (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.58:2015-08-01 (open)]

Table 112: Health Concerns Section (V2) Contexts

Contained By:	Contains:
Care Plan (V2) (required)	Health Concern Act (V2) Health Status Observation (V2) Risk Concern Act (V2)

This section contains data describing an interest or worry about a health state or process that could possibly require attention, intervention, or management. A Health Concern is a health related matter that is of interest, importance or worry to someone, who may be the patient, patient's family or patient's health care provider. Health concerns are derived from a variety of sources within an EHR (such as Problem List, Family History, Social History, Social Worker Note, etc.). Health concerns can be medical, surgical, nursing, allied health or patient-reported concerns.

Problem Concerns are a subset of Health Concerns that have risen to the level of importance that they typically would belong on a classic “Problem List”, such as “Diabetes Mellitus” or “Family History of Melanoma” or “Tobacco abuse”. These are of broad interest to multiple members of the care team. Examples of other Health Concerns that might not typically be considered a Problem Concern include “Risk of Hyperkalemia” for a patient taking an ACE-inhibitor medication, or “Transportation difficulties” for someone who doesn't drive and has trouble getting to appointments, or “Under-insured” for someone who doesn't have sufficient insurance to properly cover their medical needs such as medications. These are typically most important to just a limited number of care team members.

Table 113: Health Concerns Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.58:2015-08-01)					
@nullFlavor	0..1	MAY		1198-32802	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1198-28804	
@root	1..1	SHALL		1198-28805	2.16.840.1.113883.10.20.22.2.58
@extension	1..1	SHALL		1198-32862	2015-08-01
code	1..1	SHALL		1198-28806	
@code	1..1	SHALL		1198-28807	75310-3
@codeSystem	1..1	SHALL		1198-28808	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-28809	
text	1..1	SHALL		1198-28810	
entry	0..*	SHOULD		1198-30483	
observation	1..1	SHALL		1198-30484	Health Status Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09)
entry	1..*	SHALL		1198-30768	
act	1..1	SHALL		1198-30769	Health Concern Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.132:2015-08-01)
entry	0..*	MAY		1198-32308	
act	1..1	SHALL		1198-32309	Risk Concern Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.136:2015-08-01)

1. **MAY** contain zero or one [0..1] @nullFlavor="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1198-32802).
2. **SHALL** contain exactly one [1..1] templateId (CONF:1198-28804) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.58" (CONF:1198-28805).
 - b. **SHALL** contain exactly one [1..1] @extension="2015-08-01" (CONF:1198-32862).

3. **SHALL** contain exactly one [1..1] **code** (CONF:1198-28806).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="75310-3" Health concerns document (CONF:1198-28807).
 - 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:1198-28808).
4. **SHALL** contain exactly one [1..1] **title** (CONF:1198-28809).
5. **SHALL** contain exactly one [1..1] **text** (CONF:1198-28810).
6. **SHOULD** contain zero or more [0..*] **entry** (CONF:1198-30483) such that it
 - a. **SHALL** contain exactly one [1..1] Health Status Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09) (CONF:1198-30484).

If section/@nullFlavor is not present:

7. **SHALL** contain at least one [1..*] **entry** (CONF:1198-30768) such that it
 - a. **SHALL** contain exactly one [1..1] Health Concern Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.132:2015-08-01) (CONF:1198-30769).
8. **MAY** contain zero or more [0..*] **entry** (CONF:1198-32308) such that it
 - a. **SHALL** contain exactly one [1..1] Risk Concern Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.136:2015-08-01) (CONF:1198-32309).

Figure 77: Health Concerns Section Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.58" />
  <code code="75310-3" displayName="Health Concerns Document"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <title>Health Concerns Section</title>
  <text>
    ...
  </text>
  <entry>
    <!-- Health Status Observation -->
  </entry>
  <entry>
    <!-- Health Concern Act -->
  </entry>
</section>

```

2.24 Health Status Evaluations and Outcomes Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.22.2.61 (open)]

Table 114: Health Status Evaluations and Outcomes Section Contexts

Contained By:	Contains:
Care Plan (V2) (optional)	Outcome Observation

This template represents observations regarding the outcome of care from the interventions used to treat the patient. These observations represent status, at points in time, related to established care plan goals and/or interventions.

Table 115: Health Status Evaluations and Outcomes Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.61)					
@nullFlavor	0..1	MAY		1098-32821	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1098-29578	
@root	1..1	SHALL		1098-29579	2.16.840.1.113883.10.20.22.2.61
code	1..1	SHALL		1098-29580	
@code	1..1	SHALL		1098-29581	11383-7
@codeSystem	1..1	SHALL		1098-29582	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-29589	
text	1..1	SHALL		1098-29590	
entry	1..*	SHALL		1098-31227	
observation	1..1	SHALL		1098-31228	Outcome Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.144)

1. **MAY** contain zero or one [0..1] @nullFlavor="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1098-32821).
2. **SHALL** contain exactly one [1..1] templateId (CONF:1098-29578) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.61" (CONF:1098-29579).
3. **SHALL** contain exactly one [1..1] code (CONF:1098-29580).
 - a. This code **SHALL** contain exactly one [1..1] @code="11383-7" Patient Problem Outcome (CONF:1098-29581).

- 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:1098-29582).
 4. **SHALL** contain exactly one [1..1] **title** (CONF:1098-29589).
 5. **SHALL** contain exactly one [1..1] **text** (CONF:1098-29590).
- If section/@nullFlavor is not present:
6. **SHALL** contain at least one [1..*] **entry** (CONF:1098-31227) such that it
 - a. **SHALL** contain exactly one [1..1] **Outcome Observation** (identifier:
urn:oid:2.16.840.1.113883.10.20.22.4.144) (CONF:1098-31228).

Figure 78: Health Status Evaluations and Outcomes Section Example

```

<section>
  <!-- Health Status Evaluations/Outcomes Section -->
  <templateId root="2.16.840.1.113883.10.20.22.2.61" />
  <code code="11383-7" displayName="Patient Problem Outcome"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <title>Health Status Evaluations/Outcomes Section</title>
  <text>
    <list>
      <item>
        <content styleCode="Bold">Pulse oximetry greater than 92% on room air</content>:
MET <list>
          <item>Evaluates Expected Outcome/Goal:
            <content styleCode="Bold">
              Pulse oximetry greater than 92% on room air
            </content>
          </item>
          <item>Supported by: Pulse oximetry 95% on room air (March 21, 2013 at
15:20)</item>
        </list>
      </item>
    </list>
  </text>
  <entry>
    <!-- Outcome Observation -->
    <observation classCode="OBS" moodCode="EVN">
      ...
    </observation>
  </entry>
  <entry>
    <!-- Outcome Observation -->
    <observation classCode="OBS" moodCode="EVN">
      ...
    </observation>
  </entry>
  ...
</section>

```

2.25 History of Past Illness Section (V3)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.20:2015-08-01
(open)]

Table 116: History of Past Illness Section (V3) Contexts

Contained By:	Contains:
Consultation Note (V3) (optional) Discharge Summary (V3) (optional) History and Physical (V3) (required) Transfer Summary (V2) (optional) Referral Note (V2) (optional) Procedure Note (V3) (optional)	Problem Observation (V3)

This section contains a record of the patient’s past complaints, problems, and diagnoses. It contains data from the patient’s past up to the patient’s current complaint or reason for seeking medical care.

Table 117: History of Past Illness Section (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.2.20:2015-08-01)					
templateId	1..1	SHALL		1198-7828	
@root	1..1	SHALL		1198-10390	2.16.840.1.113883.10.20.22.2.20
@extension	1..1	SHALL		1198-32536	2015-08-01
code	1..1	SHALL		1198-15474	
@code	1..1	SHALL		1198-15475	11348-0
@codeSystem	1..1	SHALL		1198-30831	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-7830	
text	1..1	SHALL		1198-7831	
entry	0..*	MAY		1198-8791	
observation	1..1	SHALL		1198-15476	Problem Observation (V3) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7828) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.20" (CONF:1198-10390).
- b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32536).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15474).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="11348-0" History of Past Illness (CONF:1198-15475).
 - 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:1198-30831).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-7830).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7831).
5. **MAY** contain zero or more [0..*] **entry** (CONF:1198-8791) such that it
 - a. **SHALL** contain exactly one [1..1] [Problem Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) (CONF:1198-15476).

Figure 79: History of Past Illness Section (V3) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.20" extension="2015-08-01" />
  <!-- ** History of Past Illness Section ** -->
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" code="11348-0"
  displayName="HISTORY OF PAST ILLNESS" />
  <title>PAST MEDICAL HISTORY</title>
  <text>
    <paragraph>Patient has had ..... </paragraph>
  </text>
  <entry>
    <!-- Sample With Problem Observation. -->
    <observation classCode="OBS" moodCode="EVN">
      <!-- Problem Observation -->
      ...
    </observation>
  </entry>
</section>

```

2.26 History of Present Illness Section

[section: identifier urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.4 (open)]

Table 118: History of Present Illness Section Contexts

Contained By:	Contains:
Consultation Note (V3) (required) Discharge Summary (V3) (optional) History and Physical (V3) (optional) Transfer Summary (V2) (optional) Referral Note (V2) (optional) Procedure Note (V3) (optional)	

The History of Present Illness section describes the history related to the reason for the encounter. It contains the historical details leading up to and pertaining to the patient's current complaint or reason for seeking medical care.

Table 119: History of Present Illness Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.4)					
templateId	1..1	SHALL		81-7848	
@root	1..1	SHALL	UID	81-10458	1.3.6.1.4.1.19376.1.5.3.1.3.4
code	1..1	SHALL		81-15477	
@code	1..1	SHALL		81-15478	10164-2
@codeSystem	1..1	SHALL		81-26478	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-7850	
text	1..1	SHALL		81-7851	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7848) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="1.3.6.1.4.1.19376.1.5.3.1.3.4" (CONF:81-10458).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15477).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="10164-2" (CONF:81-15478).
 - 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:81-26478).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-7850).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-7851).

Figure 80: History of Present Illness Section Example

```

<section>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.4.2"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    code="10164-2"
    displayName="HISTORY OF PRESENT ILLNESS"/>
  <title>HISTORY OF PRESENT ILLNESS</title>
  <text>
    <paragraph>This patient was only recently discharged for a recurrent
    GI bleed as described below.</paragraph>
    <paragraph>He presented to the ER today c/o a dark stool yesterday
    but a normal brown stool today. On exam he was hypotensive in the
    80s resolved after ....</paragraph>
    <paragraph>Lab at discharge: Glucose 112, BUN 16, creatinine 1.1,
    electrolytes normal. H. pylori antibody pending. Admission
    hematocrit 16%, discharge hematocrit 29%. WBC 7300, platelet
    count 256,000. Urinalysis normal. Urine culture: No growth. INR
    1.1, PTT 40.</paragraph>
    <paragraph>He was transfused with 6 units of packed red blood cells
    with ....</paragraph>
    <paragraph>GI evaluation 12 September: Colonoscopy showed single red
    clot in ....</paragraph>
  </text>
</section>

```

2.27 Hospital Consultations Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.22.2.42 (open)]

Table 120: Hospital Consultations Section Contexts

Contained By:	Contains:
Discharge Summary (V3) (optional)	

The Hospital Consultations Section records consultations that occurred during the admission.

Table 121: Hospital Consultations Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.42)					
templateId	1..1	SHALL		81-9915	
@root	1..1	SHALL		81-10393	2.16.840.1.113883.10.20.22.2.42
code	1..1	SHALL		81-15485	
@code	1..1	SHALL		81-15486	18841-7
@codeSystem	1..1	SHALL		81-26479	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-9917	
text	1..1	SHALL		81-9918	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-9915) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.42" (CONF:81-10393).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15485).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="18841-7" Hospital Consultations Section (CONF:81-15486).
 - 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:81-26479).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-9917).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-9918).

Figure 81: Hospital Consultations Section Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.42"/>
  <code code="18841-7" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Hospital Consultations Section"/>
  <title>HOSPITAL CONSULTATIONS</title>
  <text>
    <list listType="ordered">
      <item>Gastroenterology</item>
      <item>Cardiology</item>
      <item>Dietitian</item>
    </list>
  </text>
</section>

```

2.28 Hospital Course Section

[section: identifier urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.5 (open)]

Table 122: Hospital Course Section Contexts

Contained By:	Contains:
Discharge Summary (V3) (required)	

The Hospital Course Section describes the sequence of events from admission to discharge in a hospital facility.

Table 123: Hospital Course Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.5)					
templateId	1..1	SHALL		81-7852	
@root	1..1	SHALL	UID	81-10459	1.3.6.1.4.1.19376.1.5.3.1.3.5
code	1..1	SHALL		81-15487	
@code	1..1	SHALL		81-15488	8648-8
@codeSystem	1..1	SHALL		81-26480	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-7854	
text	1..1	SHALL		81-7855	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7852) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="1.3.6.1.4.1.19376.1.5.3.1.3.5" (CONF:81-10459).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15487).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="8648-8" Hospital Course (CONF:81-15488).
 - 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:81-26480).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-7854).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-7855).

Figure 82: Hospital Course Section Example

```

<section>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.5"/>
  <code code="8648-8"
    displayName="HOSPITAL COURSE"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"/>
  <title>Hospital Course</title>
  <text> The patient was admitted and started on Lovenox and
    nitroglycerin paste. The patient had ... </text>
</section>

```

2.29 Hospital Discharge Instructions Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.22.2.41 (open)]

Table 124: Hospital Discharge Instructions Section Contexts

Contained By:	Contains:
Discharge Summary (V3) (optional)	

The Hospital Discharge Instructions Section records instructions at discharge.

Table 125: Hospital Discharge Instructions Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.41)					
templateId	1..1	SHALL		81-9919	
@root	1..1	SHALL		81-10395	2.16.840.1.113883.10.20.22.2.41
code	1..1	SHALL		81-15357	
@code	1..1	SHALL		81-15358	8653-8
@codeSystem	1..1	SHALL		81-26481	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-9921	
text	1..1	SHALL		81-9922	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-9919) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.41" (CONF:81-10395).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15357).

- a. This code **SHALL** contain exactly one [1..1] @code="8653-8" Hospital Discharge Instructions (CONF:81-15358).
- 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:81-26481).
3. **SHALL** contain exactly one [1..1] title (CONF:81-9921).
4. **SHALL** contain exactly one [1..1] text (CONF:81-9922).

Figure 83: Hospital Discharge Instructions Section Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.41"/>
  <code code="8653-8" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="HOSPITAL DISCHARGE INSTRUCTIONS"/>
  <title>HOSPITAL DISCHARGE INSTRUCTIONS</title>
  <text>
    <list listType="ordered">
      <item>Take all of your prescription medication as directed.</item>
      <item>Make an appointment with your doctor to be seen two weeks from the
        date of your procedure.</item>
      <item>You may feel slightly bloated after the procedure because of air
        that was introduced during the examination.</item>
      <item>Call your physician if you notice:
        <br/>
        Bleeding or black stools.
        <br/>
        Abdominal pain.
        <br/>
        Fever or chills.
        <br/>
        Nausea or vomiting.
        <br/>
        Any unusual pain or problem.
        <br/>
        Pain or redness at the site where the intravenous needle was
        placed.
        <br/>
      </item>
      <item>Do not drink alcohol for 24 hours. Alcohol amplifies the effect of
        the sedatives given.</item>
      <item>Do not drive or operate machinery for 24 hours.</item>
    </list>
  </text>
</section>

```

2.30 Hospital Discharge Physical Section

[section: identifier urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.26 (open)]

Table 126: Hospital Discharge Physical Section Contexts

Contained By:	Contains:
Discharge Summary (V3) (optional)	

The Hospital Discharge Physical Section records a narrative description of the patient's physical findings.

Table 127: Hospital Discharge Physical Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.26)					
templateId	1..1	SHALL		81-7971	
@root	1..1	SHALL	UID	81-10460	1.3.6.1.4.1.19376.1.5.3.1.3.26
code	1..1	SHALL		81-15363	
@code	1..1	SHALL		81-15364	10184-0
@codeSystem	1..1	SHALL		81-26482	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-7973	
text	1..1	SHALL		81-7974	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7971) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="1.3.6.1.4.1.19376.1.5.3.1.3.26" (CONF:81-10460).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15363).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="10184-0" Hospital Discharge Physical (CONF:81-15364).
 - 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:81-26482).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-7973).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-7974).

Figure 84: Hospital Discharge Physical Section Example

```

<section>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.26"/>
  <code code="10184-0"
        displayName="HOSPITAL DISCHARGE PHYSICAL"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"/>
  <title>Hospital Discharge Physical</title>
  <text>GENERAL: Well-developed, slightly obese man.
    <br/>
    NECK: Supple, with no jugular venous distension.
    <br/>
    HEART: Intermittent tachycardia without murmurs or gallops.
    <br/>
    PULMONARY: Decreased breath sounds, but no clear-cut rales or
    wheezes.
    <br/>
    EXTREMITIES: Free of edema.
  </text>
</section>

```

2.31 Hospital Discharge Studies Summary Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.22.2.16 (open)]

Table 128: Hospital Discharge Studies Summary Section Contexts

Contained By:	Contains:
Discharge Summary (V3) (optional)	

This section records the results of observations generated by laboratories, imaging procedures, and other procedures. The scope includes 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, and could record 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 when a cardiologist reports the left ventricular ejection fraction based on the review of an echocardiogram.

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

Note that there are discrepancies between CCD and the lab domain model, such as the effectiveTime in specimen collection.

Table 129: Hospital Discharge Studies Summary Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.16)					
templateId	1..1	SHALL		81-7910	
@root	1..1	SHALL		81-10398	2.16.840.1.113883.10.20.22.2.16
code	1..1	SHALL		81-15365	
@code	1..1	SHALL		81-15366	11493-4
@codeSystem	1..1	SHALL		81-26483	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-7912	
text	1..1	SHALL		81-7913	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7910) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.16" (CONF:81-10398).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15365).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="11493-4" Hospital Discharge Studies Summary (CONF:81-15366).
 - 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:81-26483).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-7912).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-7913).

Figure 85: Hospital Discharge Studies Summary Section Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.16"/>
  <code code="11493-4"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="HOSPITAL DISCHARGE STUDIES SUMMARY"/>
  <title>Hospital Discharge Studies Summary</title>
  <text>
    ...
  </text>
</section>

```

2.32 Immunizations Section (entries optional) (V3)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.2:2015-08-01
(open)]

Table 130: Immunizations Section (entries optional) (V3) Contexts

Contained By:	Contains:
Consultation Note (V3) (optional) Discharge Summary (V3) (optional) History and Physical (V3) (optional) Transfer Summary (V2) (optional)	Immunization Activity (V3)

The Immunizations Section defines a patient's current immunization status and pertinent immunization history. The primary use case for the Immunization Section is to enable communication of a patient's immunization status. The section should include current immunization status, and may contain the entire immunization history that is relevant to the period of time being summarized.

Table 131: Immunizations Section (entries optional) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.2.2:2015-08-01)					
templateId	1..1	SHALL		1198-7965	
@root	1..1	SHALL		1198-10399	2.16.840.1.113883.10.20.22.2.2
@extension	1..1	SHALL		1198-32529	2015-08-01
code	1..1	SHALL		1198-15367	
@code	1..1	SHALL		1198-15368	11369-6
@codeSystem	1..1	SHALL		1198-32146	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-7967	
text	1..1	SHALL		1198-7968	
entry	0..*	SHOULD		1198-7969	
substanceAdministration	1..1	SHALL		1198-15494	Immunization Activity (V3) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7965) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.2" (CONF:1198-10399).
- b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32529).
- 2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15367).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="11369-6" Immunizations (CONF:1198-15368).
 - 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:1198-32146).
- 3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-7967).
- 4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7968).
- 5. **SHOULD** contain zero or more [0..*] **entry** (CONF:1198-7969) such that it
 - a. **SHALL** contain exactly one [1..1] [Immunization Activity \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01) (CONF:1198-15494).

2.32.1 Immunizations Section (entries required) (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.2.1:2015-08-01 (open)]

Table 132: Immunizations Section (entries required) (V3) Contexts

Contained By:	Contains:
Continuity of Care Document (CCD) (V3) (optional) Referral Note (V2) (optional)	Immunization Activity (V3)

The Immunizations Section defines a patient's current immunization status and pertinent immunization history. The primary use case for the Immunization Section is to enable communication of a patient's immunization status. The section should include current immunization status, and may contain the entire immunization history that is relevant to the period of time being summarized.

Table 133: Immunizations Section (entries required) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.2.1:2015-08-01)					
@nullFlavor	0..1	MAY		1198-32833	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1198-9015	
@root	1..1	SHALL		1198-10400	2.16.840.1.113883.10.20.22.2.2.1
@extension	1..1	SHALL		1198-32530	2015-08-01
code	1..1	SHALL		1198-15369	
@code	1..1	SHALL		1198-15370	11369-6
@codeSystem	1..1	SHALL		1198-32147	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-9017	
text	1..1	SHALL		1198-9018	
entry	1..*	SHALL		1198-9019	
substanceAdministration	1..1	SHALL		1198-15495	Immunization Activity (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01)

1. Conforms to [Immunizations Section \(entries optional\) \(V3\) template](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.2:2015-08-01).
2. **MAY** contain zero or one [0..1] **@nullFlavor**="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1198-32833).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-9015) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.2.1" (CONF:1198-10400).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32530).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15369).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="11369-6" Immunizations (CONF:1198-15370).
 - 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:1198-32147).
5. **SHALL** contain exactly one [1..1] **title** (CONF:1198-9017).
6. **SHALL** contain exactly one [1..1] **text** (CONF:1198-9018).

If section/@nullFlavor is not present:

7. **SHALL** contain at least one [1..*] **entry** (CONF:1198-9019) such that it
 - a. **SHALL** contain exactly one [1..1] [Immunization Activity \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01) (CONF:1198-15495).

Figure 86: Immunizations Section (entries required) (V3) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.1" extension="2015-08-01" />
  <!-- ***** Immunizations section template ***** -->
  <code code="11369-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="History of immunizations" />
  <title>Immunizations</title>
  <text>
    <table border="1" width="100%">
      <thead>
        <tr>
          <th>Vaccine</th>
          <th>Date</th>
          <th>Status</th>
        </tr>
      </thead>
      <tbody>
        <tr>
          <td>
            <content ID="immun1" />Influenza virus vaccine, IM
          </td>
          <td>Nov 1999</td>
          <td>Completed</td>
        </tr>
        <tr>
          <td>
            <content ID="immun2" />Influenza virus vaccine, IM
          </td>
          <td>Dec 1998</td>
          <td>Completed</td>
        </tr>
        <tr>
          <td>
            <content ID="immun3" />
            Pneumococcal polysaccharide vaccine, IM
          </td>
          <td>Dec 1998</td>
          <td>Completed</td>
        </tr>
        <tr>
          <td>
            <content ID="immun4" />Tetanus and diphtheria toxoids, IM
          </td>
          <td>1997</td>
          <td>Refused</td>
        </tr>
      </tbody>
    </table>
  </text>
  <entry typeCode="DRIV">
    <substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="false">
      <templateId root="2.16.840.1.113883.10.20.22.4.52" />

```

```

        <!-- **** Immunization activity template **** -->
        ...

        </substanceAdministration>
    </entry>
    ...
</section>

```

2.33 Implants Section (DEPRECATED)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.33:2014-06-09 (open)]

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: Replaced by the Procedure Implants Section (2.16.840.1.113883.10.20.22.2.40)

Table 134: Implants Section (DEPRECATED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.33:2014-06-09)					
templateId	1..1	SHALL		1098-8042	
@root	1..1	SHALL		1098-32608	2.16.840.1.113883.10.20.22.2.33
@extension	1..1	SHALL		1098-32609	2014-06-09
code	1..1	SHALL		1098-15371	
@code	1..1	SHALL		1098-15372	55122-6
@codeSystem	1..1	SHALL		1098-26471	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-8044	
text	1..1	SHALL		1098-8045	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-8042) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.2.33"** (CONF:1098-32608).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32609).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15371).

- a. This code **SHALL** contain exactly one [1..1] **@code**="55122-6" Implants (CONF:1098-15372).
- 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:1098-26471).
- 3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-8044).
- 4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-8045).

2.34 Instructions Section (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.45:2014-06-09 (open)]

Table 135: Instructions Section (V2) Contexts

Contained By:	Contains:
History and Physical (V3) (optional) Progress Note (V3) (optional)	Instruction (V2)

The Instructions Section records instructions given to a patient. List patient decision aids here.

Table 136: Instructions Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.45:2014-06-09)					
@nullFlavor	0..1	MAY		1098-32835	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1098-10112	
@root	1..1	SHALL		1098-31384	2.16.840.1.113883.10.20.22.2.45
@extension	1..1	SHALL		1098-32599	2014-06-09
code	1..1	SHALL		1098-15375	
@code	1..1	SHALL		1098-15376	69730-0
@codeSystem	1..1	SHALL		1098-32148	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-10114	
text	1..1	SHALL		1098-10115	
entry	1..*	SHALL		1098-10116	
act	1..1	SHALL		1098-31398	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09)

1. **MAY** contain zero or one [0..1] **@nullFlavor**="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1098-32835).
 2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-10112) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.45" (CONF:1098-31384).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32599).
 3. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15375).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="69730-0" Instructions (CONF:1098-15376).
 - 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:1098-32148).
 4. **SHALL** contain exactly one [1..1] **title** (CONF:1098-10114).
 5. **SHALL** contain exactly one [1..1] **text** (CONF:1098-10115).
- If section/@nullFlavor is not present:
6. **SHALL** contain at least one [1..*] **entry** (CONF:1098-10116).

- a. Such entries **SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-31398).

Figure 87: Instructions Section (V2) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.21.2.45"
    extension="2014-06-09" />
  <code code="69730-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    displayName="INSTRUCTIONS" />
  <title>INSTRUCTIONS</title>
  <text>
    Patient may have low grade fever, mild joint pain and injection area
    tenderness
  </text>
  <entry typeCode="DRIV">
    <act classCode="ACT" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.20" />
      <!-- *** Instructions template *** -->
      ...
    </act>
  </entry>
</section>

```

2.35 Interventions Section (V3)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.21.2.3:2015-08-01 (open)]

Table 137: Interventions Section (V3) Contexts

Contained By:	Contains:
Care Plan (V2) (optional) Progress Note (V3) (optional)	Handoff Communication Participants Intervention Act (V2) Planned Intervention Act (V2)

This template represents Interventions. Interventions are actions taken to maximize the prospects of the goals of care for the patient, including the removal of barriers to success. Interventions can be planned, ordered, historical, etc.

Interventions include actions that may be ongoing (e.g., maintenance medications that the patient is taking, or monitoring the patient’s health status or the status of an intervention).

Instructions are nested within interventions and may include self-care instructions. Instructions are information or directions to the patient and other providers including how to care for the individual’s condition, what to do at home, when to call for help, any additional appointments, testing, and changes to the medication list or medication instructions, clinical guidelines and a summary of best practice.

Instructions are information or directions to the patient. Use the Instructions Section when instructions are included as part of a document that is not a Care Plan. Use the Interventions Section, containing the Intervention Act containing the Instruction entry, when instructions are part of a structured care plan.

Table 138: Interventions Section (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.21.2.3:2015-08-01)					
templateId	1..1	SHALL		1198-8680	
@root	1..1	SHALL	UID	1198-10461	2.16.840.1.113883.10.20.21.2.3
@extension	1..1	SHALL		1198-32559	2015-08-01
code	1..1	SHALL		1198-15377	
@code	1..1	SHALL		1198-15378	62387-6
@codeSystem	1..1	SHALL		1198-30864	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-8682	
text	1..1	SHALL		1198-8683	
entry	0..*	SHOULD		1198-30996	
act	1..1	SHALL		1198-30997	Intervention Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.131:2015-08-01)
entry	0..*	SHOULD		1198-32730	
act	1..1	SHALL		1198-32731	Planned Intervention Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.146:2015-08-01)
entry	0..*	MAY	Entry	1198-32402	
act	1..1	SHALL		1198-32403	Handoff Communication Participants (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.141)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8680) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.21.2.3" (CONF:1198-10461).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32559).

2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15377).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="62387-6" Interventions Provided (CONF:1198-15378).
 - 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:1198-30864).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-8682).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-8683).
5. **SHOULD** contain zero or more [0..*] **entry** (CONF:1198-30996) such that it
 - a. **SHALL** contain exactly one [1..1] [Intervention Act \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.131:2015-08-01) (CONF:1198-30997).
6. **SHOULD** contain zero or more [0..*] **entry** (CONF:1198-32730) such that it
 - a. **SHALL** contain exactly one [1..1] [Planned Intervention Act \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.146:2015-08-01) (CONF:1198-32731).
7. **MAY** contain zero or more [0..*] **entry** (CONF:1198-32402) such that it
 - a. **SHALL** contain exactly one [1..1] [Handoff Communication Participants](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.141) (CONF:1198-32403).

Figure 88: Interventions Section (V3) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.21.2.3" extension="2015-08-01" />
  <code code="62387-6" displayName="Interventions Provided"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <title>Interventions Section</title>
  <text />
  <entry>
    <act />
  </entry>
</section>

```

2.36 Medical (General) History Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.22.2.39 (open)]

Table 139: Medical (General) History Section Contexts

Contained By:	Contains:
Procedure Note (V3) (optional)	

The Medical History Section describes all aspects of the medical history of the patient even if not pertinent to the current procedure, and may include chief complaint, past medical history, social history, family history, surgical or procedure history, medication history, and other history information. The history may be limited to information pertinent to the current procedure or may be more comprehensive. The history may be reported as a collection of

random clinical statements or it may be reported categorically. Categorical report formats may be divided into multiple subsections including Past Medical History, Social History.

Table 140: Medical (General) History Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.39)					
templateId	1..1	SHALL		81-8160	
@root	1..1	SHALL		81-10403	2.16.840.1.113883.10.20.22.2.39
code	1..1	SHALL		81-15379	
@code	1..1	SHALL		81-15380	11329-0
@codeSystem	1..1	SHALL		81-26484	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-8162	
text	1..1	SHALL		81-8163	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-8160) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.39" (CONF:81-10403).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15379).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="11329-0" Medical (General) History (CONF:81-15380).
 - 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:81-26484).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-8162).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-8163).

2.37 Medical Equipment Section (V2)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.23:2014-06-09 (open)]

Table 141: Medical Equipment Section (V2) Contexts

Contained By:	Contains:
Consultation Note (V3) (optional) Continuity of Care Document (CCD) (V3) (optional) Transfer Summary (V2) (optional) Referral Note (V2) (optional)	Medical Equipment Organizer Non-Medicinal Supply Activity (V2) Procedure Activity Procedure (V2)

This section defines a patient's implanted and external health and medical devices and equipment. This section lists any pertinent durable medical equipment (DME) used to help maintain the patient's health status. All equipment relevant to the diagnosis, care, or treatment of a patient should be included.

Devices applied to, or placed in, the patient are represented with the Procedure Activity Procedure (V2) template. Equipment supplied to the patient (e.g., pumps, inhalers, wheelchairs) is represented by the Non-Medicinal Supply Activity V2 template.

These devices may be grouped together within a Medical Equipment Organizer. The organizer would probably not be used with devices applied in or on the patient but rather to organize a group of medical supplies the patient has been supplied with.

Table 142: Medical Equipment Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.23:2014-06-09)					
templateId	1..1	SHALL		1098-7944	
@root	1..1	SHALL		1098-10404	2.16.840.1.113883.10.20.22.2.23
@extension	1..1	SHALL		1098-32523	2014-06-09
code	1..1	SHALL		1098-15381	
@code	1..1	SHALL		1098-15382	46264-8
@codeSystem	1..1	SHALL		1098-30828	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-7946	
text	1..1	SHALL		1098-7947	
entry	0..*	MAY		1098-7948	
organizer	1..1	SHALL		1098-30351	Medical Equipment Organizer (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.135)
entry	0..*	SHOULD		1098-31125	
supply	1..1	SHALL		1098-31861	Non-Medicinal Supply Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.50:2014-06-09)
entry	0..*	SHOULD		1098-31885	
procedure	1..1	SHALL		1098-31886	Procedure Activity Procedure (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7944) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.23" (CONF:1098-10404).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32523).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15381).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="46264-8" Medical Equipment (CONF:1098-15382).

- 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:1098-30828).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-7946).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-7947).
5. **MAY** contain zero or more [0..*] **entry** (CONF:1098-7948) such that it
 - a. **SHALL** contain exactly one [1..1] Medical Equipment Organizer (identifier:
urn:oid:2.16.840.1.113883.10.20.22.4.135) (CONF:1098-30351).
6. **SHOULD** contain zero or more [0..*] **entry** (CONF:1098-31125) such that it
 - a. **SHALL** contain exactly one [1..1] Non-Medicinal Supply Activity (V2)
(identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.50:2014-06-09)
(CONF:1098-31861).
7. **SHOULD** contain zero or more [0..*] **entry** (CONF:1098-31885) such that it
 - a. **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:1098-31886).

Figure 89: Medical Equipment Section (V2) Example

```

<component>
  <section>
    <!-- Medical equipment section -->
    <templateId root="2.16.840.1.113883.10.20.22.2.23" extension="2014-06-09" />
    <code code="46264-8" codeSystem="2.16.840.1.113883.6.1" />
    <title>MEDICAL EQUIPMENT</title>
    <text>
      <content styleCode="Bold">Medical Equipment</content>
      <list>
        <item>Implanted Devices: Cardiac Pacemaker July 3, 2013</item>
        <item>Implanted Devices: Upper GI Prosthesis, January 3, 2013</item>
        <item>Cane, February 2, 2003</item>
        <item>Biliary Stent, May 5, 2013</item>
      </list>
    </text>
    <entry>
      <organizer classCode="CLUSTER" moodCode="EVN">
        <!-- Medical Equipment Organizer template -->
        <templateId root="2.16.840.1.113883.10.20.22.4.135" />
        ...
      </organizer>
    </entry>
    <entry>
      <supply classCode="SPLY" moodCode="EVN">
        <!-- Non-medicinal supply activity V2 template ***** -->
        <templateId root="2.16.840.1.113883.10.20.22.4.50" extension="2014-06-09"
/>
        ...
      </supply>
    </entry>
    <entry>
      <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"
/>
        ...
      </procedure>
    </entry>
  </section>
</component>

```

2.38 Medications Administered Section (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.38:2014-06-09
(open)]

Table 143: Medications Administered Section (V2) Contexts

Contained By:	Contains:
Procedure Note (V3) (optional)	Medication Activity (V2)

The Medications Administered Section usually resides inside a Procedure Note describing a procedure. This section defines medications and fluids administered during the procedure, its related encounter, or other procedure related activity excluding anesthetic medications. Anesthesia medications should be documented as described in the Anesthesia Section
 templateId 2.16.840.1.113883.10.20.22.2.25.

Table 144: Medications Administered Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.38:2014-06-09)					
templateId	1..1	SHALL		1098-8152	
@root	1..1	SHALL		1098-10405	2.16.840.1.113883.10.20.22.2.38
@extension	1..1	SHALL		1098-32525	2014-06-09
code	1..1	SHALL		1098-15383	
@code	1..1	SHALL		1098-15384	29549-3
@codeSystem	1..1	SHALL		1098-30829	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-8154	
text	1..1	SHALL		1098-8155	
entry	0..*	MAY		1098-8156	
substanceAdministration	1..1	SHALL		1098-15499	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:1098-8152) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.38" (CONF:1098-10405).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32525).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15383).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="29549-3" Medications Administered (CONF:1098-15384).
 - 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:1098-30829).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-8154).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-8155).

5. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8156).
 - a. The entry, if present, **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:1098-15499).

Figure 90: Medications Administered Section (V2) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.38" extension="2014-06-09" />
  <code code="29549-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="MEDICATIONS ADMINISTERED" />
  <title>MEDICATIONS ADMINISTERED</title>
  <text>
    <table border="1" width="100%">
      <thead>
        <tr>
          <th>Medication</th>
          <th>Directions</th>
          <th>Start Date</th>
          <th>Status</th>
          <th>Indications</th>
          <th>Fill Instructions</th>
        </tr>
      </thead>
      <tbody>
        <tr>
          <td>
            <content ID="MedAdministered_1">
              Proventil 0.09 MG/ACTUAT inhalant solution
            </content>
          </td>
          <td>0.09 MG/ACTUAT inhalant solution, 2 puffs QID PRN wheezing</td>
          <td>20070103</td>
          <td>Active</td>
          <td>Pneumonia (233604007 SNOMED CT)</td>
          <td>Generic Substitution Allowed</td>
        </tr>
      </tbody>
    </table>
  </text>
  <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 V2 ** -->
      ...
    </substanceAdministration>
  </entry>
</section>

```

2.39 Medications Section (entries optional) (V2)

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

Table 145: Medications Section (entries optional) (V2) Contexts

Contained By:	Contains:
History and Physical (V3) (required) Progress Note (V3) (optional) Procedure Note (V3) (optional)	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 146: 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).

2.39.1 Medications Section (entries required) (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.1.1:2014-06-09 (open)]

Table 147: Medications Section (entries required) (V2) Contexts

Contained By:	Contains:
Consultation Note (V3) (optional) Continuity of Care Document (CCD) (V3) (required) Transfer Summary (V2) (required) Referral Note (V2) (required)	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.

This section requires either an entry indicating the subject is not known to be on any medications or entries summarizing the subject's medications.

Table 148: Medications Section (entries required) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.1.1:2014-06-09)					
@nullFlavor	0..1	MAY		1098-32845	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1098-7568	
@root	1..1	SHALL		1098-10433	2.16.840.1.113883.10.20.22.2.1.1
@extension	1..1	SHALL		1098-32499	2014-06-09
code	1..1	SHALL		1098-15387	
@code	1..1	SHALL		1098-15388	10160-0
@codeSystem	1..1	SHALL		1098-30825	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-7570	
text	1..1	SHALL		1098-7571	
entry	1..*	SHALL		1098-7572	
substanceAdministration	1..1	SHALL		1098-10077	Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09)

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. **MAY** contain zero or one [0..1] @nullFlavor="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1098-32845).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-7568) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.1.1" (CONF:1098-10433).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-06-09" (CONF:1098-32499).
4. **SHALL** contain exactly one [1..1] code (CONF:1098-15387).
 - a. This code **SHALL** contain exactly one [1..1] @code="10160-0" History of medication use (CONF:1098-15388).
 - 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:1098-30825).
5. **SHALL** contain exactly one [1..1] title (CONF:1098-7570).
6. **SHALL** contain exactly one [1..1] text (CONF:1098-7571).

If section/@nullFlavor is not present:

7. **SHALL** contain at least one [1..*] **entry** (CONF:1098-7572) 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:1098-10077).

Figure 91: Medications Section (entries required) (V2) Example

```

<section>
  <!--**MEDICATION SECTION (coded entries required) ** -->
  <templateId root="2.16.840.1.113883.10.20.22.2.1.1" extension="2014-06-09" />
  <!-- Medications Section (entries optional) -->
  <templateId root="2.16.840.1.113883.10.20.22.2.1" extension="2014-06-09" />

  <code code="10160-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="HISTORY OF MEDICATION USE" />
  <title>MEDICATIONS</title>
  <text>
    Narrative Text
  </text>

  <entry>
    <substanceAdministration classCode="SBADM" moodCode="EVN">
      <!--**MEDICATION ACTIVITY V2 ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09" />
      ....
    </substanceAdministration>
  </entry>
</section>

```

2.40 Mental Status Section (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.56:2015-08-01 (open)]

Table 149: Mental Status Section (V2) Contexts

Contained By:	Contains:
Consultation Note (V3) (optional) Continuity of Care Document (CCD) (V3) (optional) Transfer Summary (V2) (optional) Referral Note (V2) (optional)	Assessment Scale Observation Mental Status Observation (V3) Mental Status Organizer (V3)

The Mental Status Section contains observations and evaluations related to a patient’s psychological and mental competency and deficits including, but not limited to any of the following types of information:

- Appearance (e.g., unusual grooming, clothing or body modifications)
- Attitude (e.g., cooperative, guarded, hostile)

- Behavior/psychomotor (e.g., abnormal movements, eye contact, tics)
- Mood and affect (e.g., anxious, angry, euphoric)
- Speech and Language (e.g., pressured speech, perseveration)
- Thought process (e.g., logic, coherence)
- Thought content (e.g., delusions, phobias)
- Perception (e.g., voices, hallucinations)
- Cognition (e.g., memory, alertness/consciousness, attention, orientation) – which were included in Cognitive Status Observation in earlier publications of C-CDA.
- Insight and judgment (e.g., understanding of condition, decision making)

Table 150: Mental Status Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.56:2015-08-01)					
templateId	1..1	SHALL		1198-28293	
@root	1..1	SHALL		1198-28294	2.16.840.1.113883.10.20.22.2.56
@extension	1..1	SHALL		1198-32793	2015-08-01
code	1..1	SHALL		1198-28295	
@code	1..1	SHALL		1198-28296	10190-7
@codeSystem	1..1	SHALL		1198-30826	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-28297	
text	1..1	SHALL		1198-28298	
entry	0..*	MAY		1198-28301	
organizer	1..1	SHALL		1198-28302	Mental Status Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.75:2015-08-01)
entry	0..*	MAY		1198-28305	
observation	1..1	SHALL		1198-28306	Mental Status Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.74:2015-08-01)
entry	0..*	MAY		1198-28313	
observation	1..1	SHALL		1198-28314	Assessment Scale Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.69)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-28293) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.56" (CONF:1198-28294).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32793).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-28295).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="10190-7" Mental Status (CONF:1198-28296).

- 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:1198-30826).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-28297).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-28298).
5. **MAY** contain zero or more [0..*] **entry** (CONF:1198-28301) such that it
 - a. **SHALL** contain exactly one [1..1] Mental Status Organizer (V3) (identifier:
urn:h17ii:2.16.840.1.113883.10.20.22.4.75:2015-08-01) (CONF:1198-
28302).
6. **MAY** contain zero or more [0..*] **entry** (CONF:1198-28305) such that it
 - a. **SHALL** contain exactly one [1..1] Mental Status Observation (V3)
(identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.74:2015-08-01)
(CONF:1198-28306).
7. **MAY** contain zero or more [0..*] **entry** (CONF:1198-28313) such that it
 - a. **SHALL** contain exactly one [1..1] Assessment Scale Observation (identifier:
urn:oid:2.16.840.1.113883.10.20.22.4.69) (CONF:1198-28314).

Figure 92: Mental Status Section Example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.14" extension="2015-08-01" />
  <!-- Mental Status Section -->
  <code code="10190-7" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="MENTAL STATUS" />
  <title>MENTAL STATUS</title>
  <text>
    ...
  </text>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- Mental Status Observation template -->
      <templateId root="2.16.840.1.113883.10.20.22.4.125" extension="2015-08-01" />
      ...

    </observation>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- Mental Status Observation V2 -->
      <templateId root="2.16.840.1.113883.10.20.22.4.74" extension="2015-08-01" />
      ...

    </observation>
  </entry>
  <entry>
    <organizer classCode="CLUSTER" moodCode="EVN">
      <!-- Mental Status Organizer V2-->
      <templateId root="2.16.840.1.113883.10.20.22.4.75" extension="2015-08-01" />
      <id root="a7bc1062-8649-42a0-833d-ekd65bd013c9" />
      ...

    </organizer>
  </entry>
</section>
```

2.41 Nutrition Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.22.2.57 (open)]

Table 151: Nutrition Section Contexts

Contained By:	Contains:
Consultation Note (V3) (optional) Continuity of Care Document (CCD) (V3) (optional) Discharge Summary (V3) (optional) Transfer Summary (V2) (optional) Referral Note (V2) (optional) Progress Note (V3) (optional)	Nutritional Status Observation

The Nutrition Section represents diet and nutrition information including special diet requirements and restrictions (e.g., texture modified diet, liquids only, enteral feeding). It also represents the overall nutritional status of the patient and nutrition assessment findings.

Table 152: Nutrition Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.57)					
templateId	1..1	SHALL		1098-30477	
@root	1..1	SHALL	UID	1098-30478	2.16.840.1.113883.10.20.22.2.57
code	1..1	SHALL		1098-30318	
@code	1..1	SHALL		1098-30319	61144-2
@codeSystem	1..1	SHALL		1098-30320	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-31042	
text	1..1	SHALL		1098-31043	
entry	0..*	SHOULD		1098-30321	
observation	1..1	SHALL		1098-30322	Nutritional Status Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.124)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-30477) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.57" (CONF:1098-30478).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-30318).

- a. This code **SHALL** contain exactly one [1..1] @code="61144-2" Diet and nutrition (CONF:1098-30319).
- 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:1098-30320).
3. **SHALL** contain exactly one [1..1] title (CONF:1098-31042).
4. **SHALL** contain exactly one [1..1] text (CONF:1098-31043).
5. **SHOULD** contain zero or more [0..*] entry (CONF:1098-30321) such that it
 - a. **SHALL** contain exactly one [1..1] Nutritional Status Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.124) (CONF:1098-30322).

Figure 93: Nutrition Section Example

```

<section>
  <!-- Nutrition Section -->
  <templateId root="2.16.840.1.113883.10.20.22.2.57" />
  <code code="61144-2" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Diet and Nutrition" />
  <title>NUTRITION SECTION</title>
  <text>
    <paragraph>Nutritional Status: well nourished</paragraph>
    <paragraph>Nutrition Assessment: Dietary Requirements; low sodium diet, Dietary
    Intake, high carbohydrate diet; BMI 25-29 overweight </paragraph>
    <paragraph>Nutritional Recommendations: BMI 22; Nutrition Education "Lean
    Meats"</paragraph>
  </text>
  <entry>
    <!-- SHOULD HAVE Nutritional Status Observation -->
    <observation classCode="OBS" moodCode="EVN">
      <!-- contains NUTRITIONAL STATUS Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.124" />
      ...
      <entryRelationship typeCode="SUBJ">
        <observation classCode="OBS" moodCode="EVN">
          <!-- ** Nutritional Assessment observation** -->
          <templateId root="2.16.840.1.113883.10.20.22.4.138" />
          <id root="ab1791b0-5c71-11db-b0de-0800200c9a66" />
          ...
        </observation>
      </entryRelationship>
    </observation>
  </entry>
</section>

```

2.42 Objective Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.21.2.1 (open)]

Table 153: Objective Section Contexts

Contained By:	Contains:
Progress Note (V3) (optional)	

The Objective Section contains data about the patient gathered through tests, measures, or observations that produce a quantified or categorized result. It includes important and relevant positive and negative test results, physical findings, review of systems, and other measurements and observations.

Table 154: Objective Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.21.2.1)					
templateId	1..1	SHALL		81-7869	
@root	1..1	SHALL	UID	81-10462	2.16.840.1.113883.10.20.21.2.1
code	1..1	SHALL		81-15389	
@code	1..1	SHALL		81-15390	61149-1
@codeSystem	1..1	SHALL		81-26485	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-7871	
text	1..1	SHALL		81-7872	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7869) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.21.2.1" (CONF:81-10462).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15389).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="61149-1" Objective (CONF:81-15390).
 - 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:81-26485).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-7871).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-7872).

Figure 94: Objective Section Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.21.2.1"/>
  <code code="61149-1 " codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="OBJECTIVE DATA "/>
  <title>OBJECTIVE DATA</title>
  <text>
    <list listType="ordered">
      <item>Chest: clear to ausc. No rales, normal breath sounds</item>
      <item>Heart: RR, PMI in normal location and no heave or evidence of
        cardiomegaly,normal heart sounds, no murm or gallop</item>
    </list>
  </text>
</section>

```

2.43 Observer Context

[assignedAuthor: identifier urn:oid:2.16.840.1.113883.10.20.6.2.4 (open)]

Table 155: Observer Context Contexts

Contained By:	Contains:
Diagnostic Imaging Report (V3) (optional)	

The Observer Context is used to override the author specified in the CDA Header. It is valid as a direct child element of a section.

Table 156: Observer Context Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
assignedAuthor (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.4)					
templateId	1..1	SHALL		81-9194	
@root	1..1	SHALL		81-10536	2.16.840.1.113883.10.20.6.2.4
id	1..*	SHALL		81-9196	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-9194) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.6.2.4" (CONF:81-10536).

The id element contains the author's id or the DICOM device observer UID

2. **SHALL** contain at least one [1..*] **id** (CONF:81-9196).
3. Either **assignedPerson** or **assignedAuthoringDevice** **SHALL** be present (CONF:81-9198).

Figure 95: Observer Context Example

```

<assignedAuthor>
  <templateId root="2.16.840.1.113883.10.20.6.2.4"/>
  <id extension="121008" root="2.16.840.1.113883.19.5"/>
  <assignedPerson>
    <name>
      <given>Richard</given>
      <family>Blitz</family>
      <suffix>MD</suffix>
    </name>
  </assignedPerson>
</assignedAuthor>

```

2.44 Operative Note Fluids Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.7.12 (open)]

Table 157: Operative Note Fluids Section Contexts

Contained By:	Contains:
Operative Note (V3) (optional)	

The Operative Note Fluids Section may be used to record fluids administered during the surgical procedure.

Table 158: Operative Note Fluids Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.7.12)					
templateId	1..1	SHALL		81-8030	
@root	1..1	SHALL	UID	81-10463	2.16.840.1.113883.10.20.7.12
code	1..1	SHALL		81-15391	
@code	1..1	SHALL		81-15392	10216-0
@codeSystem	1..1	SHALL		81-26486	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-8032	
text	1..1	SHALL		81-8033	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-8030) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.7.12" (CONF:81-10463).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15391).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="10216-0" Operative Note Fluids (CONF:81-15392).
 - 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:81-26486).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-8032).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-8033).
5. If the Operative Note Fluids section is present, there **SHALL** be a statement providing details of the fluids administered or **SHALL** explicitly state there were no fluids administered (CONF:81-8052).

Figure 96: Operative Note Fluids Section Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.7.12"/>
  <code code="10216-0"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="OPERATIVE NOTE FLUIDS"/>
  <title>Operative Note Fluids</title>
  <text>250 ML Ringers Lactate</text>
</section>

```

2.45 Operative Note Surgical Procedure Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.7.14 (open)]

Table 159: Operative Note Surgical Procedure Section Contexts

Contained By:	Contains:
Operative Note (V3) (optional)	

The Operative Note Surgical Procedure Section can be used to restate the procedures performed if appropriate for an enterprise workflow. The procedure(s) performed associated with the Operative Note are formally modeled in the header using serviceEvent.

Table 160: Operative Note Surgical Procedure Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.7.14)					
templateId	1..1	SHALL		81-8034	
@root	1..1	SHALL	UID	81-10464	2.16.840.1.113883.10.20.7.14
code	1..1	SHALL		81-15393	
@code	1..1	SHALL		81-15394	10223-6
@codeSystem	1..1	SHALL		81-26487	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-8036	
text	1..1	SHALL		81-8037	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-8034) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.7.14" (CONF:81-10464).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15393).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="10223-6" Operative Note Surgical Procedure (CONF:81-15394).
 - 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:81-26487).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-8036).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-8037).
5. If the surgical procedure section is present there **SHALL** be text indicating the procedure performed (CONF:81-8054).

Figure 97: Operative Note Surgical Procedure Section Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.7.14"/>
  <code code="10223-6"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="OPERATIVE NOTE SURGICAL PROCEDURE"/>
  <title>Surgical Procedure</title>
  <text>Laparoscopic Appendectomy</text>
</section>

```

2.46 Payers Section (V3)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.18:2015-08-01
(open)]

Table 161: Payers Section (V3) Contexts

Contained By:	Contains:
Continuity of Care Document (CCD) (V3) (optional) Transfer Summary (V2) (optional)	Coverage Activity (V3)

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 162: Payers Section (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2015-08-01)					
templateId	1..1	SHALL		1198-7924	
@root	1..1	SHALL		1198-10434	2.16.840.1.113883.10.20.22.2.18
@extension	1..1	SHALL		1198-32597	2015-08-01
code	1..1	SHALL		1198-15395	
@code	1..1	SHALL		1198-15396	48768-6
@codeSystem	1..1	SHALL		1198-32149	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-7926	
text	1..1	SHALL		1198-7927	
entry	0..*	SHOULD		1198-7959	
act	1..1	SHALL		1198-15501	Coverage Activity (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.60:2015-08-01)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7924) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.18" (CONF:1198-10434).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32597).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15395).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="48768-6" Payers (CONF:1198-15396).
 - 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:1198-32149).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-7926).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7927).
5. **SHOULD** contain zero or more [0..*] **entry** (CONF:1198-7959) such that it
 - a. **SHALL** contain exactly one [1..1] [Coverage Activity \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.60:2015-08-01) (CONF:1198-15501).

Figure 98: Payers Section (V3) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.18" extension="2015-08-01" />
  <!-- ***** 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="2015-08-01" />
      <!-- **** Coverage entry template **** -->
      ...
    </act>
  </entry>
</section>

```

2.47 Physical Exam Section (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.2.10:2015-08-01
(open)]

Table 163: Physical Exam Section (V3) Contexts

Contained By:	Contains:
Consultation Note (V3) (optional) History and Physical (V3) (required) Transfer Summary (V2) (optional) Referral Note (V2) (optional) Progress Note (V3) (optional) Procedure Note (V3) (optional)	Longitudinal Care Wound Observation (V2)

The section includes direct observations made by a clinician. The examination may include the use of simple instruments and may also describe simple maneuvers performed directly on the patient’s body.

It also includes observations made by the examining clinician using only inspection, palpation, auscultation, and percussion. It does not include laboratory or imaging findings.

The exam may be limited to pertinent body systems based on the patient’s chief complaint or it may include a comprehensive examination. The examination may be reported as a collection of random clinical statements or it may be reported categorically.

The Physical Exam Section may contain multiple nested subsections.

Table 164: Physical Exam Section (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.2.10:2015-08-01)					
templateId	1..1	SHALL		1198-7806	
@root	1..1	SHALL	UID	1198-10465	2.16.840.1.113883.10.20.2.10
@extension	1..1	SHALL		1198-32587	2015-08-01
code	1..1	SHALL		1198-15397	
@code	1..1	SHALL		1198-15398	29545-1
@codeSystem	1..1	SHALL		1198-30931	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-7808	
text	1..1	SHALL		1198-7809	
entry	0..*	MAY		1198-31926	
observation	1..1	SHALL		1198-31927	Longitudinal Care Wound Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.2.4.114:2015-08-01)
component	0..*	MAY		1198-32434	
section	1..1	SHALL		1198-32435	
code	1..1	SHALL		1198-32436	urn:oid:2.16.840.1.113883.11.20.9.65 (Physical Exam Type)
title	1..1	SHALL		1198-32437	
text	1..1	SHALL		1198-32438	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7806) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.2.10" (CONF:1198-10465).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32587).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15397).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="29545-1" Physical Findings (CONF:1198-15398).

- 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:1198-30931).
- 3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-7808).
- 4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7809).
- 5. **MAY** contain zero or more [0..*] **entry** (CONF:1198-31926) such that it
 - a. **SHALL** contain exactly one [1..1] Longitudinal Care Wound Observation (V2)
(identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.114:2015-08-01)
(CONF:1198-31927).
- 6. **MAY** contain zero or more [0..*] **component** (CONF:1198-32434) such that it
 - a. **SHALL** contain exactly one [1..1] **section** (CONF:1198-32435).
 - i. This section **SHALL** contain exactly one [1..1] **code** (ValueSet: Physical Exam Type urn:oid:2.16.840.1.113883.11.20.9.65 **STATIC**) (CONF:1198-32436).
 - ii. This section **SHALL** contain exactly one [1..1] **title** (CONF:1198-32437).
 - iii. This section **SHALL** contain exactly one [1..1] **text** (CONF:1198-32438).

Table 165: Physical Exam Type

Value Set: Physical Exam Type urn:oid:2.16.840.1.113883.11.20.9.65			
Additional section types that may be used under the Physical Examination section.			
Value Set Source: http://www.search.loinc.org			
Code	Code System	Code System OID	Print Name
10199-8	LOINC	urn:oid:2.16.840.1.113883.6.1	Head, physical findings
10197-2	LOINC	urn:oid:2.16.840.1.113883.6.1	Eye, physical findings
10195-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Ear, physical Findings
10203-8	LOINC	urn:oid:2.16.840.1.113883.6.1	Nose, physical findings
11393-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Ears & nose & mouth & throat, physical findings
10201-2	LOINC	urn:oid:2.16.840.1.113883.6.1	Mouth & throat & teeth, physical findings
51850-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Head & ears & eyes & nose & throat, physical findings
11411-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Neck, physical findings
10207-9	LOINC	urn:oid:2.16.840.1.113883.6.1	Thorax & lungs, physical findings
11391-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Chest, physical findings
...			

Figure 99: Physical Exam Section (V3) Example

```

<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.2.10" extension="2015-08-01" />
    <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" code="29545-1"
    displayName="Physical Findings" />
    <title>Physical Examination</title>
    <!--**10.4.1 Physical Exam at Transfer -->
    <text>
      <list listType="ordered">
        <item>Recurrent GI bleed of unknown etiology; hypotension perhaps
          secondary to this but as likely secondary to polypharmacy.</item>
        <item>Acute on chronic anemia secondary to #1.</item>
        <item>Azotemia, acute renal failure with volume loss secondary to
          #1.</item>
        <item>Hyperkalemia secondary to #3 and on ACE and K+ supplement.</item>
        <item>Other chronic diagnoses as noted above, currently stable.</item>
      </list>
    </text>
    ...
  </section>
</component>

```

2.48 Plan of Treatment Section (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09
(open)]

Table 166: Plan of Treatment Section (V2) Contexts

Contained By:	Contains:
Consultation Note (V3) (optional) Continuity of Care Document (CCD) (V3) (optional) Discharge Summary (V3) (required) History and Physical (V3) (optional) Transfer Summary (V2) (optional) Referral Note (V2) (optional) Progress Note (V3) (optional) Procedure Note (V3) (optional) Operative Note (V3) (optional)	Goal Observation Handoff Communication Participants Instruction (V2) Nutrition Recommendation Planned Act (V2) Planned Encounter (V2) Planned Immunization Activity Planned Medication Activity (V2) Planned Observation (V2) Planned Procedure (V2) Planned Supply (V2)

This section, formerly known as "Plan of Care", contains data that define pending orders, interventions, encounters, services, and procedures for the patient. It is limited to prospective, unfulfilled, or incomplete orders and requests only. These are indicated by the @moodCode of the entries within this section. All active, incomplete, or pending orders, appointments, referrals, procedures, services, or any other pending event of clinical significance to the current care of the patient should be listed.

This section may also contain information about ongoing care of the patient, clinical reminders, patient's values, beliefs, preferences, care expectations, and overarching care goals.

Clinical reminders are placed here to provide prompts for disease prevention and management, patient safety, and healthcare quality improvements, including widely accepted performance measures.

Values may include the importance of quality of life over longevity. These values are taken into account when prioritizing all problems and their treatments.

Beliefs may include comfort with dying or the refusal of blood transfusions because of the patient's religious convictions.

Preferences may include liquid medicines over tablets, or treatment via secure email instead of in person.

Care expectations may range from being treated only by female clinicians, to expecting all calls to be returned within 24 hours.

Overarching goals described in this section are not tied to a specific condition, problem, health concern, or intervention. Examples of overarching goals could be to minimize pain or dependence on others, or to walk a daughter down the aisle for her marriage.

The plan may also indicate that patient education will be provided.

Table 167: Plan of Treatment Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09)					
templateId	1..1	SHALL		1098-7723	
@root	1..1	SHALL		1098-10435	2.16.840.1.113883.10.20.22.2.10
@extension	1..1	SHALL		1098-32501	2014-06-09
code	1..1	SHALL		1098-14749	
@code	1..1	SHALL		1098-14750	18776-5
@codeSystem	1..1	SHALL		1098-30813	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-16986	
text	1..1	SHALL		1098-7725	
entry	0..*	MAY		1098-7726	
observation	1..1	SHALL		1098-14751	Planned Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09)
entry	0..*	MAY		1098-8805	
encounter	1..1	SHALL		1098-30472	Planned Encounter (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09)
entry	0..*	MAY		1098-8807	
act	1..1	SHALL		1098-30473	Planned Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09)
entry	0..*	MAY		1098-8809	
procedure	1..1	SHALL		1098-30474	Planned Procedure (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09)
entry	0..*	MAY		1098-8811	
substanceAdministration	1..1	SHALL		1098-30475	Planned Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09)

					0.22.4.42:2014-06-09
entry	0..*	MAY		1098-8813	
supply	1..1	SHALL		1098-30476	Planned Supply (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.43:2014-06-09)
entry	0..*	MAY		1098-14695	
act	1..1	SHALL		1098-31397	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.20:2014-06-09)
entry	0..*	MAY		1098-29621	
act	1..1	SHALL		1098-30868	Handoff Communication Participants (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.141)
entry	0..*	MAY		1098-31841	
act	1..1	SHALL		1098-31864	Nutrition Recommendation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.130)
entry	0..*	MAY		1098-32353	
substanceAdministration	1..1	SHALL		1098-32354	Planned Immunization Activity (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.120)
entry	0..*	MAY		1098-32887	
observation	1..1	SHALL		1098-32888	Goal Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.121)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7723) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.10" (CONF:1098-10435).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32501).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-14749).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="18776-5" Plan of Treatment (CONF:1098-14750).
 - 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:1098-30813).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-16986).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-7725).

5. **MAY** contain zero or more [0..*] **entry** (CONF:1098-7726) such that it
 - a. **SHALL** contain exactly one [1..1] [Planned Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09) (CONF:1098-14751).
6. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8805) such that it
 - a. **SHALL** contain exactly one [1..1] [Planned Encounter \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09) (CONF:1098-30472).
7. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8807) such that it
 - a. **SHALL** contain exactly one [1..1] [Planned Act \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09) (CONF:1098-30473).
8. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8809) such that it
 - a. **SHALL** contain exactly one [1..1] [Planned Procedure \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09) (CONF:1098-30474).
9. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8811) 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:1098-30475).
10. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8813) such that it
 - a. **SHALL** contain exactly one [1..1] [Planned Supply \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09) (CONF:1098-30476).
11. **MAY** contain zero or more [0..*] **entry** (CONF:1098-14695) such that it
 - a. **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:1098-31397).
12. **MAY** contain zero or more [0..*] **entry** (CONF:1098-29621) such that it
 - a. **SHALL** contain exactly one [1..1] [Handoff Communication Participants](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.141) (CONF:1098-30868).
13. **MAY** contain zero or more [0..*] **entry** (CONF:1098-31841) such that it
 - a. **SHALL** contain exactly one [1..1] [Nutrition Recommendation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.130) (CONF:1098-31864).
14. **MAY** contain zero or more [0..*] **entry** (CONF:1098-32353) 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:1098-32354).
15. **MAY** contain zero or more [0..*] **entry** (CONF:1098-32887) such that it
 - a. **SHALL** contain exactly one [1..1] [Goal Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.121) (CONF:1098-32888).

Figure 100: Plan of Treatment Section (V2) Example

```

<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.22.2.10" extension="2014-06-09" />
    <!-- **** Plan of Treatment Section V2 template **** -->
    <code code="18776-5" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Treatment plan" />
    <title>TREATMENT PLAN</title>
    <text>
      ...
    </text>
    <entry>
      <act classCode="ACT" moodCode="EVN">
        <!-- Handoff Communication template -->
        <templateId root="2.16.840.1.113883.10.20.22.4.141" />
        ...
      </act>
    </entry>
    <entry>
      <encounter moodCode="INT" classCode="ENC">
        <templateId root="2.16.840.1.113883.10.20.22.4.40" extension="2014-06-09"
/>
        <!-- Plan Activity Encounter V2 template -->
        ...
      </encounter>
    </entry>
  </section>
</component>

```

2.49 Planned Procedure Section (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.30:2014-06-09
(open)]

Table 168: Planned Procedure Section (V2) Contexts

Contained By:	Contains:
Procedure Note (V3) (optional) Operative Note (V3) (optional)	Planned Procedure (V2)

This section contains the procedure(s) that a clinician planned based on the preoperative assessment.

Table 169: Planned Procedure Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.30:2014-06-09)					
templateId	1..1	SHALL		1098-8082	
@root	1..1	SHALL		1098-10436	2.16.840.1.113883.10.20.22.2.30
@extension	1..1	SHALL		1098-32590	2014-06-09
code	1..1	SHALL		1098-15399	
@code	1..1	SHALL		1098-15400	59772-4
@codeSystem	1..1	SHALL		1098-32151	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-8084	
text	1..1	SHALL		1098-8085	
entry	0..*	MAY		1098-8744	
procedure	1..1	SHALL		1098-15502	Planned Procedure (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-8082) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.30" (CONF:1098-10436).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32590).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15399).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="59772-4" Planned Procedure (CONF:1098-15400).
 - 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:1098-32151).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-8084).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-8085).
5. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8744) such that it
 - a. **SHALL** contain exactly one [1..1] [Planned Procedure \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09) (CONF:1098-15502).

Figure 101: Planned Procedure Section (V2) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.30" extension="2014-06-09" />
  <code code="59772-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Planned Procedure" />
  <title>Planned Procedure</title>
  <text>
    ...
  </text>
  <entry>
    <procedure moodCode="RQO" classCode="PROC">
      <templateId root="2.16.840.1.113883.10.20.22.4.41" extension="2014-06-09" />
      <!-- ** Planned Procedure ** -->
      ...
    </procedure>
  </entry>
</section>

```

2.50 Postoperative Diagnosis Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.22.2.35 (open)]

Table 170: Postoperative Diagnosis Section Contexts

Contained By:	Contains:
Operative Note (V3) (required)	

The Postoperative Diagnosis Section records the diagnosis or diagnoses discovered or confirmed during the surgery. Often it is the same as the preoperative diagnosis.

Table 171: Postoperative Diagnosis Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.35)					
templateId	1..1	SHALL		81-8101	
@root	1..1	SHALL		81-10437	2.16.840.1.113883.10.20.22.2.35
code	1..1	SHALL		81-15401	
@code	1..1	SHALL		81-15402	10218-6
@codeSystem	1..1	SHALL		81-26488	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-8103	
text	1..1	SHALL		81-8104	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-8101) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.35" (CONF:81-10437).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15401).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="10218-6" Postoperative Diagnosis (CONF:81-15402).
 - 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:81-26488).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-8103).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-8104).

Figure 102: Postoperative Diagnosis Section Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.35"/>
  <code code="10218-6"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="POSTOPERATIVE DIAGNOSIS"/>
  <title>Postoperative Diagnosis</title>
  <text>Appendicitis with periappendiceal abscess</text>
</section>

```

2.51 Postprocedure Diagnosis Section (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.36:2015-08-01
(open)]

Table 172: Postprocedure Diagnosis Section (V3) Contexts

Contained By:	Contains:
Procedure Note (V3) (required)	Postprocedure Diagnosis (V3)

The Postprocedure Diagnosis Section records the diagnosis or diagnoses discovered or confirmed during the procedure. Often it is the same as the preprocedure diagnosis or indication.

Table 173: Postprocedure Diagnosis Section (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.36:2015-08-01)					
templateId	1..1	SHALL		1198-8167	
@root	1..1	SHALL		1198-10438	2.16.840.1.113883.10.20.22.2.36
@extension	1..1	SHALL		1198-32550	2015-08-01
code	1..1	SHALL		1198-15403	
@code	1..1	SHALL		1198-15404	59769-0
@codeSystem	1..1	SHALL		1198-30862	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-8170	
text	1..1	SHALL		1198-8171	
entry	0..1	SHOULD		1198-8762	
act	1..1	SHALL		1198-15503	Postprocedure Diagnosis (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.51:2015-08-01)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8167) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.36" (CONF:1198-10438).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32550).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15403).

- a. This code **SHALL** contain exactly one [1..1] `@code="59769-0"` Postprocedure Diagnosis (CONF:1198-15404).
- 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:1198-30862).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-8170).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-8171).
5. **SHOULD** contain zero or one [0..1] **entry** (CONF:1198-8762) such that it
 - a. **SHALL** contain exactly one [1..1] [Postprocedure Diagnosis \(V3\)](#) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.51:2015-08-01) (CONF:1198-15503).

Figure 103: Postprocedure Diagnosis Section (V3) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.36" extension="2015-08-01" />
  <code code="59769-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="POSTPROCEDURE DIAGNOSIS" />
  <title>Postprocedure Diagnosis</title>
  <text>
    ...
  </text>
  <entry>
    <act moodCode="EVN" classCode="ACT">
      <templateId root="2.16.840.1.113883.10.20.22.4.51" extension="2014-06-09" />
      <!-- ** Postprocedure Diagnosis ** -->
      ...
    </act>
  </entry>
</section>

```

2.52 Preoperative Diagnosis Section (V3)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.34:2015-08-01 (open)]

Table 174: Preoperative Diagnosis Section (V3) Contexts

Contained By:	Contains:
Operative Note (V3) (required)	Preoperative Diagnosis (V3)

The Preoperative Diagnosis Section records the surgical diagnoses assigned to the patient before the surgical procedure which are the reason for the surgery. The preoperative diagnosis is, in the surgeon's opinion, the diagnosis that will be confirmed during surgery.

Table 175: Preoperative Diagnosis Section (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.34:2015-08-01)					
templateId	1..1	SHALL		1198-8097	
@root	1..1	SHALL		1198-10439	2.16.840.1.113883.10.20.22.2.34
@extension	1..1	SHALL		1198-32551	2015-08-01
code	1..1	SHALL		1198-15405	
@code	1..1	SHALL		1198-15406	10219-4
@codeSystem	1..1	SHALL		1198-30863	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-8099	
text	1..1	SHALL		1198-8100	
entry	0..1	SHOULD		1198-10096	
act	1..1	SHALL		1198-15504	Preoperative Diagnosis (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.65:2015-08-01)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8097) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.34" (CONF:1198-10439).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32551).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15405).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="10219-4" Preoperative Diagnosis (CONF:1198-15406).
 - 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:1198-30863).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-8099).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-8100).
5. **SHOULD** contain zero or one [0..1] **entry** (CONF:1198-10096) such that it
 - a. **SHALL** contain exactly one [1..1] [Preoperative Diagnosis \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.65:2015-08-01) (CONF:1198-15504).

Figure 104: Preoperative Diagnosis Section (V3) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.34" extension="2015-08-01" />
  <code code="10219-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName=" PREOPERATIVE DIAGNOSIS" />
  <title>Preoperative Diagnosis</title>
  <text>Appendicitis</text>
  <entry>
    <act moodCode="EVN" classCode="ACT">
      <templateId root="2.16.840.1.113883.10.20.22.4.65" extension="2015-08-01" />
      <!-- ** Preoperative Diagnosis ** -->
      ...

    </act>
  </entry>
</section>

```

2.53 Problem Section (entries optional) (V3)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.5:2015-08-01
(open)]

Table 176: Problem Section (entries optional) (V3) Contexts

Contained By:	Contains:
Discharge Summary (V3) (optional) History and Physical (V3) (optional) Progress Note (V3) (optional)	Health Status Observation (V2) Problem Concern Act (V3)

This section lists and describes all relevant clinical problems at the time the document is generated. At a minimum, all pertinent current and historical problems should be listed. Overall health status may be represented in this section.

Table 177: Problem Section (entries optional) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.5:2015-08-01)					
templateId	1..1	SHALL		1198-7877	
@root	1..1	SHALL		1198-10440	2.16.840.1.113883.10.20.22.2.5
@extension	1..1	SHALL		1198-32511	2015-08-01
code	1..1	SHALL		1198-15407	
@code	1..1	SHALL		1198-15408	11450-4
@codeSystem	1..1	SHALL		1198-31141	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-7879	
text	1..1	SHALL		1198-7880	
entry	0..*	SHOULD		1198-7881	
act	1..1	SHALL		1198-15505	Problem Concern Act (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01)
entry	0..1	MAY		1198-30481	
observation	1..1	SHALL		1198-30482	Health Status Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7877) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.5" (CONF:1198-10440).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32511).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15407).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="11450-4" Problem List (CONF:1198-15408).
 - 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:1198-31141).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-7879).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7880).
5. **SHOULD** contain zero or more [0..*] **entry** (CONF:1198-7881) such that it

- a. **SHALL** contain exactly one [1..1] [Problem Concern Act \(V3\)](#) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01) (CONF:1198-15505).
- 6. **MAY** contain zero or one [0..1] **entry** (CONF:1198-30481) such that it
 - a. **SHALL** contain exactly one [1..1] [Health Status Observation \(V2\)](#) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09) (CONF:1198-30482).

2.53.1 Problem Section (entries required) (V3)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.5.1:2015-08-01 (open)]

Table 178: Problem Section (entries required) (V3) Contexts

Contained By:	Contains:
Consultation Note (V3) (required) Continuity of Care Document (CCD) (V3) (required) Transfer Summary (V2) (required) Referral Note (V2) (required)	Health Status Observation (V2) Problem Concern Act (V3)

This section lists and describes all relevant clinical problems at the time the document is generated. At a minimum, all pertinent current and historical problems should be listed. Overall health status may be represented in this section.

Table 179: Problem Section (entries required) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.5.1:2015-08-01)					
@nullFlavor	0..1	MAY		1198-32864	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1198-9179	
@root	1..1	SHALL		1198-10441	2.16.840.1.113883.10.20.22.2.5.1
@extension	1..1	SHALL		1198-32510	2015-08-01
code	1..1	SHALL		1198-15409	
@code	1..1	SHALL		1198-15410	11450-4
@codeSystem	1..1	SHALL		1198-31142	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-9181	
text	1..1	SHALL		1198-9182	
entry	1..*	SHALL		1198-9183	
act	1..1	SHALL		1198-15506	Problem Concern Act (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01)
entry	0..1	MAY		1198-30479	
observation	1..1	SHALL		1198-30480	Health Status Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09)

1. Conforms to [Problem Section \(entries optional\) \(V3\) template \(identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.5:2015-08-01\)](#).
2. **MAY** contain zero or one [0..1] **@nullFlavor**="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1198-32864).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-9179) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.5.1" (CONF:1198-10441).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32510).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15409).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="11450-4" Problem List (CONF:1198-15410).

- 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:1198-31142).
 - 5. **SHALL** contain exactly one [1..1] **title** (CONF:1198-9181).
 - 6. **SHALL** contain exactly one [1..1] **text** (CONF:1198-9182).
- If section/@nullFlavor is not present:
- 7. **SHALL** contain at least one [1..*] **entry** (CONF:1198-9183) such that it
 - a. **SHALL** contain exactly one [1..1] Problem Concern Act (V3) (identifier:
urn:h17ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01) (CONF:1198-15506).
 - 8. **MAY** contain zero or one [0..1] **entry** (CONF:1198-30479) such that it
 - a. **SHALL** contain exactly one [1..1] Health Status Observation (V2)
(identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09)
(CONF:1198-30480).

Figure 105: Problem Section (entries required) (V3) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.5.1"
    extension="2015-08-01" />
  <code code="11450-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    displayName="PROBLEM LIST" />
  <title>PROBLEMS</title>
  <text>
    <list listType="ordered">
      <item>Pneumonia: Resolved in March 1998</item>
      <item>...</item>
    </list>
  </text>
  <entry typeCode="DRIV">
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.3" extension="2014-06-09" />
      <!-- Problem Concern Act template -->
      ...
    </act>
  </entry>
</section>

```

Figure 106: No Known Problems Section Example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.5"
    extension="2014-06-09" />
  <!-- Problem Section with Coded Entries Optional -->
  <templateId root="2.16.840.1.113883.10.20.22.2.5.1"/>
  <!-- Problem Section with Coded Entries Required -->
  <code code="11450-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Problem List"/>
  <title>PROBLEMS</title>
  <text ID="Concern_1">
    Problem Concern:

    <br/>
    Concern Tracker Start Date: 06/07/2013 16:05:06

    <br/>
    Concern Tracker End Date:

    <br/>
    Concern Status: Active

    <br/>
    <content ID="problems1">No known

      <content ID="problemType1">problems.</content>
    </content>
  </text>
  <entry typeCode="DRIV">
    <!-- Problem Concern Act -->
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.3"/>
      <id root="36e3e930-7b14-11db-9fe1-0800200c9a66"/>
      <!-- SDWG supports 48765-2 or CONC in the code element -->
      <code code="CONC" codeSystem="2.16.840.1.113883.5.6"/>
      <text>
        <reference value="#Concern_1"></reference>
      </text>
      <statusCode code="active"/>
      <!-- The concern is not active, in terms of there being an active condition to
be managed.-->
      <effectiveTime>
        <low value="20130607160506"/>
        <!-- Time at which THIS "concern" began being tracked.-->
      </effectiveTime>
      <!-- status is active so high is not applicable. If high is present it should
have nullFlavor of NA-->
      <!-- Optional Author Element-->
      <author>
        <time value="20130607160506"/>
        <assignedAuthor>
          <id extension="66666" root="2.16.840.1.113883.4.6"/>
          <code code="207RC0000X" codeSystem="2.16.840.1.113883.6.101"
codeSystemName="NUCC"
          displayName="Cardiovascular Disease"/>
          <addr>
```

```

        <streetAddressLine>6666 StreetName St.</streetAddressLine>
        <city>Silver Spring</city>
        <state>MD</state>
        <postalCode>20901</postalCode>
        <country>US</country>
    </addr>
    <telecom value="tel:+1(301)666-6666" use="WP"/>
    <assignedPerson>
        <name>
            <given>Heartly</given>
            <family>Sixer</family>
            <suffix>MD</suffix>
        </name>
    </assignedPerson>
</assignedAuthor>
</author>
<entryRelationship typeCode="SUBJ">
    <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"/>
        <id root="4adc1021-7b14-11db-9fe1-0800200c9a67"/>
        <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
        <text>
            <reference value="#problems1"></reference>
        </text>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="20130607160506"/>
        </effectiveTime>
        <!-- The time when this was biologically relevant ie 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"></reference>
            </originalText>
        </value>
    </observation>
</entryRelationship>
</act>

```

```
</entry>
</section>
```

2.54 Procedure Description Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.22.2.27 (open)]

Table 180: Procedure Description Section Contexts

Contained By:	Contains:
Procedure Note (V3) (required) Operative Note (V3) (required)	

The Procedure Description section records the particulars of the procedure and may include procedure site preparation, surgical site preparation, pertinent details related to sedation/anesthesia, pertinent details related to measurements and markings, procedure times, medications administered, estimated blood loss, specimens removed, implants, instrumentation, sponge counts, tissue manipulation, wound closure, sutures used, vital signs and other monitoring data. Local practice often identifies the level and type of detail required based on the procedure or specialty.

Table 181: Procedure Description Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.27)					
templateId	1..1	SHALL		81-8062	
@root	1..1	SHALL		81-10442	2.16.840.1.113883.10.20.22.2.27
code	1..1	SHALL		81-15411	
@code	1..1	SHALL		81-15412	29554-3
@codeSystem	1..1	SHALL		81-26489	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-8064	
text	1..1	SHALL		81-8065	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-8062) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.27" (CONF:81-10442).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15411).

- a. This code **SHALL** contain exactly one [1..1] `@code="29554-3"` Procedure Description (CONF:81-15412).
- 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:81-26489).
- 3. **SHALL** contain exactly one [1..1] `title` (CONF:81-8064).
- 4. **SHALL** contain exactly one [1..1] `text` (CONF:81-8065).

Figure 107: Procedure Description Section Example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.27"/>
  <code code="29554-3"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="PROCEDURE DESCRIPTION"/>
  <title>Procedure Description</title>
  <text>The patient was taken to the endoscopy suite where ... </text>
</section>
```

2.55 Procedure Disposition Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.18.2.12 (open)]

Table 182: Procedure Disposition Section Contexts

Contained By:	Contains:
Procedure Note (V3) (optional) Operative Note (V3) (optional)	

The Procedure Disposition Section records the status and condition of the patient at the completion of the procedure or surgery. It often also states where the patient was transferred to for the next level of care.

Table 183: Procedure Disposition Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.18.2.12)					
templateId	1..1	SHALL		81-8070	
@root	1..1	SHALL	UID	81-10466	2.16.840.1.113883.10.20.18.2.12
code	1..1	SHALL		81-15413	
@code	1..1	SHALL		81-15414	59775-7
@codeSystem	1..1	SHALL		81-26490	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-8072	
text	1..1	SHALL		81-8073	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-8070) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.18.2.12" (CONF:81-10466).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15413).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="59775-7" Procedure Disposition (CONF:81-15414).
 - 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:81-26490).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-8072).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-8073).

Figure 108: Procedure Disposition Section Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.18.2.12"/>
  <code code="59775-7" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="PROCEDURE DISPOSITION"/>
  <title>PROCEDURE DISPOSITION</title>
  <text>The patient was taken to the Endoscopy Recovery Unit in stable
    condition.</text>
</section>

```

2.56 Procedure Estimated Blood Loss Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.18.2.9 (open)]

Table 184: Procedure Estimated Blood Loss Section Contexts

Contained By:	Contains:
Procedure Note (V3) (optional) Operative Note (V3) (required)	

The Procedure Estimated Blood Loss Section may be a subsection of another section such as the Procedure Description Section. The Procedure Estimated Blood Loss Section records the approximate amount of blood that the patient lost during the procedure or surgery. It may be an accurate quantitative amount, e.g., 250 milliliters, or it may be descriptive, e.g., “minimal” or “none”.

Table 185: Procedure Estimated Blood Loss Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.18.2.9)					
templateId	1..1	SHALL		81-8074	
@root	1..1	SHALL	UID	81-10467	2.16.840.1.113883.10.20.18.2.9
code	1..1	SHALL		81-15415	
@code	1..1	SHALL		81-15416	59770-8
@codeSystem	1..1	SHALL		81-26491	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-8076	
text	1..1	SHALL		81-8077	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-8074) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.18.2.9" (CONF:81-10467).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15415).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="59770-8" Procedure Estimated Blood Loss (CONF:81-15416).
 - 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:81-26491).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-8076).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-8077).

- The Estimated Blood Loss section **SHALL** include a statement providing an estimate of the amount of blood lost during the procedure, even if the estimate is text, such as "minimal" or "none" (CONF:81-8741).

Figure 109: Procedure Estimated Blood Loss Section Example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.18.2.9"/>
  <code code="59770-8" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="PROCEDURE ESTIMATED BLOOD LOSS"/>
  <title>Procedure Estimated Blood Loss</title>
  <text>Minimal</text>
</section>
```

2.57 Procedure Findings Section (V3)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.28:2015-08-01
(open)]

Table 186: Procedure Findings Section (V3) Contexts

Contained By:	Contains:
Procedure Note (V3) (optional) Operative Note (V3) (required)	Problem Observation (V3)

The Procedure Findings Section records clinically significant observations confirmed or discovered during a procedure or surgery.

Table 187: Procedure Findings Section (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.28:2015-08-01)					
templateId	1..1	SHALL		1198-8078	
@root	1..1	SHALL		1198-10443	2.16.840.1.113883.10.20.22.2.28
@extension	1..1	SHALL		1198-32537	2015-08-01
code	1..1	SHALL		1198-15417	
@code	1..1	SHALL		1198-15418	59776-5
@codeSystem	1..1	SHALL		1198-30859	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-8080	
text	1..1	SHALL		1198-8081	
entry	0..*	MAY		1198-8090	
observation	1..1	SHALL		1198-15507	Problem Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8078) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.28" (CONF:1198-10443).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32537).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15417).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="59776-5" Procedure Findings (CONF:1198-15418).
 - 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:1198-30859).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-8080).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-8081).
5. **MAY** contain zero or more [0..*] **entry** (CONF:1198-8090) such that it
 - a. **SHALL** contain exactly one [1..1] [Problem Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) (CONF:1198-15507).

Figure 110: Procedure Findings Section (V3) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.28" extension="2015-08-01" />
  <code code="59776-5" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="PROCEDURE FINDINGS" />
  <title>Procedure Findings</title>
  <text>A 6 mm sessile polyp was found in the ascending colon and removed by snare, no
cautery. Bleeding was controlled. Moderate diverticulosis and hemorrhoids were
incidentally noted.</text>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
      <!-- Problem Observation -->
      ...

    </observation>
  </entry>
</section>

```

2.58 Procedure Implants Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.22.2.40 (open)]

Table 188: Procedure Implants Section Contexts

Contained By:	Contains:
Procedure Note (V3) (optional)	
Operative Note (V3) (optional)	

The Procedure Implants Section records any materials placed during the procedure including stents, tubes, and drains.

Table 189: Procedure Implants Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.40)					
templateId	1..1	SHALL		81-8178	
@root	1..1	SHALL		81-10444	2.16.840.1.113883.10.20.22.2.40
code	1..1	SHALL		81-15373	
@code	1..1	SHALL		81-15374	59771-6
@codeSystem	1..1	SHALL		81-26492	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-8180	
text	1..1	SHALL		81-8181	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-8178) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.40" (CONF:81-10444).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15373).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="59771-6" Procedure Implants (CONF:81-15374).
 - 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:81-26492).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-8180).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-8181).
5. The Procedure Implants section **SHALL** include a statement providing details of the implants placed, or assert no implants were placed (CONF:81-8769).

Figure 111: Procedure Implants Section Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.40"/>
  <code code="59771-6" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="PROCEDURE IMPLANTS"/>
  <title>Procedure Implants</title>
  <text>No implants were placed.</text>
</section>

```

2.59 Procedure Indications Section (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.29:2014-06-09 (open)]

Table 190: Procedure Indications Section (V2) Contexts

Contained By:	Contains:
Procedure Note (V3) (required) Operative Note (V3) (optional)	Indication (V2)

This section contains the reason(s) for the procedure or surgery. This section may include the preprocedure diagnoses as well as symptoms contributing to the reason for the procedure.

Table 191: Procedure Indications Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.29:2014-06-09)					
templateId	1..1	SHALL		1098-8058	
@root	1..1	SHALL		1098-10445	2.16.840.1.113883.10.20.22.2.29
@extension	1..1	SHALL		1098-32572	2014-06-09
code	1..1	SHALL		1098-15419	
@code	1..1	SHALL		1098-15420	59768-2
@codeSystem	1..1	SHALL		1098-30827	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-8060	
text	1..1	SHALL		1098-8061	
entry	0..*	MAY		1098-8743	
observation	1..1	SHALL		1098-15508	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-8058) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.29" (CONF:1098-10445).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32572).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15419).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="59768-2" Procedure Indications (CONF:1098-15420).

- 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:1098-30827).
- 3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-8060).
- 4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-8061).
- 5. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8743) such that it
 - a. **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:1098-15508).

Figure 112: Procedure Indications Section (V2) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.29" extension="2014-06-09" />
  <code code="59768-2" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="PROCEDURE INDICATIONS" />
  <title>Procedure Indications</title>
  <text>The procedure is performed for screening in a low risk individual.
</text>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <!-- Indication Entry -->
      <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09" />
      ...
    </observation>
  </entry>
</section>

```

2.60 Procedure Specimens Taken Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.22.2.31 (open)]

Table 192: Procedure Specimens Taken Section Contexts

Contained By:	Contains:
Procedure Note (V3) (optional)	
Operative Note (V3) (required)	

The Procedure Specimens Taken Section records the tissues, objects, or samples taken from the patient during the procedure including biopsies, aspiration fluid, or other samples sent for pathological analysis. The narrative may include a description of the specimens.

Table 193: Procedure Specimens Taken Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.31)					
templateId	1..1	SHALL		81-8086	
@root	1..1	SHALL		81-10446	2.16.840.1.113883.10.20.22.2.31
code	1..1	SHALL		81-15421	
@code	1..1	SHALL		81-15422	59773-2
@codeSystem	1..1	SHALL		81-26493	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-8088	
text	1..1	SHALL		81-8089	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-8086) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.31" (CONF:81-10446).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15421).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="59773-2" Procedure Specimens Taken (CONF:81-15422).
 - 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:81-26493).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-8088).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-8089).
5. The Procedure Specimens Taken section **SHALL** list all specimens removed or **SHALL** explicitly state that no specimens were taken (CONF:81-8742).

Figure 113: Procedure Specimens Taken Section Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.31"/>
  <code code="59773-2"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="PROCEDURE SPECIMENS TAKEN"/>
  <title>Procedure Specimens Taken</title>
  <text>Ascending colon polyp</text>
</section>

```

2.61 Procedures Section (entries optional) (V2)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.7:2014-06-09
(open)]

Table 194: Procedures Section (entries optional) (V2) Contexts

Contained By:	Contains:
Consultation Note (V3) (optional) Discharge Summary (V3) (optional) History and Physical (V3) (optional) Referral Note (V2) (optional) Procedure Note (V3) (optional)	Procedure Activity Act (V2) Procedure Activity Observation (V2) Procedure Activity Procedure (V2)

This section describes all interventional, surgical, diagnostic, or therapeutic procedures or treatments pertinent to the patient historically at the time the document is generated. The section should include notable procedures, but can contain all procedures for the period of time being summarized. The common notion of "procedure" is broader than that specified by the HL7 Version 3 Reference Information Model (RIM), therefore this section contains procedure templates represented with three RIM classes: Act, Observation, and Procedure. Procedure Activity Procedure (V2) is for procedures that alter the physical condition of a patient (e.g., splenectomy). Procedure Activity Observation (V2) is for procedures that result in new information about a patient but do not cause physical alteration (e.g., EEG). Procedure Activity Act (V2) is for all other types of procedures (e.g., dressing change).

Table 195: Procedures Section (entries optional) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.7:2014-06-09)					
templateId	1..1	SHALL		1098-6270	
@root	1..1	SHALL		1098-6271	2.16.840.1.113883.10.20.22.2.7
@extension	1..1	SHALL		1098-32532	2014-06-09
code	1..1	SHALL		1098-15423	
@code	1..1	SHALL		1098-15424	47519-4
@codeSystem	1..1	SHALL		1098-31139	urn:oid:2.16.840.1.113883.6.1 (LOINC)
title	1..1	SHALL		1098-17184	
text	1..1	SHALL		1098-6273	
entry	0..*	MAY		1098-6274	
procedure	1..1	SHALL		1098-15509	Procedure Activity Procedure (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09)
entry	0..*	MAY		1098-6278	
observation	1..1	SHALL		1098-15510	Procedure Activity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09)
entry	0..*	MAY		1098-8533	
act	1..1	SHALL		1098-15511	Procedure Activity Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.12:2014-06-09)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-6270) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.7" (CONF:1098-6271).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32532).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15423).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="47519-4" History of Procedures (CONF:1098-15424).

- b. This code **SHALL** contain exactly one [1..1] **@codeSystem** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1098-31139).
- 3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-17184).
- 4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-6273).
- 5. **MAY** contain zero or more [0..*] **entry** (CONF:1098-6274) such that it
 - a. **SHALL** contain exactly one [1..1] [Procedure Activity Procedure \(V2\)](#) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09) (CONF:1098-15509).
- 6. **MAY** contain zero or more [0..*] **entry** (CONF:1098-6278) such that it
 - a. **SHALL** contain exactly one [1..1] [Procedure Activity Observation \(V2\)](#) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09) (CONF:1098-15510).
- 7. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8533) such that it
 - a. **SHALL** contain exactly one [1..1] [Procedure Activity Act \(V2\)](#) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.12:2014-06-09) (CONF:1098-15511).

2.61.1 Procedures Section (entries required) (V2)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.7.1:2014-06-09 (open)]

Table 196: Procedures Section (entries required) (V2) Contexts

Contained By:	Contains:
Continuity of Care Document (CCD) (V3) (optional) Transfer Summary (V2) (optional)	Procedure Activity Act (V2) Procedure Activity Observation (V2) Procedure Activity Procedure (V2)

This section describes all interventional, surgical, diagnostic, or therapeutic procedures or treatments pertinent to the patient historically at the time the document is generated. The section should include notable procedures, but can contain all procedures for the period of time being summarized. The common notion of "procedure" is broader than that specified by the HL7 Version 3 Reference Information Model (RIM), therefore this section contains procedure templates represented with three RIM classes: Act, Observation, and Procedure. Procedure act is for procedures that alter the physical condition of a patient (e.g., splenectomy). Observation act is for procedures that result in new information about a patient but do not cause physical alteration (e.g., EEG). Act is for all other types of procedures (e.g., dressing change).

Table 197: Procedures Section (entries required) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.7.1:2014-06-09)					
@nullFlavor	0..1	MAY		1098-32876	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1098-7891	
@root	1..1	SHALL		1098-10447	2.16.840.1.113883.10.20.22.2.7.1
@extension	1..1	SHALL		1098-32533	2014-06-09
code	1..1	SHALL		1098-15425	
@code	1..1	SHALL		1098-15426	47519-4
@codeSystem	1..1	SHALL		1098-31138	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-7893	
text	1..1	SHALL		1098-7894	
entry	1..*	SHALL		1098-7895	
act	0..1	MAY		1098-32877	Procedure Activity Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.12:2014-06-09)
observation	0..1	MAY		1098-32878	Procedure Activity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09)
procedure	0..1	MAY		1098-15512	Procedure Activity Procedure (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09)

1. Conforms to [Procedures Section \(entries optional\) \(V2\) template \(identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.7:2014-06-09\)](#).
2. **MAY** contain zero or one [0..1] **@nullFlavor**="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1098-32876).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7891) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.7.1" (CONF:1098-10447).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32533).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15425).

- a. This code **SHALL** contain exactly one [1..1] `@code="47519-4"` History of Procedures (CONF:1098-15426).
 - 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:1098-31138).
5. **SHALL** contain exactly one [1..1] `title` (CONF:1098-7893).
6. **SHALL** contain exactly one [1..1] `text` (CONF:1098-7894).

If section/`@nullFlavor` is not present there **SHALL** be at least one entry conformant to Procedure Activity Act (V2) (templateId 2.16.840.1.113883.10.20.22.4.12:2014-06-09) **OR** Procedure Activity Observation (V2) (templateId: 2.16.840.1.113883.10.20.22.4.13:2014-06-09) **OR** Procedure Activity Procedure (V2) (templateId: 2.16.840.1.113883.10.20.22.4.14:2014-06-09)

7. **SHALL** contain at least one [1..*] `entry` (CONF:1098-7895) such that it
- a. **MAY** contain zero or one [0..1] Procedure Activity Act (V2) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.12:2014-06-09) (CONF:1098-32877).
 - b. **MAY** contain zero or one [0..1] Procedure Activity Observation (V2) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09) (CONF:1098-32878).
 - c. **MAY** contain zero or one [0..1] Procedure Activity Procedure (V2) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09) (CONF:1098-15512).

Figure 114: Procedures Section (entries required) (V2) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.7" extension="2014-06-09" />
  <!-- Procedures section template -->
  <code code="47519-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="PROCEDURES" />
  <title>Procedures</title>
  <text>
    ...
  </text>
  <entry typeCode="DRIV">
    <procedure classCode="PROC" moodCode="EVN">
      <!-- Procedure Activity Procedure template -->
      <templateId root="2.16.840.1.113883.10.20.22.4.14" extension="2014-06-09" />
      ...
    </procedure>
  </entry>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.13" extension="2014-06-09" />
    <!-- Procedure Activity Observation template -->
    ...
  </observation>
  <entry>
    <act classCode="ACT" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.12" extension="2014-06-09" />
      <!-- Procedure Activity Act template -->
      ...
    </act>
  </entry>
</section>

```

2.62 Reason for Referral Section (V2)

[section: identifier urn:hl7ii:1.3.6.1.4.1.19376.1.5.3.1.3.1:2014-06-09
(open)]

Table 198: Reason for Referral Section (V2) Contexts

Contained By:	Contains:
Transfer Summary (V2) (required) Referral Note (V2) (required)	Patient Referral Act

This section describes the clinical reason why a provider is sending a patient to another provider for care. The reason for referral may become the reason for visit documented by the receiving provider.

Table 199: Reason for Referral Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:1.3.6.1.4.1.19376.1.5.3.1.3.1:2014-06-09)					
templateId	1..1	SHALL		1098-7844	
@root	1..1	SHALL	UID	1098-10468	1.3.6.1.4.1.19376.1.5.3.1.3.1
@extension	1..1	SHALL		1098-32571	2014-06-09
code	1..1	SHALL		1098-15427	
@code	1..1	SHALL		1098-15428	42349-1
@codeSystem	1..1	SHALL		1098-30867	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-7846	
text	1..1	SHALL		1098-7847	
entry	0..*	MAY		1098-30808	
observation	1..1	SHALL		1098-30897	Patient Referral Act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.140)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7844) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="1.3.6.1.4.1.19376.1.5.3.1.3.1" (CONF:1098-10468).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32571).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15427).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="42349-1" Reason for Referral (CONF:1098-15428).
 - 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:1098-30867).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-7846).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-7847).
5. **MAY** contain zero or more [0..*] **entry** (CONF:1098-30808) such that it
 - a. **SHALL** contain exactly one [1..1] [Patient Referral Act](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.140) (CONF:1098-30897).

Figure 115: Reason for Referral Section (V2) Example

```

<component>
  <section>
    <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.1" extension="2014-06-09" />
    <code code="42349-1" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    displayName="Reason for Referral " />
    <title>REASON FOR REFERRAL</title>
    <text>Request for Patient referral for consultation.</text>
    <entry>
      <observation classCode="OBS" moodCode="INT">
        <!-- Patient Referral Activity Observation -->
        <templateId root="2.16.840.1.113883.10.20.22.4.140" />
        ...
      </observation>
    </entry>
  </section>
</component>

```

2.63 Reason for Visit Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.22.2.12 (open)]

Table 200: Reason for Visit Section Contexts

Contained By:	Contains:
Consultation Note (V3) (optional) Discharge Summary (V3) (optional) History and Physical (V3) (optional) Procedure Note (V3) (optional)	

This section records the patient’s reason for the patient's visit (as documented by the provider). Local policy determines whether Reason for Visit and Chief Complaint are in separate or combined sections.

Table 201: Reason for Visit Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.12)					
templateId	1..1	SHALL		81-7836	
@root	1..1	SHALL		81-10448	2.16.840.1.113883.10.20.22.2.12
code	1..1	SHALL		81-15429	
@code	1..1	SHALL		81-15430	29299-5
@codeSystem	1..1	SHALL		81-26494	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-7838	
text	1..1	SHALL		81-7839	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7836) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.12" (CONF:81-10448).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15429).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="29299-5" Reason for Visit (CONF:81-15430).
 - 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:81-26494).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-7838).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-7839).

Figure 116: Reason for Visit Section Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.12"/>
  <code code="29299-5"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="REASON FOR VISIT"/>
  <title>REASON FOR VISIT</title>
  <text>
    <paragraph>Dark stools.</paragraph>
  </text>
</section>

```

2.64 Results Section (entries optional) (V3)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.3:2015-08-01
(open)]

Table 202: Results Section (entries optional) (V3) Contexts

Contained By:	Contains:
History and Physical (V3) (required) Progress Note (V3) (optional)	Result Organizer (V3)

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 203: Results Section (entries optional) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2015-08-01)					
templateId	1..1	SHALL		1198-7116	
@root	1..1	SHALL		1198-9136	2.16.840.1.113883.10.20.22.2.3
@extension	1..1	SHALL		1198-32591	2015-08-01
code	1..1	SHALL		1198-15431	
@code	1..1	SHALL		1198-15432	30954-2
@codeSystem	1..1	SHALL		1198-31041	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-8891	
text	1..1	SHALL		1198-7118	
entry	0..*	SHOULD		1198-7119	
organizer	1..1	SHALL		1198-15515	Result Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2015-08-01)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7116) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.3" (CONF:1198-9136).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32591).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15431).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="30954-2" Relevant diagnostic tests and/or laboratory data (CONF:1198-15432).
 - 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:1198-31041).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-8891).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7118).
5. **SHOULD** contain zero or more [0..*] **entry** (CONF:1198-7119) such that it
 - a. **SHALL** contain exactly one [1..1] [Result Organizer \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2015-08-01) (CONF:1198-15515).

2.64.1 Results Section (entries required) (V3)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.3.1:2015-08-01
(open)]

Table 204: Results Section (entries required) (V3) Contexts

Contained By:	Contains:
Consultation Note (V3) (optional) Continuity of Care Document (CCD) (V3) (required) Transfer Summary (V2) (required) Referral Note (V2) (optional)	Result Organizer (V3)

The Results Section contains observations of results generated by laboratories, imaging procedures, and other procedures. These coded result observations are contained within a Results Organizer in the Results Section. The scope includes observations such as hematology, chemistry, serology, virology, toxicology, microbiology, plain x-ray, ultrasound, CT, MRI, angiography, echocardiography, nuclear medicine, pathology, and procedure observations. The section often includes notable results such as abnormal values or relevant trends, and could 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 205: Results Section (entries required) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2015-08-01)					
@nullFlavor	0..1	MAY		1198-32875	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1198-7108	
@root	1..1	SHALL		1198-9137	2.16.840.1.113883.10.20.22.2.3.1
@extension	1..1	SHALL		1198-32592	2015-08-01
code	1..1	SHALL		1198-15433	
@code	1..1	SHALL		1198-15434	30954-2
@codeSystem	1..1	SHALL		1198-31040	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-8892	
text	1..1	SHALL		1198-7111	
entry	1..*	SHALL		1198-7112	
organizer	1..1	SHALL		1198-15516	Result Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2015-08-01)

1. Conforms to [Results Section \(entries optional\) \(V3\) template](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2015-08-01).
2. **MAY** contain zero or one [0..1] **@nullFlavor**="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1198-32875).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7108) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.3.1" (CONF:1198-9137).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32592).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15433).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="30954-2" Relevant diagnostic tests and/or laboratory data (CONF:1198-15434).
 - 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:1198-31040).
5. **SHALL** contain exactly one [1..1] **title** (CONF:1198-8892).
6. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7111).

If section/@nullFlavor is not present:

7. **SHALL** contain at least one [1..*] **entry** (CONF:1198-7112) such that it
 - a. **SHALL** contain exactly one [1..1] **Result Organizer (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2015-08-01) (CONF:1198-15516).

Figure 117: Results Section (entries required) (V3) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.3.1" extension="2015-08-01" />
  <code code="30954-2" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="RELEVANT DIAGNOSTIC TESTS AND/OR LABORATORY DATA" />
  <title>Results</title>
  <text />
  <entry typeCode="DRIV">
    <organizer classCode="BATTERY" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.1" extension="2014-06-09" />
      ...

      <organizer>
        <component>
          <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.2" extension="2014-
06-09" />
            . . .

          </observation>
        </component>
      </organizer>
    </organizer>
  </entry>
</section>

```

2.65 Review of Systems Section

[section: identifier urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.18 (open)]

Table 206: Review of Systems Section Contexts

Contained By:	Contains:
Consultation Note (V3) (optional) Discharge Summary (V3) (optional) History and Physical (V3) (required) Transfer Summary (V2) (optional) Referral Note (V2) (optional) Progress Note (V3) (optional) Procedure Note (V3) (optional)	

The Review of Systems Section contains a relevant collection of symptoms and functions systematically gathered by a clinician. It includes symptoms the patient is currently experiencing, some of which were not elicited during the history of present illness, as well as a potentially large number of pertinent negatives, for example, symptoms that the patient denied experiencing.

Table 207: Review of Systems Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.18)					
templateId	1..1	SHALL		81-7812	
@root	1..1	SHALL	UID	81-10469	1.3.6.1.4.1.19376.1.5.3.1.3.18
code	1..1	SHALL		81-15435	
@code	1..1	SHALL		81-15436	10187-3
@codeSystem	1..1	SHALL		81-26495	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-7814	
text	1..1	SHALL		81-7815	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7812) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="1.3.6.1.4.1.19376.1.5.3.1.3.18" (CONF:81-10469).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15435).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="10187-3" Review of Systems (CONF:81-15436).
 - 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:81-26495).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-7814).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-7815).

Figure 118: Review of Systems Section Example

```

<section>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.18"/>
  <code code="10187-3" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="REVIEW OF SYSTEMS"/>
  <title>REVIEW OF SYSTEMS</title>
  <text>
    <paragraph>
      Patient denies recent history of fever or malaise. Positive
      For weakness and shortness of breath. One episode of melena. No recent
      headaches. Positive for osteoarthritis in hips, knees and hands.
    </paragraph>
  </text>
</section>

```

2.66 Social History Section (V3)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01
(open)]

Table 208: Social History Section (V3) Contexts

Contained By:	Contains:
Consultation Note (V3) (optional)	Caregiver Characteristics
Continuity of Care Document (CCD) (V3) (required)	Characteristics of Home Environment
Discharge Summary (V3) (optional)	Cultural and Religious Observation
History and Physical (V3) (required)	Pregnancy Observation
Transfer Summary (V2) (optional)	Smoking Status - Meaningful Use (V2)
Referral Note (V2) (optional)	Social History Observation (V3)
Procedure Note (V3) (optional)	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 209: Social History Section (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01)					
templateId	1..1	SHALL		1198-7936	
@root	1..1	SHALL		1198-10449	2.16.840.1.113883.10.20.22.2.17
@extension	1..1	SHALL		1198-32494	2015-08-01
code	1..1	SHALL		1198-14819	
@code	1..1	SHALL		1198-14820	29762-2
@codeSystem	1..1	SHALL		1198-30814	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-7938	
text	1..1	SHALL		1198-7939	
entry	0..*	MAY		1198-7953	
observation	1..1	SHALL		1198-14821	Social History Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2015-08-01)
entry	0..*	MAY		1198-9132	
observation	1..1	SHALL		1198-14822	Pregnancy Observation (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.8)
entry	0..*	SHOULD		1198-14823	
observation	1..1	SHALL		1198-14824	Smoking Status - Meaningful Use (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09)
entry	0..*	MAY		1198-16816	
observation	1..1	SHALL		1198-16817	Tobacco Use (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09)
entry	0..*	MAY		1198-28361	
observation	1..1	SHALL		1198-28362	Caregiver Characteristics (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.72)

entry	0..*	MAY		1198-28366	
observation	1..1	SHALL		1198-28367	Cultural and Religious Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.111)
entry	0..*	MAY		1198-28825	
observation	1..1	SHALL		1198-28826	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:1198-7936) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.17" (CONF:1198-10449).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32494).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-14819).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="29762-2" Social History (CONF:1198-14820).
 - 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:1198-30814).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-7938).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7939).
5. **MAY** contain zero or more [0..*] **entry** (CONF:1198-7953) such that it
 - a. **SHALL** contain exactly one [1..1] [Social History Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2015-08-01) (CONF:1198-14821).
6. **MAY** contain zero or more [0..*] **entry** (CONF:1198-9132) 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:1198-14822).
7. **SHOULD** contain zero or more [0..*] **entry** (CONF:1198-14823) 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:1198-14824).
8. **MAY** contain zero or more [0..*] **entry** (CONF:1198-16816) 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:1198-16817).
9. **MAY** contain zero or more [0..*] **entry** (CONF:1198-28361) 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:1198-28362).
10. **MAY** contain zero or more [0..*] **entry** (CONF:1198-28366) such that it

- a. **SHALL** contain exactly one [1..1] Cultural and Religious Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.111) (CONF:1198-28367).
11. **MAY** contain zero or more [0..*] **entry** (CONF:1198-28825) such that it
- a. **SHALL** contain exactly one [1..1] Characteristics of Home Environment (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.109) (CONF:1198-28826).

Figure 119: Social History Section (V3) Example

```
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.22.2.17" extension="2015-08-01" />
    <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="2015-08-01"
/>
      ...

      </observation>
    </entry>
    <entry>
      <observation classCode="OBS" moodCode="EVN">
        <!-- ** Current smoking status observation ** -->
        <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 Observations(NEW)**-->
        <templateId root="2.16.840.1.113883.10.20.22.4.111" />
      ...

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

```

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

```

2.67 Subjective Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.21.2.2 (open)]

Table 210: Subjective Section Contexts

Contained By:	Contains:
Progress Note (V3) (optional)	

The Subjective Section describes in a narrative format the patient’s current condition and/or interval changes as reported by the patient or by the patient’s guardian or another informant.

Table 211: Subjective Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.21.2.2)					
templateId	1..1	SHALL		81-7873	
@root	1..1	SHALL	UID	81-10470	2.16.840.1.113883.10.20.21.2.2
code	1..1	SHALL		81-15437	
@code	1..1	SHALL		81-15438	61150-9
@codeSystem	1..1	SHALL		81-26496	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-7875	
text	1..1	SHALL		81-7876	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7873) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.21.2.2" (CONF:81-10470).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15437).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="61150-9" Subjective (CONF:81-15438).

- 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:81-26496).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-7875).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-7876).

Figure 120: Subjective Section Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.21.2.2"/>
  <code code="61150-9" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="SUBJECTIVE"/>
  <title>SUBJECTIVE DATA</title>
  <text>
    <paragraph>
      I have used the peripheral nerve stimulator in my back for five days.
      While using it I found that I was able to do physical activity
      without pain. However, afterwards for one day, I would feel pain but
      then it would go away. I also noticed that I didn't have to take the
      Vicodin as much. I took 2 less Vicodin per day and 2 less tramadol
      everyday. I have not lain in my bed in a year and a half. I sleep in
      a recliner.
    </paragraph>
  </text>
</section>

```

2.68 Surgery Description Section (DEPRECATED)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.26:2014-06-09
(open)]

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: This template has been replaced by the Procedure Description Section (2.16.840.1.113883.10.20.22.2.27).

Table 212: Surgery Description Section (DEPRECATED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.26:2014-06-09)					
templateId	1..1	SHALL		1098-8022	
@root	1..1	SHALL		1098-10450	2.16.840.1.113883.10.20.22.2.26
@extension	1..1	SHALL		1098-32893	2014-06-09
code	1..1	SHALL		1098-15439	
@code	1..1	SHALL		1098-15440	29554-3
@codeSystem	1..1	SHALL		1098-26497	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-8024	
text	1..1	SHALL		1098-8025	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-8022) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.26" (CONF:1098-10450).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32893).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15439).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="29554-3" Surgery Description (CONF:1098-15440).
 - 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:1098-26497).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-8024).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-8025).

2.69 Surgical Drains Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.7.13 (open)]

Table 213: Surgical Drains Section Contexts

Contained By:	Contains:
Operative Note (V3) (optional)	

The Surgical Drains Section may be used to record drains placed during the surgical procedure. Optionally, surgical drain placement may be represented with a text element in the Procedure Description Section.

Table 214: Surgical Drains Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.7.13)					
templateId	1..1	SHALL		81-8038	
@root	1..1	SHALL	UID	81-10473	2.16.840.1.113883.10.20.7.13
code	1..1	SHALL		81-15441	
@code	1..1	SHALL		81-15442	11537-8
@codeSystem	1..1	SHALL		81-26498	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-8040	
text	1..1	SHALL		81-8041	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-8038) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.7.13" (CONF:81-10473).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15441).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="11537-8" Surgical Drains (CONF:81-15442).
 - 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:81-26498).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-8040).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-8041).
5. If the Surgical Drains section is present, there **SHALL** be a statement providing details of the drains placed or **SHALL** explicitly state there were no drains placed (CONF:81-8056).

Figure 121: Surgical Drains Section Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.7.13"/>
  <code code="11537-8"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="SURGICAL DRAINS"/>
  <title>Surgical Drains</title>
  <text>Penrose drain placed</text>
</section>

```

2.70 Vital Signs Section (entries optional) (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.4:2015-08-01
(open)]

Table 215: Vital Signs Section (entries optional) (V3) Contexts

Contained By:	Contains:
Discharge Summary (V3) (optional) History and Physical (V3) (required) Progress Note (V3) (optional)	Vital Signs Organizer (V3)

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 216: Vital Signs Section (entries optional) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4:2015-08-01)					
templateId	1..1	SHALL		1198-7268	
@root	1..1	SHALL		1198-10451	2.16.840.1.113883.10.20.22.2.4
@extension	1..1	SHALL		1198-32584	2015-08-01
code	1..1	SHALL		1198-15242	
@code	1..1	SHALL		1198-15243	8716-3
@codeSystem	1..1	SHALL		1198-30902	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-9966	
text	1..1	SHALL		1198-7270	
entry	0..*	SHOULD		1198-7271	
organizer	1..1	SHALL		1198-15517	Vital Signs Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2015-08-01)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7268) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.4" (CONF:1198-10451).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32584).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15242).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="8716-3" Vital Signs (CONF:1198-15243).
 - 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:1198-30902).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-9966).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7270).
5. **SHOULD** contain zero or more [0..*] **entry** (CONF:1198-7271) such that it
 - a. **SHALL** contain exactly one [1..1] **Vital Signs Organizer (V3)** (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.26:2015-08-01) (CONF:1198-15517).

2.70.1 Vital Signs Section (entries required) (V3)

[section: identifier urn:h17ii:2.16.840.1.113883.10.20.22.2.4.1:2015-08-01 (open)]

Table 217: Vital Signs Section (entries required) (V3) Contexts

Contained By:	Contains:
Consultation Note (V3) (optional) Continuity of Care Document (CCD) (V3) (required) Transfer Summary (V2) (required) Referral Note (V2) (optional)	Vital Signs Organizer (V3)

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 218: Vital Signs Section (entries required) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2015-08-01)					
@nullFlavor	0..1	MAY		1198-32874	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1198-7273	
@root	1..1	SHALL		1198-10452	2.16.840.1.113883.10.20.22.2.4.1
@extension	1..1	SHALL		1198-32585	2015-08-01
code	1..1	SHALL		1198-15962	
@code	1..1	SHALL		1198-15963	8716-3
@codeSystem	1..1	SHALL		1198-30903	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-9967	
text	1..1	SHALL		1198-7275	
entry	1..*	SHALL		1198-7276	
organizer	1..1	SHALL		1198-15964	Vital Signs Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2015-08-01)

1. Conforms to [Vital Signs Section \(entries optional\) \(V3\) template \(identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4:2015-08-01\)](#).
2. **MAY** contain zero or one [0..1] **@nullFlavor**="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1198-32874).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7273) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.4.1" (CONF:1198-10452).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32585).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15962).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="8716-3" Vital Signs (CONF:1198-15963).
 - 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:1198-30903).
5. **SHALL** contain exactly one [1..1] **title** (CONF:1198-9967).
6. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7275).

If section/@nullFlavor is not present:

7. **SHALL** contain at least one [1..*] **entry** (CONF:1198-7276) such that it
 - a. **SHALL** contain exactly one [1..1] **Vital Signs Organizer (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2015-08-01) (CONF:1198-15964).

Figure 122: Vital Signs Section (entries required) (V3) Example

```
<component>
  <section>
    <!-- ** Vital Signs section with entries required ** -->
    <templateId root="2.16.840.1.113883.10.20.22.4.1" extension="2015-08-01" />
    <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="2015-08-01"
/>
          . . .
        </organizer>
      </entry>
    </section>
  </component>
```

3 ENTRY-LEVEL TEMPLATES

This chapter describes the clinical statement entry templates used within the sections of the document types of this consolidated guide. 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., template identifier, 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), this guide constrains 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.

Provenance in entry templates:

In this version of Consolidated CDA (C-CDA), we have added a “SHOULD” Author constraint on several entry-level templates. Authorship and Author timestamps must be explicitly asserted in these cases, unless the values propagated from the document header hold true.

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 Medication (V2)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.36:2014-06-09 (open)]

Table 219: Admission Medication (V2) Contexts

Contained By:	Contains:
Admission Medications Section (entries optional) (V3) (optional)	Medication Activity (V2)

This template represents the medications taken by the patient prior to and at the time of admission.

Table 220: Admission Medication (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.36:2014-06-09)					
@classCode	1..1	SHALL		1098-7698	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-7699	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-16758	
@root	1..1	SHALL		1098-16759	2.16.840.1.113883.10.20.22.4.36
@extension	1..1	SHALL		1098-32524	2014-06-09
code	1..1	SHALL		1098-15518	
@code	1..1	SHALL		1098-15519	42346-7
@codeSystem	1..1	SHALL		1098-32152	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entryRelationship	1..*	SHALL		1098-7701	
@typeCode	1..1	SHALL		1098-7702	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
substanceAdministration	1..1	SHALL		1098-15520	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"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7698).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7699).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-16758) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.36"** (CONF:1098-16759).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32524).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15518).
 - a. This code **SHALL** contain exactly one [1..1] **@code="42346-7"** Medications on Admission (CONF:1098-15519).
 - 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:1098-32152).
5. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1098-7701) 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:1098-7702).
- 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:1098-15520).

Figure 123: Admission Medication (V2) Example

```

<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.36" extension="2014-06-09" />
  <code code="42346-7" />
  <entryRelationship typeCode="SUBJ">
    <substanceAdministration classCode="SBADM" moodCode="EVN">
      <!-- ** MEDICATION ACTIVITY V2 ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09" />
      ...
    </substanceAdministration>
  </entryRelationship>
</act>

```

3.2 Advance Directive Observation (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.48:2015-08-01 (open)]

Table 221: Advance Directive Observation (V3) Contexts

Contained By:	Contains:
Advance Directive Organizer (V2) (required) Planned Intervention Act (V2) (optional) Intervention Act (V2) (optional) Advance Directives Section (entries optional) (V3) (optional) Advance Directives Section (entries required) (V3) (optional)	Author Participation US Realm Address (AD.US.FIELDDED) US Realm Person Name (PN.US.FIELDDED)

This clinical statement represents Advance Directive Observation findings (e.g., “resuscitation status is Full Code”) rather than orders. It should not be considered a legal document or a substitute for the actual Advance Directive document. The related legal documents are referenced using the reference/externalReference element.

The Advance Directive Observation describes the patient’s directives, including but not limited to:

- Medications
- Transfer of Care to Hospital
- Treatment
- Procedures

- Intubation and Ventilation
- Diagnostic Tests
- Tests

The observation/value element contains the detailed patient directive which may be coded or text. For example, a category directive may be antibiotics, and the details would be intravenous antibiotics only.

Table 222: Advance Directive Observation (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.48:2015-08-01)					
@classCode	1..1	SHALL		1198-8648	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1198-8649	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-8655	
@root	1..1	SHALL		1198-10485	2.16.840.1.113883.10.20.22.4.48
@extension	1..1	SHALL		1198-32496	2015-08-01
id	1..*	SHALL		1198-8654	
code	1..1	SHALL		1198-8651	urn:oid:2.16.840.1.113883.1.11.20.2 (AdvanceDirectiveTypeCode)
translation	1..1	SHALL		1198-32842	
@code	1..1	SHALL		1198-32843	75320-2
@codeSystem	1..1	SHALL		1198-32844	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1198-8652	
@code	1..1	SHALL		1198-19082	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1198-8656	
low	1..1	SHALL		1198-28719	
high	1..1	SHALL		1198-15521	
value	1..1	SHALL		1198-30804	
author	0..*	SHOULD		1198-32406	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
participant	0..*	SHOULD		1198-8662	
@typeCode	1..1	SHALL		1198-8663	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = VRF
templateId	1..1	SHALL		1198-8664	
@root	1..1	SHALL		1198-10486	2.16.840.1.113883.10.20.1.58

time	0..1	SHOULD		1198-8665	
participantRole	1..1	SHALL		1198-8825	
code	0..1	SHOULD		1198-28446	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	0..*	MAY		1198-28451	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
playingEntity	0..1	MAY		1198-28428	
code	0..1	SHOULD		1198-28429	urn:oid:2.16.840.1.113883.11.20.9.51 (Healthcare Agent Qualifier)
name	0..*	MAY		1198-28454	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
participant	0..*	SHOULD		1198-8667	
@typeCode	1..1	SHALL		1198-8668	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CST
participantRole	1..1	SHALL		1198-8669	
@classCode	1..1	SHALL		1198-8670	urn:oid:2.16.840.1.113883.5.110 (RoleClass) = AGNT
code	0..1	SHOULD		1198-28440	urn:oid:2.16.840.1.113883.11.20.12.1 (Personal And Legal Relationship Role Type)
addr	0..1	SHOULD		1198-8671	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	0..*	SHOULD		1198-8672	
playingEntity	1..1	SHALL		1198-8824	
code	0..1	SHOULD		1198-28444	urn:oid:2.16.840.1.113883.11.20.9.51 (Healthcare Agent Qualifier)
name	1..1	SHALL		1198-8673	
reference	1..*	SHOULD		1198-8692	
@typeCode	1..1	SHALL		1198-8694	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
externalDocument	1..1	SHALL		1198-8693	

id	1..*	SHALL		1198-8695	
text	0..1	MAY		1198-8696	
reference	0..1	MAY		1198-8697	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-8648).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-8649).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8655) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.48"** (CONF:1198-10485).
 - b. **SHALL** contain exactly one [1..1] **@extension="2015-08-01"** (CONF:1198-32496).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-8654).
5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [AdvanceDirectiveTypeCode](#) urn:oid:2.16.840.1.113883.1.11.20.2 **STATIC** 2006-10-17 (CONF:1198-8651).
 - a. This code **SHALL** contain exactly one [1..1] **translation** (CONF:1198-32842) such that it
 - i. **SHALL** contain exactly one [1..1] **@code="75320-2"** Advance directive (CONF:1198-32843).
 - ii. **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:1198-32844).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-8652).
 - 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:1198-19082).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-8656).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1198-28719).
 - b. This effectiveTime **SHALL** contain exactly one [1..1] **high** (CONF:1198-15521).
 - i. If the Advance Directive does not have a specified ending time, the <high> element **SHALL** have the nullFlavor attribute set to **NA** (CONF:1198-32449).
8. **SHALL** contain exactly one [1..1] **value** (CONF:1198-30804) such that it
 - a. If type CD, then value will be SNOMED-CT 2.16.840.1.113883.6.96 (CONF:1198-32493).
9. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-32406).
The participant "VRF" represents the clinician(s) who verified the patient advance directive observation.
10. **SHOULD** contain zero or more [0..*] **participant** (CONF:1198-8662) such that it

- a. **SHALL** contain exactly one [1..1] `@typeCode="VRF"` Verifier (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1198-8663).
- b. **SHALL** contain exactly one [1..1] `templateId` (CONF:1198-8664) such that it
 - i. **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.10.20.1.58"` (CONF:1198-10486).
- c. **SHOULD** contain zero or one [0..1] `time` (CONF:1198-8665).
 - i. The data type of Observation/participant/time in a verification **SHALL** be **TS** (time stamp) (CONF:1198-8666).
- d. **SHALL** contain exactly one [1..1] `participantRole` (CONF:1198-8825).
 - i. This `participantRole` **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:1198-28446).
 - ii. This `participantRole` **MAY** contain zero or more [0..*] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-28451).
 - iii. This `participantRole` **MAY** contain zero or one [0..1] `playingEntity` (CONF:1198-28428).
 - 1. The `playingEntity`, if present, **SHOULD** contain zero or one [0..1] `code`, which **SHOULD** be selected from ValueSet [Healthcare Agent Qualifier](#) urn:oid:2.16.840.1.113883.11.20.9.51 **DYNAMIC** (CONF:1198-28429).
 - 2. The `playingEntity`, if present, **MAY** contain zero or more [0..*] [US Realm Person Name \(PN.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-28454).

This custodian (CST) participant identifies a legal representative for the patient's advance directive. Examples of such individuals are called health care agents, substitute decision makers and/or health care proxies. If there is more than one legal representative, a qualifier may be used to designate the legal representative as primary or secondary.

- 11. **SHOULD** contain zero or more [0..*] `participant` (CONF:1198-8667) such that it
 - a. **SHALL** contain exactly one [1..1] `@typeCode="CST"` Custodian (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1198-8668).
 - b. **SHALL** contain exactly one [1..1] `participantRole` (CONF:1198-8669).
 - i. This `participantRole` **SHALL** contain exactly one [1..1] `@classCode="AGNT"` Agent (CodeSystem: RoleClass urn:oid:2.16.840.1.113883.5.110 **STATIC**) (CONF:1198-8670).
 - ii. This `participantRole` **SHOULD** contain zero or one [0..1] `code`, which **SHOULD** be selected from ValueSet [Personal And Legal Relationship Role Type](#) urn:oid:2.16.840.1.113883.11.20.12.1 **DYNAMIC** (CONF:1198-28440).
 - iii. This `participantRole` **SHOULD** contain zero or one [0..1] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-8671).

- iv. This participantRole **SHOULD** contain zero or more [0..*] **telecom** (CONF:1198-8672).
- v. This participantRole **SHALL** contain exactly one [1..1] **playingEntity** (CONF:1198-8824).
 - 1. This playingEntity **SHOULD** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Healthcare Agent Qualifier](#) urn:oid:2.16.840.1.113883.11.20.9.51 **DYNAMIC** (CONF:1198-28444).

Record the name of the agent who can provide a copy of the Advance Directive in the name element.

- 2. This playingEntity **SHALL** contain exactly one [1..1] **name** (CONF:1198-8673).

12. **SHOULD** contain at least one [1..*] **reference** (CONF:1198-8692) 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:1198-8694).
- b. **SHALL** contain exactly one [1..1] **externalDocument** (CONF:1198-8693).
 - i. This externalDocument **SHALL** contain at least one [1..*] **id** (CONF:1198-8695).
 - ii. This externalDocument **MAY** contain zero or one [0..1] **text** (CONF:1198-8696).
 - 1. The text, if present, **MAY** contain zero or one [0..1] **reference** (CONF:1198-8697).
 - a. The URL of a referenced advance directive document **MAY** be present, and **SHALL** be represented in Observation/reference/ExternalDocument/text/reference (CONF:1198-8698).
 - b. If a URL is referenced, then it **SHOULD** have a corresponding linkHTML element in narrative block ([CONF:1198-8699](#)).

Table 223: Advance Directive Type Code Value Set

Value Set: AdvanceDirectiveTypeCode 2.16.840.1.113883.1.11.20.2 STATIC 2006-10-17		
Code System(s): SNOMED CT 2.16.840.1.113883.6.96		
Code	Code System	Print Name
52765003	SNOMED CT	Intubation
61420007	SNOMED CT	Tube Feedings
71388002	SNOMED CT	Other Directive
78823007	SNOMED CT	Life Support
89666000	SNOMED CT	CPR
225204009	SNOMED CT	IV Fluid and Support
281789004	SNOMED CT	Antibiotics
304251008	SNOMED CT	Resuscitation

Table 224: Healthcare Agent Qualifier

Value Set: Healthcare Agent Qualifier urn:oid:2.16.840.1.113883.11.20.9.51 A value set SNOMED-CT qualifier codes for representing principal and secondary. Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
63161005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Principal
2603003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Secondary

Figure 124: Advance Directive Observation (V3) Example

```
<entry>
  <observation classCode="OBS" moodCode="EVN">
    <!-- ** Advance Directive Observation** -->
    <templateId root="2.16.840.1.113883.10.20.22.4.48"
      extension="2015-08-01" />
    <id root="9b54c3c9-1673-49c7-aef9-b037ed72ed27" />
    <code code="304251008" displayName="Resuscitation"
      codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED
CT">
      <translation code="75320-2"
        displayName="Advance Directive"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"></translation>
    </code>
    <statusCode code="completed" />
    <effectiveTime>
      <low value="20110213" />
      <high nullFlavor="NA" />
    </effectiveTime>
    <value xsi:type="CD"
      code="304253006"
      codeSystem="2.16.840.1.113883.6.96"
      codeSystemName="SNOMED-CT"
      displayName="Not for resuscitation">
      <originalText>Do not resuscitate</originalText>
    </value>
    <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"
          displayName="Registered nurse"
          codeSystem="2.16.840.1.113883.6.101"
          codeSystemName="Health Care Provider Taxonomy (HIPAA)" />
        <assignedPerson>
          <name>
            <given>Nurse</given>
            <family>Nightingale</family>
            <suffix>RN</suffix>
          </name>
        </assignedPerson>
        <representedOrganization classCode="ORG">
          <id root="2.16.840.1.113883.19.5" />
          <name>Good Health Hospital</name>
        </representedOrganization>
      </assignedAuthor>
    </author>
    <participant typeCode="VRF">
      <templateId root="2.16.840.1.113883.10.20.1.58" />
      <time value="201302013" />
      <participantRole>
        <id root="20cf14fb-b65c-4c8c-a54d-b0cca834c18c" />
        <code code="163W00000X"
          codeSystem="2.16.840.1.113883.6.101"

```

```

        codeSystemName="Health Care Provider Taxonomy (HIPAA)"
        displayName="Registered nurse" />
        <addr>
            ...
        </addr>
        <telecom value="tel:(995)555-1006" use="WP" />
        <playingEntity>
            <code code="63161005" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED-CT" displayName="Principal" />
            <name>
                <given>Nurse</given>
                <family>Florence</family>
                <suffix>RN</suffix>
            </name>
        </playingEntity>
    </participantRole>
</participant>
<participant typeCode="CST">
    <participantRole classCode="AGNT">
        <code code="MTH" codeSystem="2.16.840.1.113883.5.111" displayName="Mother"
/>
        <addr>
            ...
        </addr>
        <telecom value="tel:(999)555-1212" use="WP" />
        <playingEntity>
            <code code="63161005" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED-CT" displayName="Principal" />
            <name>
                <prefix>Mrs.</prefix>
                <given>Martha</given>
                <family>Jones</family>
            </name>
        </playingEntity>
    </participantRole>
</participant>
<reference typeCode="REFR">
    <externalDocument>
        <id root="b50b7910-7ffb-4f4c-bbe4-177ed68cbbf3" />
        <text mediaType="application/pdf">
            <reference value="AdvanceDirective.b50b7910-7ffb-4f4c-bbe4-
177ed68cbbf3.pdf" />
        </text>
        <versionNumber value="1" />
    </externalDocument>
</reference>
</observation>
</entry>

```

3.3 Advance Directive Organizer (V2)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.108:2015-08-01
(open)]

Table 225: Advance Directive Organizer (V2) Contexts

Contained By:	Contains:
Advance Directives Section (entries optional) (V3) (optional) Advance Directives Section (entries required) (V3) (optional)	Advance Directive Observation (V3) Author Participation

This clinical statement groups a set of advance directive observations.

Table 226: Advance Directive Organizer (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.108:2015-08-01)					
@classCode	1..1	SHALL		1198-28410	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		1198-28411	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-28412	
@root	1..1	SHALL		1198-28413	2.16.840.1.113883.10.20.22.4.108
@extension	1..1	SHALL		1198-32876	2015-08-01
id	1..*	SHALL		1198-28414	
code	1..1	SHALL		1198-28415	
@code	1..1	SHALL		1198-31230	45473-6
@codeSystem	1..1	SHALL		1198-31231	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1198-28418	
@code	1..1	SHALL		1198-31346	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
author	0..*	SHOULD		1198-32407	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
component	1..*	SHALL		1198-28420	
observation	1..1	SHALL		1198-28421	Advance Directive Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.48:2015-08-01)

1. **SHALL** contain exactly one [1..1] @classCode="CLUSTER" Cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1198-28410).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-28411).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1198-28412) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.108" (CONF:1198-28413).
 - b. **SHALL** contain exactly one [1..1] @extension="2015-08-01" (CONF:1198-32876).
4. **SHALL** contain at least one [1..*] id (CONF:1198-28414).
5. **SHALL** contain exactly one [1..1] code (CONF:1198-28415).

- a. This code **SHALL** contain exactly one [1..1] `@code="45473-6"` Advance directive - living will (CONF:1198-31230).
- 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:1198-31231).
6. **SHALL** contain exactly one [1..1] `statusCode` (CONF:1198-28418).
 - a. This `statusCode` **SHALL** contain exactly one [1..1] `@code="completed"` (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1198-31346).
7. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-32407).
8. **SHALL** contain at least one [1..*] `component` (CONF:1198-28420) such that it
 - a. **SHALL** contain exactly one [1..1] [Advance Directive Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.48:2015-08-01) (CONF:1198-28421).

Figure 125: Advance Directive Organizer Example

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.108" extension="2015-08-01" />
  <!-- *** Advance Directive Organizer template -->
  <id root="af6ebdf2-d996-11e2-a5b8-f23c91aec05e" />
  <code code="45473-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="advance directive - living will" />
  <statusCode code="completed" />
  <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" displayName="Registered nurse"
codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
      <assignedPerson>
        <name>
          <given>Nurse</given>
          <family>Nightingale</family>
          <suffix>RN</suffix>
        </name>
      </assignedPerson>
      <representedOrganization classCode="ORG">
        <id root="2.16.840.1.113883.19.5" />
        <name>Good Health Hospital</name>
      </representedOrganization>
    </assignedAuthor>
  </author>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Advance Directive Observation V2** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.48" extension="2015-08-01" />
      ...

    </observation>
  </component>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Advance Directive Observation V2** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.48" extension="2015-08-01" />
      <id root="9b54c3c9-1673-49c7-aef9-b037ed72ed27" />
      ...

    </observation>
  </component>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Advance Directive Observation V2** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.48" extension="2015-08-01" />
      ...

    </observation>
  </component>
</organizer>
```

</organizer>

3.4 Age Observation

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

Table 227: Age Observation Contexts

Contained By:	Contains:
Family History Observation (V3) (optional) Problem Observation (V3) (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 228: 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 229: AgePQ UCUM

Value Set: AgePQ_UCUM urn:oid:2.16.840.1.113883.11.20.9.21			
A valueSet of UCUM codes for representing age value units.			
Value Set Source: http://unitsofmeasure.org/ucum.html			
Code	Code System	Code System OID	Print Name
min	UCUM	urn:oid:2.16.840.1.113883.3.6.8	Minute
h	UCUM	urn:oid:2.16.840.1.113883.3.6.8	Hour
d	UCUM	urn:oid:2.16.840.1.113883.3.6.8	Day
wk	UCUM	urn:oid:2.16.840.1.113883.3.6.8	Week
mo	UCUM	urn:oid:2.16.840.1.113883.3.6.8	Month
a	UCUM	urn:oid:2.16.840.1.113883.3.6.8	Year

Figure 126: 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>

```

3.5 Allergy Concern Act (V3)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.30:2015-08-01 (open)]

Table 230: Allergy Concern Act (V3) Contexts

Contained By:	Contains:
Allergies and Intolerances Section (entries optional) (V3) (optional) Allergies and Intolerances Section (entries required) (V3) (required)	Allergy - Intolerance Observation (V2) Author Participation

This template reflects an ongoing concern on behalf of the provider that placed the allergy on a patient's allergy list. As long as the underlying condition is of concern to the provider (i.e., as long as the allergy, whether active or resolved, is of ongoing concern and interest to the provider), the statusCode is "active". Only when the underlying allergy is no longer of concern is the statusCode set to "completed". The effectiveTime reflects the time that the underlying allergy was felt to be a concern.

The statusCode of the Allergy Concern Act is the definitive indication of the status of the concern, whereas the effectiveTime of the nested Allergy - Intolerance Observation is the definitive indication of whether or not the underlying allergy is resolved.

The effectiveTime/low of the Allergy Concern Act asserts when the concern became active. This equates to the time the concern was authored in the patient's chart. The effectiveTime/high asserts when the concern was completed (e.g., when the clinician deemed there is no longer any need to track the underlying condition).

Table 231: Allergy Concern Act (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.30:2015-08-01)					
@classCode	1..1	SHALL		1198-7469	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1198-7470	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-7471	
@root	1..1	SHALL		1198-10489	2.16.840.1.113883.10.20.22.4.30
@extension	1..1	SHALL		1198-32543	2015-08-01
id	1..*	SHALL		1198-7472	
code	1..1	SHALL		1198-7477	
@code	1..1	SHALL		1198-19158	CONC
@codeSystem	1..1	SHALL		1198-32154	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = 2.16.840.1.113883.5.6
statusCode	1..1	SHALL		1198-7485	
@code	1..1	SHALL		1198-19086	urn:oid:2.16.840.1.113883.11.20.9.19 (ProblemAct statusCode)
effectiveTime	1..1	SHALL		1198-7498	
author	0..*	SHOULD		1198-31145	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	1..*	SHALL		1198-7509	
@typeCode	1..1	SHALL		1198-7915	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
observation	1..1	SHALL		1198-14925	Allergy - Intolerance Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.7:2014-06-09)

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-7469).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-7470).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7471) such that it

- a. **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.10.20.22.4.30"` (CONF:1198-10489).
 - b. **SHALL** contain exactly one [1..1] `@extension="2015-08-01"` (CONF:1198-32543).
4. **SHALL** contain at least one [1..*] `id` (CONF:1198-7472).
5. **SHALL** contain exactly one [1..1] `code` (CONF:1198-7477).
 - a. This code **SHALL** contain exactly one [1..1] `@code="CONC"` Concern (CONF:1198-19158).
 - b. This code **SHALL** contain exactly one [1..1] `@codeSystem="2.16.840.1.113883.5.6"` (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1198-32154).
6. **SHALL** contain exactly one [1..1] `statusCode` (CONF:1198-7485).
 - a. This statusCode **SHALL** contain exactly one [1..1] `@code`, which **SHALL** be selected from ValueSet [ProblemAct statusCode](#) urn:oid:2.16.840.1.113883.11.20.9.19 **STATIC** (CONF:1198-19086).
7. **SHALL** contain exactly one [1..1] `effectiveTime` (CONF:1198-7498).
 - a. If statusCode/`@code="active"` Active, then effectiveTime **SHALL** contain [1..1] low (CONF:1198-7504).
 - b. If statusCode/`@code="completed"` Completed, then effectiveTime **SHALL** contain [1..1] high (CONF:1198-10085).
8. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-31145).
9. **SHALL** contain at least one [1..*] `entryRelationship` (CONF:1198-7509) 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:1198-7915).
 - b. **SHALL** contain exactly one [1..1] [Allergy - Intolerance Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.7:2014-06-09) (CONF:1198-14925).

Table 232: ProblemAct statusCode

Value Set: ProblemAct statusCode urn:oid:2.16.840.1.113883.11.20.9.19			
A ValueSet of HL7 actStatus codes for use on the concern act			
Value Set Source:			
http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
completed	ActStatus	urn:oid:2.16.840.1.113883.5.14	Completed
aborted	ActStatus	urn:oid:2.16.840.1.113883.5.14	Aborted
active	ActStatus	urn:oid:2.16.840.1.113883.5.14	Active
suspended	ActStatus	urn:oid:2.16.840.1.113883.5.14	Suspended

Figure 127: Allergy Concern Act (V3) Example

```
<act classCode="ACT" moodCode="EVN">
  <!-- ** Allergy Concern Act ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.30" extension="2015-08-01" />
  <id root="36e3e930-7b14-11db-9fe1-0800200c9a66" />
  <code code="CONC" codeSystem="2.16.840.1.113883.5.6" />
  <!-- The statusCode represents the need to continue tracking the allergy -->
  <!-- This is of ongoing concern to the provider -->
  <statusCode code="active" />
  <effectiveTime>
    <!-- The low value represents when the allergy was first recorded in the
         patient's chart -->
    <!-- Concern started being tracked as an active issue on May 1, 1998 -->
    <low value="199805011145-0800" />
  </effectiveTime>
  <author typeCode="AUT">
    <!-- Same as Concern effectiveTime/low -->
    <time value="199805011145-0800" />
    <assignedAuthor>
      <id extension="555555555" root="1.1.1.1.1.1.2" />
    </assignedAuthor>
  </author>
  <entryRelationship typeCode="SUBJ">
    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Allergy observation ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.7" extension="2014-06-09" />
      <id root="4adc1020-7b14-11db-9fe1-0800200c9a66" />
      <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
      <!-- Observation statusCode represents the status of the act of observing -->
      <statusCode code="completed" />
      <effectiveTime>
        <!-- The low value reflects the date of onset of the allergy -->
        <!-- Based on patient symptoms, presumed onset is May 1, 1998 -->
        <low value="19980501" />
        <!-- The high value reflects when the allergy was known to be resolved
             (and will generally be absent) -->
      </effectiveTime>
      <value xsi:type="CD" code="419199007" displayName="Allergy to substance"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" />
      <author typeCode="AUT">
        <time value="199805011145-0800" />
        <assignedAuthor>
          <id extension="222223333" root="1.1.1.1.1.1.1.3" />
        </assignedAuthor>
      </author>
      <participant typeCode="CSM">
        <participantRole classCode="MANU">
          <playingEntity classCode="MMAT">
            <code code="70618" displayName="Penicillin"
codeSystem="2.16.840.1.113883.6.88" codeSystemName="RxNorm" />
          </playingEntity>
        </participantRole>
      </participant>
      <entryRelationship typeCode="MFST" inversionInd="true">
        <observation classCode="OBS" moodCode="EVN">
          <!-- ** Reaction observation ** -->
```

```

09" />
        <templateId root="2.16.840.1.113883.10.20.22.4.9" extension="2014-06-
        <id root="4adc1020-7b14-11db-9fe1-0800200c9a64" />
        <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
        <statusCode code="completed" />
        <effectiveTime>
            <low value="200802260800-0800" />
            <high value="2008022801200-0800" />
        </effectiveTime>
        <value xsi:type="CD" code="422587007"
codeSystem="2.16.840.1.113883.6.96" displayName="Nausea" />
        </observation>
    </entryRelationship>
</observation>
</entryRelationship>
</act>

```

3.6 Allergy Status Observation (DEPRECATED)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.28:2014-06-09 (open)]

Table 233: Allergy Status Observation (DEPRECATED) Contexts

Contained By:	Contains:
Substance or Device Allergy - Intolerance Observation (V2) (optional)	

This template represents the status of the allergy indicating whether it is active, no longer active, or is an historic allergy. There can be only one allergy status observation per alert observation.

THIS TEMPLATE HAS BEEN DEPRECATED 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 an allergy is determined based on attributes of the Allergy Problem Act and Allergy - Intolerance Observation.

Table 234: Allergy Status Observation (DEPRECATED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.28:2014-06-09)					
@classCode	1..1	SHALL		1098-7318	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-7319	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-7317	
@root	1..1	SHALL		1098-10490	2.16.840.1.113883.10.20.22.4.28
code	1..1	SHALL		1098-7320	
@code	1..1	SHALL		1098-19131	33999-4
@codeSystem	1..1	SHALL		1098-32155	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1098-7321	
@code	1..1	SHALL		1098-19087	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CE	1098-7322	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:1098-7318).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7319).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7317) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.28"** (CONF:1098-10490).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1098-7320).
 - a. This code **SHALL** contain exactly one [1..1] **@code="33999-4"** Status (CONF:1098-19131).
 - 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:1098-32155).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7321).
 - 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:1098-19087).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CE"**, where the code **SHALL** be selected from ValueSet [Problem Status](#) urn:oid:2.16.840.1.113883.3.88.12.80.68 **DYNAMIC** (CONF:1098-7322).

Table 235: Problem Status

Value Set: Problem Status urn:oid:2.16.840.1.113883.3.88.12.80.68			
A value set of SNOMED-CT codes reflecting state of existence.			
Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
55561003	SNOMED CT	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

3.7 Assessment Scale Observation

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

Table 236: Assessment Scale Observation Contexts

Contained By:	Contains:
Sensory Status (optional) Functional Status Section (V2) (optional) Functional Status Observation (V2) (optional) Mental Status Observation (V3) (optional) Mental Status Section (V2) (optional) Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional)	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 237: 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	SHOULD		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 128: Assessment Scale Observation Example

```

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

```

3.8 Assessment Scale Supporting Observation

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

Table 238: 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 239: 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 129: 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>
```

3.9 Authorization Activity

[act: identifier urn:oid:2.16.840.1.113883.10.20.1.19 (open)]

An Authorization Activity represents authorizations or pre-authorizations currently active for the patient for the particular payer.

Authorizations are represented using an act subordinate to the policy or program that provided it. The authorization refers to the policy or program. Authorized treatments can be grouped into an organizer class, where common properties, such as the reason for the authorization, can be expressed. Subordinate acts represent what was authorized.

Table 240: Authorization Activity Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:oid:2.16.840.1.113883.10.20.1.19)					
@classCode	1..1	SHALL		81-8944	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		81-8945	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = EVN
templateId	1..1	SHALL		81-8946	
@root	1..1	SHALL		81-10529	2.16.840.1.113883.10.20.1.19
id	1..1	SHALL		81-8947	
entryRelationship	1..*	SHALL		81-8948	
@typeCode	1..1	SHALL		81-8949	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ

1. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-8944).

2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-8945).
3. **SHALL** contain exactly one [1..1] templateId (CONF:81-8946) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.1.19" (CONF:81-10529).
4. **SHALL** contain exactly one [1..1] id (CONF:81-8947).
5. **SHALL** contain at least one [1..*] entryRelationship (CONF:81-8948) 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:81-8949).
 - b. The target of an authorization activity with act/entryRelationship/@typeCode="SUBJ" **SHALL** be a clinical statement with moodCode="PRMS" Promise (CONF:81-8951).
 - c. The target of an authorization activity **MAY** contain one or more performer, to indicate the providers that have been authorized to provide treatment (CONF:81-8952).

Figure 130: Authorization Activity Example

```

<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.1.19"/>
  <id root="f4dce790-8328-11db-9fe1-0800200c9a66"/>
  <code nullFlavor="NA" />
  <entryRelationship typeCode="SUBJ">
    <procedure classCode="PROC" moodCode="PRMS">
      <code code="73761001"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT"
        displayName="Colonoscopy"/>
    </procedure>
  </entryRelationship>
</act>

```

3.10 Boundary Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.6.2.11 (open)]

Table 241: Boundary Observation Contexts

Contained By:	Contains:
Referenced Frames Observation (required)	

A Boundary Observation contains a list of integer values for the referenced frames of a DICOM multiframe image SOP instance. It identifies the frame numbers within the referenced SOP instance to which the reference applies. The CDA Boundary Observation numbers frames using the same convention as DICOM, with the first frame in the referenced object being Frame 1. A Boundary Observation must be used if a referenced DICOM SOP instance is a multiframe image and the reference does not apply to all frames.

Table 242: Boundary Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.11)					
@classCode	1..1	SHALL		81-9282	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-9283	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = EVN
code	1..1	SHALL		81-9284	
@code	1..1	SHALL		81-19157	urn:oid:1.2.840.10008.2.16.4 (DCM) = 113036
value	1..*	SHALL	INT	81-9285	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-9282).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-9283).
3. **SHALL** contain exactly one [1..1] **code** (CONF:81-9284).
 - a. This code **SHALL** contain exactly one [1..1] **@code="113036"** Frames for Display (CodeSystem: DCM urn:oid:1.2.840.10008.2.16.4 **STATIC**) (CONF:81-19157).

Each number represents a frame for display.

4. **SHALL** contain at least one [1..*] **value** with **@xsi:type="INT"** (CONF:81-9285).

Figure 131: Boundary Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.6.2.11"/>
  <code code="113036" codeSystem="1.2.840.10008.2.16.4"
    displayName="Frames for Display"/>
  <value xsi:type="INT" value="1"/>
</observation>
```

3.11 Caregiver Characteristics

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

Table 243: Caregiver Characteristics Contexts

Contained By:	Contains:
Functional Status Section (V2) (optional) Functional Status Observation (V2) (optional) Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional) Social History Section (V3) (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 244: 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 132: 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>

```

3.12 Characteristics of Home Environment

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

Table 245: Characteristics of Home Environment Contexts

Contained By:	Contains:
Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional) Social History Section (V3) (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 246: 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 247: 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://vsac.nlm.nih.gov			
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 133: 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>

```

3.13 Code Observations

[observation: identifier urn:oid:2.16.840.1.113883.10.20.6.2.13 (open)]

Table 248: Code Observations Contexts

Contained By:	Contains:
Diagnostic Imaging Report (V3) (optional)	Quantity Measurement Observation SOP Instance Observation

DICOM Template 2000 specifies that Imaging Report Elements of Value Type Code are contained in sections. The Imaging Report Elements are inferred from Basic Diagnostic Imaging Report Observations that consist of image references and measurements (linear, area, volume, and numeric). Coded DICOM Imaging Report Elements in this context are mapped to CDA-coded observations that are section components and are related to the SOP Instance Observations (templateId 2.16.840.1.113883.10.20.6.2.8) or Quantity Measurement Observations (templateId 2.16.840.1.113883.10.20.6.2.14) by the SPRT (Support) act relationship.

Table 249: Code Observations Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.13)					
@classCode	1..1	SHALL		81-9304	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-9305	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		81-15523	
@root	1..1	SHALL		81-15524	2.16.840.1.113883.10.20.6.2.13
code	1..1	SHALL		81-19181	
effectiveTime	0..1	SHOULD		81-9309	
value	1..1	SHALL		81-9308	
entryRelationship	0..*	MAY		81-9311	
@typeCode	1..1	SHALL		81-9312	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SPRT
observation	1..1	SHALL		81-16083	SOP Instance Observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.8)
entryRelationship	0..*	MAY		81-9314	
@typeCode	1..1	SHALL		81-9315	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SPRT
observation	1..1	SHALL		81-16084	Quantity Measurement Observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.14)

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-9304).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-9305).
3. **SHALL** contain exactly one [1..1] templateId (CONF:81-15523).
 - a. This templateId **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.6.2.13" (CONF:81-15524).
4. **SHALL** contain exactly one [1..1] code (CONF:81-19181).
5. **SHOULD** contain zero or one [0..1] effectiveTime (CONF:81-9309).

6. **SHALL** contain exactly one [1..1] **value** (CONF:81-9308).
7. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:81-9311) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SPRT" Has Support** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:81-9312).
 - b. **SHALL** contain exactly one [1..1] **SOP Instance Observation** (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.8) (CONF:81-16083).
8. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:81-9314) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SPRT" Has Support** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:81-9315).
 - b. **SHALL** contain exactly one [1..1] **Quantity Measurement Observation** (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.14) (CONF:81-16084).
9. Code Observations **SHALL** be rendered into section/text in separate paragraphs (CONF:81-9310).

Figure 134: Code Observations Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.6.2.13"/>
  <code code="18782-3" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Study observation"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" code="309530007"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"
    displayName="Hilar mass"/>
  <!-- entryRelationship elements referring to SOP Instance Observations
    or Quantity Measurement Observations may appear here -->
</observation>

```

3.14 Cognitive Status Problem Observation (DEPRECATED)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.73:2014-06-09 (open)]

Table 250: Cognitive Status Problem Observation (DEPRECATED) Contexts

Contained By:	Contains:
Functional Status Section (V2) (optional)	

A cognitive status problem observation is a clinical statement that describes a patient's cognitive condition, findings, or symptoms. Examples of cognitive problem observations are inability to recall, amnesia, dementia, and aggressive behavior.

A cognitive problem observation is a finding or medical condition. This is different from a cognitive result observation, which is a response to a question that provides insight into the patient's cognitive status, judgement, comprehension ability, or response speed.

THIS TEMPLATE HAS BEEN DEPRECATED AND MAY BE DELETED FROM A FUTURE RELEASE OF THIS IMPLEMENTATION GUIDE. USE OF THIS TEMPLATE IS NOT RECOMMENDED.

Reason for deprecation: Cognitive Status Problem Observation has been merged, without loss of expressivity, into Mental Status Observation (2.16.840.1.113883.10.20.22.4.74).

Table 251: Cognitive Status Problem Observation (DEPRECATED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.73:2014-06-09)					
@classCode	1..1	SHALL		1098-14319	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-14320	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
@negationInd	0..1	MAY		1098-14344	
templateId	1..1	SHALL		1098-14346	
@root	1..1	SHALL		1098-14347	2.16.840.1.113883.10.20.22.4.73
@extension	1..1	SHALL		1098-32600	2014-06-09
id	1..*	SHALL		1098-14321	
code	1..1	SHALL		1098-14804	
@code	0..1	SHOULD		1098-14805	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 373930000
text	0..1	SHOULD		1098-14341	
reference	0..1	SHOULD		1098-15532	
@value	0..1	SHOULD		1098-15533	
statusCode	1..1	SHALL		1098-14323	
@code	1..1	SHALL		1098-19091	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	0..1	SHOULD		1098-14324	
low	1..1	SHALL		1098-26458	
high	0..1	MAY		1098-26459	
value	1..1	SHALL	CD	1098-14349	urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 (Problem)
methodCode	0..*	MAY		1098-14693	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-14319).

2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-14320).

Use negationInd="true" to indicate that the problem was not observed.

3. **MAY** contain zero or one [0..1] **@negationInd** (CONF:1098-14344).
 4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-14346) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.73"** (CONF:1098-14347).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32600).
 5. **SHALL** contain at least one [1..*] **id** (CONF:1098-14321).
 6. **SHALL** contain exactly one [1..1] **code** (CONF:1098-14804).
 - a. This code **SHOULD** contain zero or one [0..1] **@code="373930000"** Cognitive function finding (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:1098-14805).
 7. **SHOULD** contain zero or one [0..1] **text** (CONF:1098-14341).
 - a. The text, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1098-15532).
 - i. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1098-15533).
 1. **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:1098-15534).
 8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-14323).
 - 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:1098-19091).
 9. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-14324).
- The value of effectiveTime/low represents onset date.
- a. The effectiveTime, if present, **SHALL** contain exactly one [1..1] **low** (CONF:1098-26458).
- If the problem is resolved, record the resolution date in effectiveTime/high. If the problem is known to be resolved but the resolution date is not known, use @nullFlavor="UNK". If the problem is not resolved, do not include the high element.
- b. The effectiveTime, if present, **MAY** contain zero or one [0..1] **high** (CONF:1098-26459).
10. **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:1098-14349).
 11. **MAY** contain zero or more [0..*] **methodCode** (CONF:1098-14693).

Table 252: Problem

<p>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.</p> <p>Specific URL Pending</p> <p>Value Set Source: http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.3221.7.4</p>			
Code	Code System	Code System OID	Print Name
46635009	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	diabetes mellitus type 1
234422006	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	acute intermittent porphyria
31712002	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	primary biliary cirrhosis
302002000	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	difficulty moving
15188001	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	hearing loss
129851009	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	alteration in bowel elimination
247472004	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	hives
39579001	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	anaphylaxis
274945004	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	AA amyloidosis (disorder)
129851009	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	alteration in comfort: pain
...			

3.15 Comment Activity

[act: identifier urn:oid:2.16.840.1.113883.10.20.22.4.64 (open)]

Comments are free text data that cannot otherwise be recorded using data elements already defined by this specification. They are not to be used to record information that can be recorded elsewhere. For example, a free text description of the severity of an allergic reaction would not be recorded in a comment.

Table 253: Comment Activity Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.64)					
@classCode	1..1	SHALL		81-9425	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		81-9426	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		81-9427	
@root	1..1	SHALL		81-10491	2.16.840.1.113883.10.20.22.4.64
code	1..1	SHALL		81-9428	
@code	1..1	SHALL		81-19159	48767-8
@codeSystem	1..1	SHALL		81-26501	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
text	1..1	SHALL		81-9430	
reference	1..1	SHALL		81-15967	
@value	1..1	SHALL		81-15968	
reference/@value	1..1	SHALL		81-9431	
author	0..1	MAY		81-9433	
time	1..1	SHALL		81-9434	
assignedAuthor	1..1	SHALL		81-9435	
id	1..1	SHALL		81-9436	
addr	1..1	SHALL		81-9437	

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-9425).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-9426).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-9427) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.64"** (CONF:81-10491).
4. **SHALL** contain exactly one [1..1] **code** (CONF:81-9428).

- a. This code **SHALL** contain exactly one [1..1] **@code="48767-8"** Annotation Comment (CONF:81-19159).
 - 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:81-26501).
5. **SHALL** contain exactly one [1..1] **text** (CONF:81-9430).
- a. This text **SHALL** contain exactly one [1..1] **reference** (CONF:81-15967).
 - i. This reference **SHALL** contain exactly one [1..1] **@value** (CONF:81-15968).
 - 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:81-15969).
 - b. This text **SHALL** contain exactly one [1..1] **reference/@value** (CONF:81-9431).
6. **MAY** contain zero or one [0..1] **author** (CONF:81-9433).
- a. The author, if present, **SHALL** contain exactly one [1..1] **time** (CONF:81-9434).
 - b. The author, if present, **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:81-9435).
 - i. This assignedAuthor **SHALL** contain exactly one [1..1] **id** (CONF:81-9436).
 - ii. This assignedAuthor **SHALL** contain exactly one [1..1] **addr** (CONF:81-9437).
 - 1. The content of addr **SHALL** be a conformant US Realm Address (AD.US.FIELDDED) (2.16.840.1.113883.10.20.22.5.2) (CONF:81-10480).
 - iii. **SHALL** include assignedPerson/name or representedOrganization/name (CONF:81-9438).
 - iv. An assignedPerson/name **SHALL** be a conformant US Realm Person Name (PN.US.FIELDDED) (2.16.840.1.113883.10.20.22.5.1.1) (CONF:81-9439).
7. Data elements defined elsewhere in the specification **SHALL NOT** be recorded using the Comment Activity (CONF:81-9429).

Figure 135: Comment Activity Example

```

<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.64"/>
  <code code="48767-8" displayName="Annotation Comment"
    codeSystemName="LOINC"
    codeSystem="2.16.840.1.113883.6.1"/>
  <text>The patient stated that he was looking forward to an upcoming
  vacation to New York with his family. He was concerned that he may
  not have enough medication for the trip. An additional prescription
  was provided to cover that period of time.
  <reference value="#PntrtoSectionText"/>
</text>
<author>
  <time value="20050329224411+0500"/>
  <assignedAuthor>
    <id extension="KP00017" root="2.16.840.1.113883.19.5"/>
    <addr>
      <streetAddressLine>21 North Ave.</streetAddressLine>
      <city>Burlington</city>
      <state>MA</state>
      <postalCode>02368</postalCode>
      <country>US</country>
    </addr>
    <telecom use="WP" value="tel:(555)555-1003"/>
    <assignedPerson>
      <name>
        <given>Henry</given>
        <family>Seven</family>
      </name>
    </assignedPerson>
  </assignedAuthor>
</author>
</act>

```

3.16 Coverage Activity (V3)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.60:2015-08-01 (open)]

Table 254: Coverage Activity (V3) Contexts

Contained By:	Contains:
Payers Section (V3) (optional)	Policy Activity (V3)

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 255: Coverage Activity (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.60:2015-08-01)					
@classCode	1..1	SHALL		1198-8872	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1198-8873	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-8897	
@root	1..1	SHALL		1198-10492	2.16.840.1.113883.10.20.22.4.60
@extension	1..1	SHALL		1198-32596	2015-08-01
id	1..*	SHALL		1198-8874	
code	1..1	SHALL		1198-8876	
@code	1..1	SHALL		1198-19160	48768-6
@codeSystem	1..1	SHALL		1198-32156	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1198-8875	
@code	1..1	SHALL		1198-19094	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
entryRelationship	1..*	SHALL		1198-8878	
@typeCode	1..1	SHALL		1198-8879	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
sequenceNumber	0..1	MAY		1198-17174	
@value	1..1	SHALL		1198-17175	
act	1..1	SHALL		1198-15528	Policy Activity (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.61:2015-08-01)

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-8872).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-8873).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8897) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.60"** (CONF:1198-10492).

- b. **SHALL** contain exactly one [1..1] @extension="2015-08-01" (CONF:1198-32596).
- 4. **SHALL** contain at least one [1..*] id (CONF:1198-8874).
- 5. **SHALL** contain exactly one [1..1] code (CONF:1198-8876).
 - a. This code **SHALL** contain exactly one [1..1] @code="48768-6" Payment sources (CONF:1198-19160).
 - 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:1198-32156).
- 6. **SHALL** contain exactly one [1..1] statusCode (CONF:1198-8875).
 - 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:1198-19094).
- 7. **SHALL** contain at least one [1..*] entryRelationship (CONF:1198-8878) 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:1198-8879).
 - b. **MAY** contain zero or one [0..1] sequenceNumber (CONF:1198-17174).
 - i. The sequenceNumber, if present, **SHALL** contain exactly one [1..1] @value (CONF:1198-17175).
 - c. **SHALL** contain exactly one [1..1] Policy Activity (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.61:2015-08-01) (CONF:1198-15528).

Figure 136: Coverage Activity (V3) Example

```

<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.60" extension="2015-08-01" />
  <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="2015-08-01" />
      . . .
    </act>
  </entryRelationship>
</act>

```

3.17 Criticality Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.145 (open)]

Table 256: Criticality Observation Contexts

Contained By:	Contains:
Allergy - Intolerance Observation (V2) (optional)	

This observation represents the gravity of the potential risk for future life-threatening adverse reactions when exposed to a substance known to cause an adverse reaction in that individual. When the worst case result is assessed to have a life-threatening or organ system threatening potential, it is considered to be of high criticality.

Table 257: Criticality Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.145)					
@classCode	1..1	SHALL		1198-32921	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1198-32922	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-32918	
@root	1..1	SHALL		1198-32923	2.16.840.1.113883.10.20.22.4.145
code	1..1	SHALL		1198-32919	
@code	1..1	SHALL		1198-32925	NEW-LOINC-CRITICALITY
@codeSystem	1..1	SHALL		1198-32926	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1198-32920	
@code	1..1	SHALL		1198-32927	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1198-32928	urn:oid:2.16.840.1.113883.1.11.20549 (Criticality Observation)

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-32921).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-32922).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1198-32918) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.145" (CONF:1198-32923).
4. **SHALL** contain exactly one [1..1] code (CONF:1198-32919).

- a. This code **SHALL** contain exactly one [1..1] @code="NEW-LOINC-CRITICALITY" Criticality (CONF:1198-32925).
- 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:1198-32926).
- 5. **SHALL** contain exactly one [1..1] statusCode (CONF:1198-32920).
 - 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:1198-32927).
- 6. **SHALL** contain exactly one [1..1] value with @xsi:type="CD", where the code **SHALL** be selected from ValueSet [Criticality Observation](#) urn:oid:2.16.840.1.113883.1.11.20549 **STATIC** 2015-08-01 (CONF:1198-32928).

Table 258: Criticality Observation

Value Set: Criticality Observation urn:oid:2.16.840.1.113883.1.11.20549 A clinical judgment as to the worst case result of a future exposure (including substance administration).			
Code	Code System	Code System OID	Print Name
CRITL	ObservationValue	urn:oid:2.16.840.1.113883.3.5.1063	Low criticality
CRITH	ObservationValue	urn:oid:2.16.840.1.113883.3.5.1063	High criticality
CRITU	ObservationValue	urn:oid:2.16.840.1.113883.3.5.1063	Unable to assess criticality

Figure 137: Criticality Observation Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.145"/>
  <code code="NEW-LOINC-CRITICALITY" codeSystem="2.16.840.1.113883.6.1"
    displayName="Criticality" />
  <text>
    <reference value="#criticality"/>
  </text>
  <statusCode code="completed"/>
  <value xsi:type="CD" code="High" displayName="High Criticality - NEED PROPER
    CODE" codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"/>
</observation>

```

3.18 Cultural and Religious Observation

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

Table 259: Cultural and Religious Observation Contexts

Contained By:	Contains:
Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional) Social History Section (V3) (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 260: 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 138: 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>

```

3.19 Deceased Observation (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.79:2015-08-01 (open)]

Table 261: Deceased Observation (V3) Contexts

Contained By:	Contains:
	Problem Observation (V3)

This template represents the observation that a patient has died. It also represents the cause of death, indicated by an entryRelationship type of 'CAUS'. This template allows for more specific representation of data than is available with the use of dischargeDispositionCode.

Table 262: Deceased Observation (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.79:2015-08-01)					
@classCode	1..1	SHALL		1198-14851	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1198-14852	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-14871	
@root	1..1	SHALL		1198-14872	2.16.840.1.113883.10.20.22.4.79
@extension	1..1	SHALL		1198-32541	2015-08-01
id	1..*	SHALL		1198-14873	
code	1..1	SHALL		1198-14853	
@code	1..1	SHALL		1198-19135	ASSERTION
@codeSystem	1..1	SHALL		1198-32158	urn:oid:2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		1198-14854	
@code	1..1	SHALL		1198-19095	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1198-14855	
low	1..1	SHALL		1198-14874	
value	1..1	SHALL	CD	1198-14857	
@code	1..1	SHALL		1198-15142	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 419099009
entryRelationship	0..1	SHOULD		1198-14868	
@typeCode	1..1	SHALL		1198-14875	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = CAUS
@inversionInd	1..1	SHALL		1198-32900	true
observation	1..1	SHALL		1198-14870	Problem Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01)

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-14851).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-14852).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-14871) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.79"** (CONF:1198-14872).
 - b. **SHALL** contain exactly one [1..1] **@extension="2015-08-01"** (CONF:1198-32541).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-14873).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1198-14853).
 - a. This code **SHALL** contain exactly one [1..1] **@code="ASSERTION"** Assertion (CONF:1198-19135).
 - 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:1198-32158).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-14854).
 - 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:1198-19095).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-14855).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1198-14874).
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:1198-14857).
 - a. This value **SHALL** contain exactly one [1..1] **@code="419099009"** Dead (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:1198-15142).
9. **SHOULD** contain zero or one [0..1] **entryRelationship** (CONF:1198-14868) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="CAUS"** Is etiology for (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-14875).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1198-32900).
 - c. **SHALL** contain exactly one [1..1] **Problem Observation (V3)** (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) (CONF:1198-14870).

Figure 139: Deceased Observation (V3) Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.79" extension="2015-08-01" />
  <id root="6898fae0-5c8a-11db-b0de-0800200c9a77" />
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
  <statusCode code="completed" />
  <effectiveTime>
    <low value="20100303" />
  </effectiveTime>
  <value xsi:type="CD" code="419099009" codeSystem="2.16.840.1.113883.6.96"
displayName="Dead" />
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01" />
      ...

    </observation>
  </entry>
</observation>

```

3.20 Discharge Medication (V2)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.35:2014-06-09 (open)]

Table 263: Discharge Medication (V2) Contexts

Contained By:	Contains:
Discharge Medications Section (entries optional) (V3) (optional)	Medication Activity (V2)
Discharge Medications Section (entries required) (V3) (required)	

This template represents medications that the patient is intended to take (or stop) after discharge.

Table 264: Discharge Medication (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.35:2014-06-09)					
@classCode	1..1	SHALL		1098-7689	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-7690	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-16760	
@root	1..1	SHALL		1098-16761	2.16.840.1.113883.10.20.22.4.35
@extension	1..1	SHALL		1098-32513	2014-06-09
code	1..1	SHALL		1098-7691	
@code	1..1	SHALL		1098-19161	75311-1
@codeSystem	1..1	SHALL		1098-32159	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1098-32779	
@code	1..1	SHALL		1098-32780	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
entryRelationship	1..*	SHALL		1098-7692	
@typeCode	1..1	SHALL		1098-7693	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
substanceAdministration	1..1	SHALL		1098-15525	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"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7689).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7690).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-16760) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.35"** (CONF:1098-16761).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32513).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1098-7691).
 - a. This code **SHALL** contain exactly one [1..1] **@code="75311-1"** Discharge medication (CONF:1098-19161).

- 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:1098-32159).
- 5. **SHALL** contain exactly one [1..1] `statusCode` (CONF:1098-32779).
 - 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:1098-32780).
- 6. **SHALL** contain at least one [1..*] `entryRelationship` (CONF:1098-7692) 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:1098-7693).
 - 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:1098-15525).

Figure 140: Discharge Medication (V2) Example

```

<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.35" extension="2014-06-09" />
  <code code="75311-1" codeSystem="2.16.840.1.113883.6.1"/>
  <statusCode code="completed" />
  <entryRelationship typeCode="SUBJ">
    <substanceAdministration classCode="SBADM" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09" />
      ...
    </substanceAdministration>
  </entryRelationship>
</act>

```

3.21 Drug Monitoring Act

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

Table 265: Drug Monitoring Act Contexts

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

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

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

Table 266: 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.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1)

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** act (CodeSystem: HL7ActClass 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.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1) (CONF:1098-28669).

Table 267: 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:

http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html

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 141: 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>

```

3.22 Drug Vehicle

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

Table 268: Drug Vehicle Contexts

Contained By:	Contains:
Medication Activity (V2) (optional)	
Immunization Activity (V3) (optional)	

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

Table 269: 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 142: 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>

```

3.23 Encounter Activity (V3)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2015-08-01
(open)]

Table 270: Encounter Activity (V3) Contexts

Contained By:	Contains:
Planned Intervention Act (V2) (optional) Intervention Act (V2) (optional) Encounters Section (entries optional) (V3) (optional) Encounters Section (entries required) (V3) (required)	Encounter Diagnosis (V3) 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 271: Encounter Activity (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2015-08-01)					
@classCode	1..1	SHALL		1198-8710	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1198-8711	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-8712	
@root	1..1	SHALL		1198-26353	2.16.840.1.113883.10.20.22.4.49
@extension	1..1	SHALL		1198-32546	2015-08-01
id	1..*	SHALL		1198-8713	
code	1..1	SHALL		1198-8714	urn:oid:2.16.840.1.113883.3.88.12.80.32 (EncounterTypeCode)
originalText	0..1	SHOULD		1198-8719	
reference	0..1	SHOULD		1198-15970	
@value	0..1	SHOULD		1198-15971	
translation	0..1	MAY		1198-32323	
effectiveTime	1..1	SHALL		1198-8715	
sdtc:dischargeDispositionCode	0..1	MAY		1198-32176	
performer	0..*	MAY		1198-8725	
assignedEntity	1..1	SHALL		1198-8726	
code	0..1	MAY		1198-8727	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
participant	0..*	SHOULD		1198-8738	
@typeCode	1..1	SHALL		1198-8740	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = LOC
participantRole	1..1	SHALL		1198-14903	Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32)
entryRelationship	0..*	MAY		1198-	

				8722	
@typeCode	1..1	SHALL		1198-8723	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1198-14899	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09)
entryRelationship	0..*	MAY		1198-15492	
act	1..1	SHALL		1198-15973	Encounter Diagnosis (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2015-08-01)

1. **SHALL** contain exactly one [1..1] **@classCode="ENC"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-8710).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-8711).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8712) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.49"** (CONF:1198-26353).
 - b. **SHALL** contain exactly one [1..1] **@extension="2015-08-01"** (CONF:1198-32546).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-8713).
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:1198-8714).
 - a. This code **SHOULD** contain zero or one [0..1] **originalText** (CONF:1198-8719).
 - i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1198-15970).
 1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1198-15971).
 - 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:1198-15972).

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:1198-32323).
6. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-8715).
7. **MAY** contain zero or one [0..1] **sdct:dischargeDispositionCode** (CONF:1198-32176).
 Note: The prefix sdct: SHALL be bound to the namespace "urn:hl7-org:sdct". The use of the namespace provides a necessary extension to CDA R2 for the use of the dischargeDispositionCode element

- a. This `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:1198-32177).
 - 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:1198-32377).
8. **MAY** contain zero or more [0..*] `performer` (CONF:1198-8725).
- a. The performer, if present, **SHALL** contain exactly one [1..1] `assignedEntity` (CONF:1198-8726).
 - 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:1198-8727).
9. **SHOULD** contain zero or more [0..*] `participant` (CONF:1198-8738) 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:1198-8740).
 - b. **SHALL** contain exactly one [1..1] [Service Delivery Location](#) (identifier: `urn:oid:2.16.840.1.113883.10.20.22.4.32`) (CONF:1198-14903).
10. **MAY** contain zero or more [0..*] `entryRelationship` (CONF:1198-8722) 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:1198-8723).
 - 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:1198-14899).
11. **MAY** contain zero or more [0..*] `entryRelationship` (CONF:1198-15492) such that it
- a. **SHALL** contain exactly one [1..1] [Encounter Diagnosis \(V3\)](#) (identifier: `urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2015-08-01`) (CONF:1198-15973).

Table 272: 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: http://www.amacodingonline.com/			
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 143: Encounter Activity (V3) Example

```

<encounter classCode="ENC" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.49" extension="2015-08-01" />
  <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>

```

3.24 Encounter Diagnosis (V3)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2015-08-01 (open)]

Table 273: Encounter Diagnosis (V3) Contexts

Contained By:	Contains:
Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional) Encounter Activity (V3) (optional)	Problem Observation (V3)

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 274: Encounter Diagnosis (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2015-08-01)					
@classCode	1..1	SHALL		1198-14889	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1198-14890	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-14895	
@root	1..1	SHALL		1198-14896	2.16.840.1.113883.10.20.22.4.80
@extension	1..1	SHALL		1198-32542	2015-08-01
code	1..1	SHALL		1198-19182	
@code	1..1	SHALL		1198-19183	29308-4
@codeSystem	1..1	SHALL		1198-32160	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entryRelationship	1..*	SHALL		1198-14892	
@typeCode	1..1	SHALL		1198-14893	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
observation	1..1	SHALL		1198-14898	Problem Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01)

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-14889).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-14890).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-14895) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.80"** (CONF:1198-14896).
 - b. **SHALL** contain exactly one [1..1] **@extension="2015-08-01"** (CONF:1198-32542).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-19182).
 - a. This code **SHALL** contain exactly one [1..1] **@code="29308-4"** Diagnosis (CONF:1198-19183).
 - 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:1198-32160).
5. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1198-14892) 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:1198-14893).
- b. **SHALL** contain exactly one [1..1] [Problem Observation \(V3\)](#) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) (CONF:1198-14898).

Figure 144: Encounter Diagnosis (V3) Example

```

<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.80" extension="2015-08-01" />
  <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="2015-08-01" />
      <!-- Problem Observation -->
      ...
    </observation>
  </entryRelationship>
</act>

```

3.25 Entry Reference

[act: identifier urn:oid:2.16.840.1.113883.10.20.22.4.122 (open)]

Table 275: Entry Reference Contexts

Contained By:	Contains:
Goal Observation (optional) Outcome Observation (optional) Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional) Planned Intervention Act (V2) (required) Intervention Act (V2) (optional)	

This template represents the act of referencing another entry in the same CDA document instance. Its purpose is to remove the need to repeat the complete XML representation of the referred entry when relating one entry to another. This template can be used to reference many types of Act class derivations, such as encounters, observations, procedures etc., as it is often necessary when authoring CDA documents to repeatedly reference other Acts of these types. For example, in a Care Plan it is necessary to repeatedly relate Health Concerns, Goals, Interventions and Outcomes.

The id is required and must be the same id as the entry/id it is referencing. The id cannot be a null value. Act/Code is set to nullFlavor="NP" (Not Present). This means the value is not present in the message (in act/Code).

Table 276: Entry Reference Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122)					
@classCode	1..1	SHALL		1098-31485	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-31486	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-31487	
@root	1..1	SHALL		1098-31488	2.16.840.1.113883.10.20.22.4.122
id	1..*	SHALL		1098-31489	
code	1..1	SHALL		1098-31490	
@nullFlavor	1..1	SHALL		1098-31491	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NP
statusCode	1..1	SHALL		1098-31498	
@code	0..1	MAY		1098-31499	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) (CONF:1098-31485).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1098-31486).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-31487) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.122"** (CONF:1098-31488).

The 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. The ID cannot have Null value (e.g., nullFlavor is not allowed).

4. **SHALL** contain at least one [1..*] **id** (CONF:1098-31489).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-31490).
 - a. This code **SHALL** contain exactly one [1..1] **@nullFlavor="NP"** Not Present (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1098-31491).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-31498).

- a. This statusCode **MAY** contain zero or one [0..1] @code="completed" (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-31499).

Figure 145: Entry Reference Example

```
<!--
*****
Health Concern section
*****
-->
<act classCode="ACT" moodCode="EVN">
  <!-- Health Concern Act of a pneumonia diagnosis -->
  <templateId root="2.16.840.1.113883.10.20.22.4.132" />
  <id root="4eab0e52-dd7d-4285-99eb-72d32ddb195c" />
  <code code="75310-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Health Concern" />
  <statusCode code="active" />
  <effectiveTime value="20130616" />
  <entryRelationship typeCode="REFR">
    <!-- Problem Observation (V2) -->
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2014-06-09" />
      <id root="8dfacd73-1682-4cc4-9351-e54ccea83612" />
      <code code="29308-4"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        displayName="Diagnosis"/>
      <statusCode code="completed" />
      <effectiveTime>
        <!-- Date of diagnosis -->
        <low value="20130616" />
      </effectiveTime>
      <value xsi:type="CD" code="233604007"
        codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED"
        displayName="Pneumonia" />
      <!-- This Entry Reference refers to a goal, intervention, actual
        outcome, or some other entry present in the Care Plan
        that the Health Concern is related to-->
      <entryRelationship typeCode="REFR">
        <act classCode="ACT" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.122" />
          <!-- This ID equals the ID of the goal of a pulse
            ox greater than 92% -->
          <id root="3700b3b0-fbed-11e2-b778-0800200c9a66" />
          <!-- The code is nulled to "NP" Not Present -->
          <code nullFlavor="NP" />
          <statusCode code="completed" />
        </act>
      </entryRelationship>
    </observation>
  </entryRelationship>
</act>
...
<!--
*****
Expected Outcomes/Goals section
*****
-->
...
<entry>
```

```

<!-- This is an observation about the expected outcome of a pulse ox reading
of 92 or greater. The Id is the same as the ID as the ID of the
pneumonia problem above -->
<observation classCode="OBS" moodCode="GOL">
  <id root="3700b3b0-fbed-11e2-b778-0800200c9a66" />
  <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" />
  <value xsi:type="IVL_PQ">
    <low value="92" unit="%" />
  </value>
  <!-- There could be another Entry Reference here referring to the
related health concern, actual outcome, or intervention -->
  ...

</observation>
</entry>
...

```

Figure 146: Diagnosis Reference Example

```

<!-- Show how an encounter can include a discharge diagnosis which references an
item on the problem list using the Entry Reference template -->
<!-- Problem Section -->
<observation>
  <id root="1234567" />
  <code code="123" codeSystem="1.2.3" displayName="asthma" />
</observation>
<!-- Encounter Section -->
<encounter>
  <entryRelationship typeCode="COMP">
    <act>
      <code code="145" codeSystem="4.5.6" displayName="discharge diagnosis" />
      <templateId root="2.16.840.1.113883.10.20.22.4.33" extension="2014-06-09" />
      <!-- this is for illustrative purposes only. In this particular
case, the template requires a nested Problem
Observation (V2). In the Health Concern template,
we'd need a constraint that says it's allowable to
include the Entry Reference template. -->
      <entryRelationship typeCode="SUBJ">
        <act classCode="ACT" moodCode="XXX">
          <templateId root="2.16.840.1.113883.10.20.22.4.122" />
          <id root="1234567" />
          <code nullFlavor="NP" />
        </act>
      </entryRelationship>
    </act>
  </entryRelationship>
</encounter>

```

3.26 Estimated Date of Delivery

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

Table 277: 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 278: 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 147: 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>
```

3.27 External Document Reference

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

Table 279: External Document Reference Contexts

Contained By:	Contains:
Goal Observation (optional) Outcome Observation (optional) Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional) Planned Intervention Act (V2) (optional) Intervention Act (V2) (optional)	

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

Table 280: External Document Reference Constraints Overview

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

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

Figure 148: External Document Reference Example

```
<externalDocument classCode="DOCCLIN" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.115"
    extension="2014-06-09" />
  <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>
```

3.28 Family History Death Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.47 (open)]

Table 281: Family History Death Observation Contexts

Contained By:	Contains:
Family History Observation (V3) (optional)	

This clinical statement records whether the family member is deceased.

Table 282: Family History Death Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.47)					
@classCode	1..1	SHALL		81-8621	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-8622	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		81-8623	
@root	1..1	SHALL		81-10495	2.16.840.1.113883.10.20.22.4.47
code	1..1	SHALL		81-19141	
@code	1..1	SHALL		81-19142	ASSERTION
@codeSystem	1..1	SHALL		81-26504	urn:oid:2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		81-8625	
@code	1..1	SHALL		81-19097	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	81-8626	
@code	1..1	SHALL		81-26470	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 419099009

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-8621).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-8622).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-8623) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.47" (CONF:81-10495).
4. **SHALL** contain exactly one [1..1] **code** (CONF:81-19141).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:81-19142).
 - 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:81-26504).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:81-8625).
 - 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:81-19097).

6. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:81-8626).
- a. This value **SHALL** contain exactly one [1..1] @code="419099009" Dead (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:81-26470).

Figure 149: Family History Death Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.47"/>
  <id root="6898fae0-5c8a-11db-b0de-0800200c9a66"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    code="419099009"
    codeSystem="2.16.840.1.113883.6.96"
    displayName="Dead"/>
</observation>
```

3.29 Family History Observation (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.46:2015-08-01 (open)]

Table 283: Family History Observation (V3) Contexts

Contained By:	Contains:
Family History Organizer (V3) (required)	Age Observation Family History Death Observation

Family History Observations related to a particular family member are contained within a Family History Organizer. The effectiveTime in the Family History Observation is the biologically or clinically relevant time of the observation. The biologically or clinically relevant time is the time at which the observation holds (is effective) for the family member (the subject of the observation).

Table 284: Family History Observation (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.46:2015-08-01)					
@classCode	1..1	SHALL		1198-8586	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1198-8587	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-8599	
@root	1..1	SHALL		1198-10496	2.16.840.1.113883.10.20.22.4.46
@extension	1..1	SHALL		1198-32605	2015-08-01
id	1..*	SHALL		1198-8592	
code	1..1	SHALL		1198-32427	urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 (Problem Type)
translation	1..*	SHALL		1198-32847	urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 (Problem Type)
statusCode	1..1	SHALL		1198-8590	
@code	1..1	SHALL		1198-19098	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	0..1	SHOULD		1198-8593	
value	1..1	SHALL	CD	1198-8591	urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 (Problem)
entryRelationship	0..1	MAY		1198-8675	
@typeCode	1..1	SHALL		1198-8676	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = SUBJ
@inversionInd	1..1	SHALL		1198-8677	true
observation	1..1	SHALL		1198-15526	Age Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.31)
entryRelationship	0..1	MAY		1198-8678	
@typeCode	1..1	SHALL		1198-8679	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CAUS
observation	1..1	SHALL		1198-15527	Family History Death Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.47)

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-8586).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-8587).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8599) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.46"** (CONF:1198-10496).
 - b. **SHALL** contain exactly one [1..1] **@extension="2015-08-01"** (CONF:1198-32605).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-8592).
5. **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** 2012-06-01 (CONF:1198-32427).
 - a. This code **SHALL** contain at least one [1..*] **translation**, 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:1198-32847).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-8590).
 - 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:1198-19098).
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1198-8593).
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:1198-8591).
9. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8675) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Subject (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1198-8676).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1198-8677).
 - c. **SHALL** contain exactly one [1..1] [Age Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.31) (CONF:1198-15526).
10. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8678) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="CAUS"** Causal or Contributory (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1198-8679).
 - b. **SHALL** contain exactly one [1..1] [Family History Death Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.47) ([CONF:1198-15527](#)).

Table 285: Problem Type (SNOMED CT)

Value Set: Problem Type 2.16.840.1.113883.3.88.12.3221.7.2 STATIC 2012-06-01			
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
404684003	SNOMED CT	2.16.840.1.113883.6.96	Finding
409586006	SNOMED CT	2.16.840.1.113883.6.96	Complaint
282291009	SNOMED CT	2.16.840.1.113883.6.96	Diagnosis
64572001	SNOMED CT	2.16.840.1.113883.6.96	Condition
248536006	SNOMED CT	2.16.840.1.113883.6.96	Finding of functional performance and activity
418799008	SNOMED CT	2.16.840.1.113883.6.96	Symptom
55607006	SNOMED CT	2.16.840.1.113883.6.96	Problem
373930000	SNOMED CT	2.16.840.1.113883.6.96	Cognitive function finding

Table 286: Problem Type (LOINC)

Value Set: Problem Type 2.16.840.1.113883.3.88.12.3221.7.2 STATIC 2014-09-02			
This value set indicates the level of medical judgment used to determine the existence of a problem.			
Value Set Source: http://www.loinc.org/			
Code	Code System	Code System OID	Print Name
75326-9	LOINC	2.16.840.1.113883.6.1	Problem HL7.CCDAR2
75325-1	LOINC	2.16.840.1.113883.6.1	Symptom HL7.CCDAR2
75324-4	LOINC	2.16.840.1.113883.6.1	Functional performance HL7.CCDAR2
75323-6	LOINC	2.16.840.1.113883.6.1	Condition HL7.CCDAR2
29308-4	LOINC	2.16.840.1.113883.6.1	Diagnosis
75322-8	LOINC	2.16.840.1.113883.6.1	Complaint HL7.CCDAR2
75275-8	LOINC	2.16.840.1.113883.6.1	Cognitive Function HL7.CCDAR2
75321-0	LOINC	2.16.840.1.113883.6.1	Clinical finding HL7.CCDAR2
75319-4	LOINC	2.16.840.1.113883.6.1	Cognitive function family member HL7.CCDAR2
75318-6	LOINC	2.16.840.1.113883.6.1	Problem family member HL7.CCDAR2
75317-8	LOINC	2.16.840.1.113883.6.1	Symptom family member HL7.CCDAR2
75316-0	LOINC	2.16.840.1.113883.6.1	Functional performance family member HL7.CCDAR2
75315-2	LOINC	2.16.840.1.113883.6.1	Condition family member HL7.CCDAR2
75314-5	LOINC	2.16.840.1.113883.6.1	Diagnosis family member HL7.CCDAR2

75313-7	LOINC	2.16.840.1.113883.6.1	Complaint family member HL7.CCDAR2
75312-9	LOINC	2.16.840.1.113883.6.1	Clinical finding family member HL7.CCDAR2

Figure 150: Family History Observation (V3) Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.46" extension="2015-08-01" />
  <!-- Family History Observation template -->
  <id root="d42ebf70-5c89-11db-b0de-0800200c9a66" />
  <code code="75323-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Condition">
  <translation code="64572001" displayName="Condition"
                codeSystem="2.16.840.1.113883.6.96"
  codeSystemName="SNOMED CT"></translation>
  </code>
  <statusCode code="completed" />
  <effectiveTime value="1967" />
  <value xsi:type="CD" code="22298006" codeSystem="2.16.840.1.113883.6.96"
  displayName="Myocardial infarction" />
  <entryRelationship typeCode="CAUS">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.47" />
      ...
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.31" />
      ....
    </observation>
  </entryRelationship>
</observation>

```

3.30 Family History Organizer (V3)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.45:2015-08-01 (open)]

Table 287: Family History Organizer (V3) Contexts

Contained By:	Contains:
Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional) Family History Section (V3) (optional)	Family History Observation (V3)

The Family History Organizer associates a set of observations with a family member. For example, the Family History Organizer can group a set of observations about the patient's father.

Table 288: Family History Organizer (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.45:2015-08-01)					
@classCode	1..1	SHALL		1198-8600	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		1198-8601	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-8604	
@root	1..1	SHALL		1198-10497	2.16.840.1.113883.10.20.22.4.45
@extension	1..1	SHALL		1198-32606	2015-08-01
id	1..*	SHALL		1198-32485	
statusCode	1..1	SHALL		1198-8602	
@code	1..1	SHALL		1198-19099	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
subject	1..1	SHALL		1198-8609	
relatedSubject	1..1	SHALL		1198-15244	
@classCode	1..1	SHALL		1198-15245	urn:oid:2.16.840.1.113883.5.41 (EntityClass) = PRS
code	1..1	SHALL		1198-15246	
@code	1..1	SHALL		1198-15247	urn:oid:2.16.840.1.113883.1.11.19579 (Family Member Value Set)
subject	0..1	SHOULD		1198-15248	
administrativeGenderCode	1..1	SHALL		1198-15974	
@code	1..1	SHALL		1198-15975	urn:oid:2.16.840.1.113883.1.11.1 (Administrative Gender (HL7 V3))
birthTime	0..1	SHOULD		1198-15976	
component	1..*	SHALL		1198-32428	
observation	1..1	SHALL		1198-32429	Family History Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.46:2015-08-01)

1. **SHALL** contain exactly one [1..1] @classCode="CLUSTER" Cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-8600).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-8601).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1198-8604) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.45" (CONF:1198-10497).
 - b. **SHALL** contain exactly one [1..1] @extension="2015-08-01" (CONF:1198-32606).
4. **SHALL** contain at least one [1..*] id (CONF:1198-32485).
5. **SHALL** contain exactly one [1..1] statusCode (CONF:1198-8602).
 - 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:1198-19099).
6. **SHALL** contain exactly one [1..1] subject (CONF:1198-8609).
 - a. This subject **SHALL** contain exactly one [1..1] relatedSubject (CONF:1198-15244).
 - i. This relatedSubject **SHALL** contain exactly one [1..1] @classCode="PRS" Person (CodeSystem: EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:1198-15245).
 - ii. This relatedSubject **SHALL** contain exactly one [1..1] code (CONF:1198-15246).
 1. This code **SHALL** contain exactly one [1..1] @code, which **SHOULD** be selected from ValueSet [Family Member Value Set](#) urn:oid:2.16.840.1.113883.1.11.19579 **DYNAMIC** (CONF:1198-15247).
 - iii. This relatedSubject **SHOULD** contain zero or one [0..1] subject (CONF:1198-15248).
 1. The subject, if present, **SHALL** contain exactly one [1..1] administrativeGenderCode (CONF:1198-15974).
 - a. This administrativeGenderCode **SHALL** contain exactly one [1..1] @code, which **SHALL** be selected from ValueSet [Administrative Gender \(HL7 V3\)](#) urn:oid:2.16.840.1.113883.1.11.1 **DYNAMIC** (CONF:1198-15975).
 2. The subject, if present, **SHOULD** contain zero or one [0..1] birthTime (CONF:1198-15976).
 3. The subject **SHOULD** contain zero or more [0..*] sdtc:id. 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 id element (CONF:1198-15249).
 4. The subject **MAY** contain zero or one [0..1] sdtc:deceasedInd. 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 deceasedInd element (CONF:1198-15981).
 5. The subject **MAY** contain zero or one [0..1] sdtc:deceasedTime. 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 deceasedTime element (CONF:1198-15982).

6. The age of a relative at the time of a family history observation **SHOULD** be inferred by comparing RelatedSubject/subject/birthTime with Observation/effectiveTime (CONF:1198-15983).
7. **SHALL** contain at least one [1..*] **component** (CONF:1198-32428).
 - a. Such components **SHALL** contain exactly one [1..1] Family History Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.46:2015-08-01) (CONF:1198-32429).

Table 289: Family Member Value Set

Value Set: Family Member Value Set urn:oid:2.16.840.1.113883.1.11.19579			
Family Relationships record the familial relationship of a person to another person. This value set is to be used when it is necessary to record family relationships (e.g., next of kin, or blood relations). This is a subset of the value set used for personal relationships			
Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.htm			
Code	Code System	Code System OID	Print Name
ADOPT	RoleCode	urn:oid:2.16.840.1.113883.5.111	adopted child
AUNT	RoleCode	urn:oid:2.16.840.1.113883.5.111	aunt
CHILD	RoleCode	urn:oid:2.16.840.1.113883.5.111	Child
CHLDINLAW	RoleCode	urn:oid:2.16.840.1.113883.5.111	child in-law
COUSN	RoleCode	urn:oid:2.16.840.1.113883.5.111	cousin
DOMPART	RoleCode	urn:oid:2.16.840.1.113883.5.111	domestic partner
FAMMEMB	RoleCode	urn:oid:2.16.840.1.113883.5.111	Family Member
CHLDFOST	RoleCode	urn:oid:2.16.840.1.113883.5.111	foster child
GRNDCHILD	RoleCode	urn:oid:2.16.840.1.113883.5.111	grandchild
GRPRN	RoleCode	urn:oid:2.16.840.1.113883.5.111	Grandparent
...			

Figure 151: Family History Organizer (V3) Example

```

<organizer moodCode="EVN" classCode="CLUSTER">
  <templateId root="2.16.840.1.113883.10.20.22.4.45" extension="2015-08-01" />
  <statusCode code="completed" />
  <subject>
    <relatedSubject classCode="PRS">
      <code code="FTH" displayName="Father" codeSystemName="HL7 FamilyMember"
codeSystem="2.16.840.1.113883.5.111">
        <translation code="9947008" displayName="Natural father"
codeSystemName="SNOMED" codeSystem="2.16.840.1.113883.6.96" />
      </code>
      <subject>
        <sdtc:id root="2.16.840.1.113883.19.5.99999.2" extension="99999999" />
        <id root="2.16.840.1.113883.19.5.99999.2" extension="1234" />
        <administrativeGenderCode code="M" />
        <birthTime value="1910" />
        <!-- Example use of sdtc extensions :-->
        <!-- <sdtc:deceasedInd value="true"/><sdtc:deceasedTime value="1967"/>
        -->
      </subject>
    </relatedSubject>
  </subject>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.46" extension="2015-08-01" />
      . . .
    </observation>
  </component>
</organizer>

```

3.31 Functional Status Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.67:2014-06-09 (open)]

Table 290: Functional Status Observation (V2) Contexts

Contained By:	Contains:
Functional Status Section (V2) (optional) Functional Status Organizer (V2) (required) Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional)	Assessment Scale Observation Author Participation Caregiver Characteristics Non-Medicinal Supply Activity (V2)

This template represents the patient's physical function (e.g., mobility status, instrumental activities of daily living, self-care status) and problems that limit function (dyspnea, dysphagia). The template may include assessment scale observations, identify supporting caregivers, and provide information about non-medicinal supplies. This template is used to represent physical or developmental function of all patient populations.

Table 291: Functional Status Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.67:2014-06-09)					
@classCode	1..1	SHALL		1098-13905	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-13906	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-13889	
@root	1..1	SHALL		1098-13890	2.16.840.1.113883.10.20.22.4.67
@extension	1..1	SHALL		1098-32568	2014-06-09
id	1..*	SHALL		1098-13907	
code	1..1	SHALL		1098-13908	
@code	1..1	SHALL		1098-31522	54522-8
@codeSystem	1..1	SHALL		1098-31523	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1098-13929	
@code	1..1	SHALL		1098-19101	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-13930	
value	1..1	SHALL		1098-13932	
author	0..*	SHOULD		1098-13936	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	0..1	MAY		1098-13892	
@typeCode	1..1	SHALL		1098-14596	REFR
supply	1..1	SHALL		1098-14218	Non-Medicinal Supply Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.50:2014-06-09)
entryRelationship	0..1	MAY		1098-13895	
@typeCode	1..1	SHALL		1098-14597	REFR
observation	1..1	SHALL		1098-13897	Caregiver Characteristics (identifier:

					urn:oid:2.16.840.1.113883.10.20.22.4.72
entryRelationship	0..1	MAY		1098-14465	
@typeCode	1..1	SHALL		1098-14598	COMP
observation	1..1	SHALL		1098-14466	Assessment Scale Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.69)
referenceRange	0..*	MAY		1098-13937	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-13905).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-13906).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-13889) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.67"** (CONF:1098-13890).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32568).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-13907).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-13908).
 - a. This code **SHALL** contain exactly one [1..1] **@code="54522-8"** Functional status (CONF:1098-31522).
 - 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:1098-31523).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-13929).
 - 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:1098-19101).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-13930).
8. **SHALL** contain exactly one [1..1] **value** (CONF:1098-13932).
 - a. If xsi:type="CD", **SHOULD** contain a code from SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96) (CONF:1098-14234).
9. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-13936).
10. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-13892) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** refers to (CONF:1098-14596).
 - b. **SHALL** contain exactly one [1..1] [Non-Medicinal Supply Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.50:2014-06-09) (CONF:1098-14218).
11. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-13895) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** refers to (CONF:1098-14597).

- b. **SHALL** contain exactly one [1..1] [Caregiver Characteristics](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.72) (CONF:1098-13897).
12. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-14465) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** has component (CONF:1098-14598).
 - b. **SHALL** contain exactly one [1..1] [Assessment Scale Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.69) (CONF:1098-14466).

referenceRange could be used to represent normal or expected capability for the function being evaluated.

- 13. **MAY** contain zero or more [0..*] **referenceRange** (CONF:1098-13937).

Figure 152: Functional Status Observation (V2) Example

```

<entry>
  <observation classCode="OBS" moodCode="EVN">
    <!-- Functional Status Observation V2-->
    <templateId root="2.16.840.1.113883.10.20.22.4.67" extension="2014-06-09" />
    <id root="ce7cfb78-bd16-467e-8bcf-859a3034108e" />
    <code code="54522-8" displayName="Functional status"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="SNOMED CT" />
    <text>
      <reference value="#FUNC1" />
    </text>
    <statusCode code="completed" />
    <effectiveTime value="200130311" />
    <value xsi:type="CD" code="129035000" displayName="independent with dressing"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" />
  </observation>
</entry>

```

3.32 Functional Status Organizer (V2)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.66:2014-06-09 (open)]

Table 292: Functional Status Organizer (V2) Contexts

Contained By:	Contains:
Functional Status Section (V2) (optional)	Author Participation Functional Status Observation (V2) Self-Care Activities (ADL and IADL)

This template groups related functional status observations into categories (e.g., mobility, self-care).

Table 293: Functional Status Organizer (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.66:2014-06-09)					
@classCode	1..1	SHALL		1098-14355	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		1098-14357	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-14361	
@root	1..1	SHALL		1098-14362	2.16.840.1.113883.10.20.22.4.66
@extension	1..1	SHALL		1098-32569	2014-06-09
id	1..*	SHALL		1098-14363	
code	1..1	SHALL		1098-14364	
statusCode	1..1	SHALL		1098-14358	
@code	1..1	SHALL		1098-31434	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
author	0..*	SHOULD		1098-31585	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
component	1..*	SHALL		1098-14359	
observation	1..1	SHALL		1098-14368	Functional Status Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.67:2014-06-09)
component	1..*	SHALL		1098-31432	
observation	1..1	SHALL		1098-31433	Self-Care Activities (ADL and IADL) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.128)

1. **SHALL** contain exactly one [1..1] @classCode="CLUSTER" Cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1098-14355).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-14357).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-14361) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.66" (CONF:1098-14362).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-06-09" (CONF:1098-32569).

4. **SHALL** contain at least one [1..*] **id** (CONF:1098-14363).

The code selected should indicate the category that groups the contained functional status evaluation observations (e.g., mobility, self-care, communication).

5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-14364).
 - a. **SHOULD** be selected from ICF (codeSystem 2.16.840.1.113883.6.254) **OR** LOINC (2.16.840.1.113883.6.1) (CONF:1098-31417).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-14358).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-31434).
7. **SHOULD** contain zero or more [0..*] **Author Participation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31585).
8. **SHALL** contain at least one [1..*] **component** (CONF:1098-14359) such that it
 - a. **SHALL** contain exactly one [1..1] **Functional Status Observation (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.67:2014-06-09) (CONF:1098-14368).
9. **SHALL** contain at least one [1..*] **component** (CONF:1098-31432) such that it
 - a. **SHALL** contain exactly one [1..1] **Self-Care Activities (ADL and IADL)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.128) (CONF:1098-31433).

Figure 153: Functional Status Organizer (V2) Example

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <!-- Functional Status Organizer V2-->
  <templateId root="2.16.840.1.113883.10.20.22.4.66" extension="2014-06-09" />
  <id root="a7bc1062-8649-42a0-833d-eed65bd017c9" />
  <code code="d5" displayName="Self-Care" codeSystem="2.16.840.1.113883.6.254"
codeSystemName="ICF" />
  <statusCode code="completed" />
  <author>
    <time value="200130311" />
    <assignedAuthor>
      <id extension="KP00017" root="2.16.840.1.113883.19.5" />
      <addr>
        <streetAddressLine>1003 Health Care
          Drive</streetAddressLine>
        <city>Ann Arbor</city>
        <state>MI</state>
        <postalCode>02368</postalCode>
        <country>US</country>
      </addr>
      <telecom use="WP" value="tel:(555)555-1003" />
      <assignedPerson>
        <name>
          <given>Assigned</given>
          <family>Amanda</family>
        </name>
      </assignedPerson>
    </assignedAuthor>
  </author>

  <component>
    <observation classCode="OBS" moodCode="EVN">
      <!-- Functional Status Observation V2-->
      <templateId root="2.16.840.1.113883.10.20.22.4.67" extension="2014-06-09" />
      ...
    </observation>
  </component>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <!-- Functional Status Observation V2-->
      <templateId root="2.16.840.1.113883.10.20.22.4.67" extension="2014-06-09" />
      ...
    </observation>
  </component>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <!-- Self-Care Activities (ADL and IADL)-->
      <templateId root="2.16.840.1.113883.10.20.22.4.128" />
      ...
    </observation>
  </component>
</organizer>
```

3.33 Functional Status Problem Observation (DEPRECATED)

[observation: identifier urn:h17ii:2.16.840.1.113883.10.20.22.4.68:2014-06-09 (open)]

Table 294: Functional Status Problem Observation (DEPRECATED) Contexts

Contained By:	Contains:
Functional Status Section (V2) (optional)	

A functional status problem observation is a clinical statement that represents a patient’s functional performance and ability.

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: Functional Status Problem Observation has been merged, without loss of expressivity, into Functional Status Observation (2.16.840.1.113883.10.20.22.4.67:2014-06-09).

Table 295: Functional Status Problem Observation (DEPRECATED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.68:2014-06-09)					
@classCode	1..1	SHALL		1098-14282	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-14283	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
@negationInd	0..1	MAY		1098-14307	
templateId	1..1	SHALL		1098-14312	
@root	1..1	SHALL		1098-14313	2.16.840.1.113883.10.20.22.4.68
@extension	1..1	SHALL		1098-32601	2014-06-09
id	1..*	SHALL		1098-14284	
code	1..1	SHALL		1098-14314	
@code	0..1	SHOULD		1098-14315	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 248536006
text	0..1	SHOULD		1098-14304	
reference	0..1	SHOULD		1098-15552	
@value	0..1	SHOULD		1098-15553	
statusCode	1..1	SHALL		1098-14286	
@code	1..1	SHALL		1098-19100	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	0..1	SHOULD		1098-14287	
low	1..1	SHALL		1098-26456	
high	0..1	MAY		1098-26457	
value	1..1	SHALL	CD	1098-14291	urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 (Problem)
@nullFlavor	0..1	MAY		1098-14292	
methodCode	0..1	MAY		1098-14316	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-14282).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-14283).

Use negationInd="true" to indicate that the problem was not observed.

3. **MAY** contain zero or one [0..1] **@negationInd** (CONF:1098-14307).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-14312) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.68"** (CONF:1098-14313).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32601).
5. **SHALL** contain at least one [1..*] **id** (CONF:1098-14284).
6. **SHALL** contain exactly one [1..1] **code** (CONF:1098-14314).
 - a. This code **SHOULD** contain zero or one [0..1] **@code="248536006"** finding of functional performance and activity (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:1098-14315).
7. **SHOULD** contain zero or one [0..1] **text** (CONF:1098-14304).
 - a. The text, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1098-15552).
 - i. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1098-15553).
 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:1098-15554).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-14286).
 - 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:1098-19100).
9. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-14287).

The value of effectiveTime/low represents onset date.

- a. The effectiveTime, if present, **SHALL** contain exactly one [1..1] **low** (CONF:1098-26456).

If the problem is resolved, record the resolution date in effectiveTime/high. If the problem is known to be resolved but the resolution date is not known, use @nullFlavor="UNK". If the problem is not resolved, do not include the high element.

- b. The effectiveTime, if present, **MAY** contain zero or one [0..1] **high** (CONF:1098-26457).
10. **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:1098-14291).
 - a. This value **MAY** contain zero or one [0..1] **@nullFlavor** (CONF:1098-14292).
 - i. If the diagnosis is unknown or the SNOMED code is unknown, **@nullFlavor** **SHOULD** be "UNK". If the diagnosis is known but the code cannot be found in

the Value Set, @nullFlavor **SHOULD** be “OTH” and the known diagnosis code **SHOULD** be placed in the translation element (CONF:1098-14293).

11. **MAY** contain zero or one [0..1] **methodCode** (CONF:1098-14316).

3.34 Goal Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.121 (open)]

Table 296: Goal Observation Contexts

Contained By:	Contains:
Plan of Treatment Section (V2) (optional) Goals Section (required)	Author Participation Entry Reference External Document Reference Goal Observation Priority Preference

This template represents a patient health goal. A Goal Observation template may have related components that are acts, encounters, observations, procedures, substance administrations, or supplies.

A goal may be a patient or provider goal. If the author is set to the recordTarget (patient), this is a patient goal. If the author is set to a provider, this is a provider goal. If both patient and provider are set as authors, this is a negotiated goal.

A goal usually has a related health concern and/or risk.

A goal may have components consisting of other goals (milestones). These milestones are related to the overall goal through entryRelationships.

Table 297: Goal Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.121)					
@classCode	1..1	SHALL		1098-30418	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-30419	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = GOL
templateId	1..1	SHALL		1098-8583	
@root	1..1	SHALL		1098-10512	2.16.840.1.113883.10.20.22.4.121
id	1..*	SHALL		1098-32332	
code	1..1	SHALL		1098-30784	urn:oid:2.16.840.1.113883.6.1 (LOINC)
statusCode	1..1	SHALL		1098-32333	
@code	1..1	SHALL		1098-32334	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = active
effectiveTime	0..1	SHOULD		1098-32335	
value	0..1	MAY		1098-32743	
author	1..*	SHALL		1098-30995	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	0..*	MAY		1098-30701	
@typeCode	1..1	SHALL		1098-30702	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1098-30703	Entry Reference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122)
entryRelationship	0..*	MAY		1098-30704	
@typeCode	1..1	SHALL		1098-30705	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
act	1..1	SHALL		1098-32879	Entry Reference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122)
entryRelationship	0..1	SHOULD		1098-30785	
@typeCode	1..1	SHALL		1098-30786	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR

observation	1..1	SHALL		1098-30787	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143)
entryRelationship	0..*	MAY		1098-31448	
@typeCode	1..1	SHALL		1098-31449	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1098-32880	Goal Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.121)
entryRelationship	0..*	MAY		1098-31559	
@typeCode	1..1	SHALL		1098-31560	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1098-31588	Entry Reference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122)
reference	0..*	MAY		1098-32754	
@typeCode	1..1	SHALL		1098-32755	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
externalDocument	1..1	SHALL		1098-32756	External Document Reference (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09)

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1098-30418).
2. **SHALL** contain exactly one [1..1] **@moodCode="GOL"** Goal (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1098-30419).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-8583) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.121"** (CONF:1098-10512).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-32332).
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:1098-30784).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-32333).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code="active"** (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-32334).
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-32335).
8. **MAY** contain zero or one [0..1] **value** (CONF:1098-32743).

If the author is set to the recordTarget (patient), this is a patient goal. If the author is set to a provider, this is a provider goal. If both patient and provider are set as authors, this is a negotiated goal.

9. **SHALL** contain at least one [1..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-30995).

The following entryRelationship represents the relationship between a Goal Observation and a Health Concern Act (Goal Observation REFERS TO Health Concern Act). As Health Concern Act is already defined in Health Concerns Section, rather than clone the whole Health Concern Act template, an Entry Reference may be used in entryRelationship to refer the template.

10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-30701) such that it
- SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-30702).
 - SHALL** contain exactly one [1..1] [Entry Reference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) (CONF:1098-30703).

The following entryRelationship represents a planned component of the goal such as Planned Encounter (V2), Planned Observation (V2), Planned Procedure (V2), Planned Medication Activity (V2), Planned Supply (V2), Planned Act (V2) or Planned Immunization Activity. Because these entries are already described in the Interventions Section of the CDA document instance, rather than repeating the full content of the entries, the Entry Reference template may be used to reference the entries.

11. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-30704) such that it
- SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-30705).
 - SHALL** contain exactly one [1..1] [Entry Reference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) (CONF:1098-32879).

The following entryRelationship represents the priority that the patient or a provider puts on the goal.

12. **SHOULD** contain zero or one [0..1] **entryRelationship** (CONF:1098-30785) such that it
- SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-30786).
 - SHALL** contain exactly one [1..1] [Priority Preference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-30787).

The following entryRelationship represents the relationship between two Goal Observations where the target is a component of the source (Goal Observation HAS COMPONENT Goal Observation). The component goal (target) is a Milestone.

13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31448) such that it
- SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31449).
 - SHALL** contain exactly one [1..1] [Goal Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.121) (CONF:1098-32880).

Where a Goal Observation needs to reference another entry already described in the CDA document instance, rather than repeating the full content of the entry, the Entry Reference template may be used to reference this entry.

14. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31559) 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:1098-31560).
 - b. **SHALL** contain exactly one [1..1] **Entry Reference** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) (CONF:1098-31588).

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

15. **MAY** contain zero or more [0..*] **reference** (CONF:1098-32754).
 - 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:1098-32755).
 - b. 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:1098-32756).

Figure 154: Goal Observation Example

```
<observation classCode="OBS" moodCode="GOL">
  <templateId root="2.16.840.1.113883.10.20.22.4.121" />
  <id root="3700b3b0-fbed-11e2-b778-0800200c9a66" />
  <code code="44616-1"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Pulse oximetry panel" />
  <statusCode code="active" />
  <effectiveTime value="20130902" />
  <value xsi:type="IVL_PQ">
    <low value="92" unit="%" />
  </value>
  <!--
    If the author is set to the recordTarget (patient), this is a patient goal.
    If the author is set to a provider, this is a provider goal.
    If both patient and provider are set as authors, this is a negotiated goal.
  -->
  <!-- Provider Author -->
  <author>
    <templateId root="2.16.840.1.113883.10.20.22.4.119" />
    ...
  </author>
  <!-- Patient Author -->
  <author typeCode="AUT">
    <templateId root="2.16.840.1.113883.10.20.22.4.119" />
    ...
  </author>
  <!-- This entryRelationship represents the relationship "Goal REFERS TO Health Concern" -
  -->
  <entryRelationship typeCode="REFR">
    <!-- Entry Reference Concern Act -->
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.122" />
      <!-- This id points to an already defined Health Concern in the Health Concerns
      Section -->
      <id root="4eab0e52-dd7d-4285-99eb-72d32ddb195c" />
      ...
    </act>
  </entryRelationship>
  <!-- Priority Preference -->
  <entryRelationship typeCode="RSON">
    <!-- Priority Preference - this is the preference that the patient
    (specified by the Author Participation template)
    places on the Goal -->
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.143" />
      ...
    </observation>
  </entryRelationship>
  <!-- Priority Preference - this is the preference that the provider
  (specified by the Author Participation template)
  places on the Goal -->
  <entryRelationship typeCode="RSON">
    <!-- Priority Preference -->
    <observation classCode="OBS" moodCode="EVN">
```

```

    <templateId root="2.16.840.1.113883.10.20.22.4.143" />
    ...
  </observation>
</entryRelationship>
</observation>

```

3.35 Handoff Communication Participants

[act: identifier urn:oid:2.16.840.1.113883.10.20.22.4.141 (open)]

Table 298: Handoff Communication Participants Contexts

Contained By:	Contains:
Plan of Treatment Section (V2) (optional) Planned Intervention Act (V2) (optional) Intervention Act (V2) (optional) Interventions Section (V3) (optional)	Author Participation

This template represents the sender (author) and receivers (participants) of a handoff communication in a plan of treatment. It does not convey details about the communication. The "handoff" process involves senders, those transmitting the patient's information and releasing the care of that patient to the next clinician, and receivers, those who accept the patient information and care of that patient.

Table 299: Handoff Communication Participants Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.141)					
@classCode	1..1	SHALL		1098-30832	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-30833	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-30834	
@root	1..1	SHALL		1098-30835	2.16.840.1.113883.10.20.22.4.141
code	1..1	SHALL		1098-30836	
@code	1..1	SHALL		1098-30837	432138007
@codeSystem	1..1	SHALL		1098-30838	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
statusCode	1..1	SHALL		1098-31668	
@code	1..1	SHALL		1098-31669	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-31670	
author	1..*	SHALL		1098-31672	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
participant	1..*	SHALL		1098-31673	
@typeCode	1..1	SHALL		1098-31674	urn:oid:2.16.840.1.113883.5.110 (RoleClass) = IRCP
participantRole	1..1	SHALL		1098-31675	
id	1..*	SHALL		1098-32422	
code	0..1	SHOULD		1098-31676	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1098-32392	
playingEntity	0..1	MAY		1098-32393	
name	1..*	SHALL		1098-32394	

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-30832).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1098-30833).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-30834) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.141"** (CONF:1098-30835).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1098-30836).
 - a. This code **SHALL** contain exactly one [1..1] **@code="432138007"** handoff communication (procedure) (CONF:1098-30837).
 - 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:1098-30838).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-31668).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-31669).

The effective time is the time when the handoff process took place between the sender and receiver of the patient information. This could be the time the information was transmitted, released, or verbally communicated to the next clinician.

6. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-31670).

The Author Participant contains the sender's contact information and is a resource for the Information Recipient for any follow-up questions.

7. **SHALL** contain at least one [1..*] **Author Participation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31672).

Documentation of the Information Recipient's name and address verifies that the information was exchanged.

8. **SHALL** contain at least one [1..*] **participant** (CONF:1098-31673) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="IRCP"** Information Recipient (CodeSystem: RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:1098-31674).
 - b. **SHALL** contain exactly one [1..1] **participantRole** (CONF:1098-31675).
 - i. This participantRole **SHALL** contain at least one [1..*] **id** (CONF:1098-32422).
 - ii. This participantRole **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:1098-31676).
 - iii. This participantRole **SHALL** contain at least one [1..*] **addr** (CONF:1098-32392).
 - iv. This participantRole **MAY** contain zero or one [0..1] **playingEntity** (CONF:1098-32393).
 1. The playingEntity, if present, **SHALL** contain at least one [1..*] **name** (CONF:1098-32394).

Figure 155: Handoff Communication Example

```
<entry>
  <act classCode="ACT" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.141" />
    <code code="432138007" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED
CT" displayName="handoff communication (procedure)" />
    <statusCode code="completed" />
    <effectiveTime value="20130712" />
    <author typeCode="AUT">
      <templateId root="2.16.840.1.113883.10.20.22.4.119" />
      <time value="20130730" />
      <assignedAuthor>
        <id root="d839038b-7171-4165-a760-467925b43857" />
        ...
      </assignedAuthor>
    </author>
    <participant typeCode="IRCP">
      <participantRole>
        <code code="163W00000X" codeSystem="2.16.840.1.113883.6.101"
codeSystemName="NUCC Health Care Provider Taxonomy" displayName="Registered Nurse" />
        ...
      </participantRole>
    </participant>
  </act>
</entry>
```


3.36 Health Concern Act (V2)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.132:2015-08-01
(open)]

Table 300: Health Concern Act (V2) Contexts

Contained By:	Contains:
Health Concerns Section (V2) (required)	Allergy - Intolerance Observation (V2) Assessment Scale Observation Author Participation Caregiver Characteristics Characteristics of Home Environment Cultural and Religious Observation Encounter Diagnosis (V3) Entry Reference External Document Reference Family History Organizer (V3) Functional Status Observation (V2) Hospital Admission Diagnosis (V3) Longitudinal Care Wound Observation (V2) Mental Status Observation (V3) Nutrition Assessment Nutritional Status Observation Postprocedure Diagnosis (V3) Pregnancy Observation Preoperative Diagnosis (V3) Priority Preference Problem Concern Act (V3) Problem Observation (V3) Reaction Observation (V2) Result Observation (V3) Result Organizer (V3) Self-Care Activities (ADL and IADL) Sensory Status Smoking Status - Meaningful Use (V2) Social History Observation (V3) Substance or Device Allergy - Intolerance Observation (V2) Tobacco Use (V2) Vital Sign Observation (V2)

This template represents a health concern.

It is a wrapper for a single health concern which may be derived from a variety of sources within an EHR (such as Problem List, Family History, Social History, Social Worker Note, etc.).

A Health Concern Act is used to track non-optimal physical or psychological situations drawing the patient to the healthcare system. These may be from the perspective of the care team or from the perspective of the patient.

When the underlying condition is of concern (i.e., as long as the condition, whether active or resolved, is of ongoing concern and interest), the statusCode is “active”. Only when the underlying condition is no longer of concern is the statusCode set to “completed”. The effectiveTime reflects the time that the underlying condition was felt to be a concern; it may or may not correspond to the effectiveTime of the condition (e.g., even five years later, a prior heart attack may remain a concern).

Health concerns require intervention(s) to increase the likelihood of achieving the goals of care for the patient and they specify the condition oriented reasons for creating the plan.

Table 301: Health Concern Act (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.132:2015-08-01)					
@classCode	1..1	SHALL		1198-30750	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1198-30751	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-30752	
@root	1..1	SHALL		1198-30753	2.16.840.1.113883.10.20.22.4.132
@extension	1..1	SHALL		1198-32861	2015-08-01
id	1..*	SHALL		1198-30754	
code	1..1	SHALL		1198-32310	
@code	1..1	SHALL		1198-32311	75310-3
@codeSystem	1..1	SHALL		1198-32312	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1198-30758	
@code	1..1	SHALL		1198-32313	urn:oid:2.16.840.1.113883.11.20.9.19 (ProblemAct statusCode)
effectiveTime	0..1	MAY		1198-30759	
author	0..*	SHOULD		1198-31546	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	0..*	MAY		1198-30761	
@typeCode	1..1	SHALL		1198-30762	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31001	Problem Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01)
entryRelationship	0..*	MAY		1198-31007	
@typeCode	1..1	SHALL		1198-31008	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31186	Allergy - Intolerance Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01)

					0.22.4.7:2014-06-09
entryRelationship	0..*	MAY		1198-31157	
@typeCode	1..1	SHALL		1198-31158	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-32106	Entry Reference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122)
entryRelationship	0..*	MAY		1198-31160	
@typeCode	1..1	SHALL		1198-31161	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
act	1..1	SHALL		1198-32107	Entry Reference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122)
entryRelationship	0..*	MAY		1198-31190	
@typeCode	1..1	SHALL		1198-31191	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31192	Assessment Scale Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.69)
entryRelationship	0..*	MAY		1198-31232	
@typeCode	1..1	SHALL		1198-31264	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31265	Self-Care Activities (ADL and IADL) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.128)
entryRelationship	0..*	MAY		1198-31234	
@typeCode	1..1	SHALL		1198-31268	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31273	Mental Status Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.74:2015-08-01)
entryRelationship	0..*	MAY		1198-31235	
@typeCode	1..1	SHALL		1198-31269	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR

observation	1..1	SHALL		1198-31275	Smoking Status - Meaningful Use (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.78:2014-06-09)
entryRelationship	0..*	MAY		1198-31236	
@typeCode	1..1	SHALL		1198-31270	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-31277	Encounter Diagnosis (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.80:2015-08-01)
entryRelationship	0..*	MAY		1198-31237	
@typeCode	1..1	SHALL		1198-31279	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
organizer	1..1	SHALL		1198-31280	Family History Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.45:2015-08-01)
entryRelationship	0..*	MAY		1198-31238	
@typeCode	1..1	SHALL		1198-31282	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31283	Functional Status Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.67:2014-06-09)
entryRelationship	0..*	MAY		1198-31241	
@typeCode	1..1	SHALL		1198-31291	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-31292	Hospital Admission Diagnosis (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.34:2015-08-01)
entryRelationship	0..*	MAY		1198-31244	
@typeCode	1..1	SHALL		1198-31300	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31301	Nutrition Assessment (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.138)
entryRelationship	0..*	MAY		1198-31246	

@typeCode	1..1	SHALL		1198-31306	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-31307	Postprocedure Diagnosis (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.51:2015-08-01)
entryRelationship	0..*	MAY		1198-31247	
@typeCode	1..1	SHALL		1198-31309	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31310	Pregnancy Observation (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.8)
entryRelationship	0..*	MAY		1198-31248	
@typeCode	1..1	SHALL		1198-31312	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-31313	Preoperative Diagnosis (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.65:2015-08-01)
entryRelationship	0..*	MAY		1198-31250	
@typeCode	1..1	SHALL		1198-31318	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31319	Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09)
entryRelationship	0..*	MAY		1198-31251	
@typeCode	1..1	SHALL		1198-31321	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31322	Result Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2015-08-01)
entryRelationship	0..*	MAY		1198-31252	
@typeCode	1..1	SHALL		1198-31324	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31325	Sensory Status (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.127)

entryRelationship	0..*	MAY		1198-31253	
@typeCode	1..1	SHALL		1198-31327	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31328	Social History Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2015-08-01)
entryRelationship	0..*	MAY		1198-31254	
typeId	0..1	MAY		1198-31330	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31331	Substance or Device Allergy - Intolerance Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.90:2014-06-09)
entryRelationship	0..*	MAY		1198-31255	
@typeCode	1..1	SHALL		1198-31333	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31334	Tobacco Use (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09)
entryRelationship	0..*	MAY		1198-31256	
@typeCode	1..1	SHALL		1198-31336	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31337	Vital Sign Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09)
entryRelationship	0..*	MAY		1198-31257	
@typeCode	1..1	SHALL		1198-31339	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31340	Longitudinal Care Wound Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.114:2015-08-01)
entryRelationship	0..*	MAY		1198-31365	
@typeCode	1..1	SHALL		1198-31366	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SPRT

observation	1..1	SHALL		1198-31367	Problem Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01)
entryRelationship	0..*	MAY		1198-31368	
@typeCode	1..1	SHALL		1198-31369	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31370	Caregiver Characteristics (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.72)
entryRelationship	0..*	MAY		1198-31371	
@typeCode	1..1	SHALL		1198-31372	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31373	Cultural and Religious Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.111)
entryRelationship	0..*	MAY		1198-31374	
@typeCode	1..1	SHALL		1198-31375	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31376	Characteristics of Home Environment (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.109)
entryRelationship	0..*	MAY		1198-31377	
@typeCode	1..1	SHALL		1198-31378	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31379	Nutritional Status Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.124)
entryRelationship	0..*	MAY		1198-31380	
@typeCode	1..1	SHALL		1198-31381	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
organizer	1..1	SHALL		1198-31382	Result Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2015-08-01)
entryRelationship	0..*	MAY		1198-31442	

@typeCode	1..1	SHALL		1198-31443	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31444	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143)
entryRelationship	0..*	MAY		1198-31544	
@typeCode	1..1	SHALL		1198-31547	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-31548	Problem Concern Act (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01)
entryRelationship	0..*	MAY		1198-31549	
@typeCode	1..1	SHALL		1198-31550	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-31551	Entry Reference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122)
reference	0..*	MAY		1198-32757	
@typeCode	1..1	SHALL		1198-32758	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
externalDocument	1..1	SHALL		1198-32759	External Document Reference (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09)

1. **SHALL** contain exactly one [1..1] @classCode="ACT" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1198-30750).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1198-30751).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1198-30752) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.132" (CONF:1198-30753).
 - b. **SHALL** contain exactly one [1..1] @extension="2015-08-01" (CONF:1198-32861).
4. **SHALL** contain at least one [1..*] id (CONF:1198-30754).
5. **SHALL** contain exactly one [1..1] code (CONF:1198-32310).
 - a. This code **SHALL** contain exactly one [1..1] @code="75310-3" Health Concern (CONF:1198-32311).
 - 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:1198-32312).

6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-30758).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [ProblemAct statusCode](#) urn:oid:2.16.840.1.113883.11.20.9.19 **STATIC** (CONF:1198-32313).
7. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:1198-30759).

A health concern may be a patient or provider concern. If the author is set to the recordTarget (patient), this is a patient concern. If the author is set to a provider, this is a provider concern. If both patient and provider are set as authors, this is a concern of both the patient and the provider.

8. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-31546).
9. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-30761) 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:1198-30762).
 - b. **SHALL** contain exactly one [1..1] [Problem Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) (CONF:1198-31001).
10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31007) 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:1198-31008).
 - b. **SHALL** contain exactly one [1..1] [Allergy - Intolerance Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.7:2014-06-09) (CONF:1198-31186).

The following entryRelationship represents the relationship between two Health Concern Acts where there is a general relationship between the source and the target (Health Concern REFERS TO Health Concern). For example, a patient has 2 health concerns identified in a CARE Plan: Failure to Thrive and Poor Feeding, while it could be that one may have caused the other, at the time of care planning and documentation it is not necessary, nor desirable to have to assert what caused what. The Entry Reference template is used here because the target Health Concern Act will be defined elsewhere in the Health Concerns Section and thus a reference to that template is all that is required.

11. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31157) 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:1198-31158).
 - b. **SHALL** contain exactly one [1..1] [Entry Reference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) (CONF:1198-32106).
 - i. The Entry Reference template **SHALL** contain an id that references a Health Concern Act (CONF:1198-32860).

The following entryRelationship represents the relationship between two Health Concern Acts where the target is a component of the source (Health Concern HAS COMPONENT Health Concern). For example, a patient has an Impaired Mobility Health Concern. There may then be

the need to document several component health concerns, such as "Unable to Transfer Bed to Chair", "Unable to Rise from Commode", "Short of Breath Walking with Walker". The Entry Reference template is used here because the target Health Concern Act will be defined elsewhere in the Health Concerns Section and thus a reference to that template is all that is required.

12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31160) 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:1198-31161).
 - b. **SHALL** contain exactly one [1..1] **Entry Reference** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) (CONF:1198-32107).
 - i. The Entry Reference template **SHALL** contain an id that references a Health Concern Act (CONF:1198-32745).
13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31190) 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:1198-31191).
 - b. **SHALL** contain exactly one [1..1] **Assessment Scale Observation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.69) (CONF:1198-31192).
14. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31232) 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:1198-31264).
 - b. **SHALL** contain exactly one [1..1] **Self-Care Activities (ADL and IADL)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.128) (CONF:1198-31265).
15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31234) 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:1198-31268).
 - b. **SHALL** contain exactly one [1..1] **Mental Status Observation (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.74:2015-08-01) (CONF:1198-31273).
16. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31235) 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:1198-31269).
 - b. **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:1198-31275).
17. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31236) 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:1198-31270).

- b. **SHALL** contain exactly one [1..1] [Encounter Diagnosis \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2015-08-01) (CONF:1198-31277).
- 18. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31237) 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:1198-31279).
 - b. **SHALL** contain exactly one [1..1] [Family History Organizer \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.45:2015-08-01) (CONF:1198-31280).
- 19. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31238) 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:1198-31282).
 - b. **SHALL** contain exactly one [1..1] [Functional Status Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.67:2014-06-09) (CONF:1198-31283).
- 20. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31241) 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:1198-31291).
 - b. **SHALL** contain exactly one [1..1] [Hospital Admission Diagnosis \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.34:2015-08-01) (CONF:1198-31292).
- 21. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31244) 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:1198-31300).
 - b. **SHALL** contain exactly one [1..1] [Nutrition Assessment](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.138) (CONF:1198-31301).
- 22. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31246) 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:1198-31306).
 - b. **SHALL** contain exactly one [1..1] [Postprocedure Diagnosis \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.51:2015-08-01) (CONF:1198-31307).
- 23. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31247) 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:1198-31309).
 - b. **SHALL** contain exactly one [1..1] [Pregnancy Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.8) (CONF:1198-31310).
- 24. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31248) 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:1198-31312).
 - b. **SHALL** contain exactly one [1..1] [Preoperative Diagnosis \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.65:2015-08-01) (CONF:1198-31313).
25. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31250) 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:1198-31318).
 - 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:1198-31319).
26. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31251) 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:1198-31321).
 - b. **SHALL** contain exactly one [1..1] [Result Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2015-08-01) (CONF:1198-31322).
27. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31252) 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:1198-31324).
 - b. **SHALL** contain exactly one [1..1] [Sensory Status](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.127) (CONF:1198-31325).
28. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31253) 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:1198-31327).
 - b. **SHALL** contain exactly one [1..1] [Social History Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2015-08-01) (CONF:1198-31328).
29. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31254) such that it
- a. **MAY** contain zero or one [0..1] typeId="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-31330).
 - b. **SHALL** contain exactly one [1..1] [Substance or Device Allergy - Intolerance Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.90:2014-06-09) (CONF:1198-31331).
30. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31255) 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:1198-31333).

- b. **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:1198-31334).
31. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31256) 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:1198-31336).
 - b. **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:1198-31337).
32. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31257) 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:1198-31339).
 - b. **SHALL** contain exactly one [1..1] [Longitudinal Care Wound Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.114:2015-08-01) (CONF:1198-31340).

The following entryRelationship represents the relationship Health Concern HAS SUPPORT Observation.

33. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31365) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="SPRT"** Has support (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-31366).
 - b. **SHALL** contain exactly one [1..1] [Problem Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) (CONF:1198-31367).
34. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31368) 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:1198-31369).
 - b. **SHALL** contain exactly one [1..1] [Caregiver Characteristics](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.72) (CONF:1198-31370).
35. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31371) 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:1198-31372).
 - b. **SHALL** contain exactly one [1..1] [Cultural and Religious Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.111) (CONF:1198-31373).
36. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31374) 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:1198-31375).

- b. **SHALL** contain exactly one [1..1] [Characteristics of Home Environment](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.109) (CONF:1198-31376).
37. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31377) 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:1198-31378).
 - b. **SHALL** contain exactly one [1..1] [Nutritional Status Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.124) (CONF:1198-31379).
38. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31380) 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:1198-31381).
 - b. **SHALL** contain exactly one [1..1] [Result Organizer \(V3\)](#) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.1:2015-08-01) (CONF:1198-31382).

The following entryRelationship represents the priority that the patient or a provider puts on the health concern.

39. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31442) 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:1198-31443).
 - b. **SHALL** contain exactly one [1..1] [Priority Preference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1198-31444).
40. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31544) 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:1198-31547).
 - b. **SHALL** contain exactly one [1..1] [Problem Concern Act \(V3\)](#) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01) (CONF:1198-31548).

Where a Health Concern needs to reference another entry already described in the CDA document instance, rather than repeating the full content of the entry, the Entry Reference template may be used to reference this entry.

41. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31549) 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:1198-31550).
 - b. **SHALL** contain exactly one [1..1] [Entry Reference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) (CONF:1198-31551).

Where it is necessary to reference an external clinical document such a Referral document, Discharge Summary document etc., the External Document Reference template can be used to reference this document. However, if this Care Plan document is replacing or appending

another Care Plan document in the same set, that relationship is set in the header, using ClinicalDocument/relatedDocument.

42. **MAY** contain zero or more [0..*] **reference** (CONF:1198-32757).

- 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:1198-32758).
- b. 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:1198-32759).

Figure 156: Health Concern Act Example

```
<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.132" extension="2015-08-01" />
  <id root="4eab0e52-dd7d-4285-99eb-72d32ddb195c" />
  <code code="75310-3"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Health Concern" />
  <!-- This Health Concern has a statusCode of active because it is an active concern -->
  <statusCode code="active" />
  <!-- The effective time is the date that the Health Concern started being followed -
    this does not necessarily correlate to the onset date of the contained health issues--
  >
  <effectiveTime value="20130616" />
  <!-- Health Concern: Current every day smoker-->
  <entryRelationship typeCode="REFR">
    <!-- Tobacco Use (V2) -->
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.85" extension="2014-06-09" />
      ...
    </observation>
  </entryRelationship>
  <!-- Health Concern Problem: Respiratory insufficiency -->
  <entryRelationship typeCode="REFR">
    <!-- Problem Observation (V2) -->
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01" />
      ...
    </observation>
  </entryRelationship>
  <!-- Health Concern Diagnosis: Pneumonia -->
  <entryRelationship typeCode="REFR">
    <!-- Problem Observation (V2) -->
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01" />
      ...
    </observation>
  </entryRelationship>
  <!--
    This is an entry relationship of the SPRT (support) type which shows
    that the productive cough supports the Health Concern (Problem: Respiratory
    Insufficiency and Diagnosis: Pneumonia
    This entryRelationship represents the relationship:
    Health Concern HAS SUPPORT Observation
  -->
  <entryRelationship typeCode="SPRT">
    <!-- Problem Observation (V2) -->
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01" />
      ...
    </observation>
  </entryRelationship>
```

```

<!-- Priority Preference -->
<entryRelationship typeCode="RSON">
  <!-- Priority Preference - this is the preference that the patient
  (specified by the Author Participation template)
  places on the Health Concern -->
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.143" />
    ...

  </observation>
</entryRelationship>
<!-- Priority Preference - this is the preference that the provider
(specified by the Author Participation template)
places on the Health Concern -->
<entryRelationship typeCode="RSON">
  <!-- Priority Preference -->
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.143" />
    ...

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

```

3.37 Health Status Observation (V2)

[observation: identifier urn:h17ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09 (open)]

Table 302: Health Status Observation (V2) Contexts

Contained By:	Contains:
Health Concerns Section (V2) (optional) Problem Section (entries optional) (V3) (optional) Problem Section (entries required) (V3) (optional)	

This template represents information about the overall health status of the patient. To represent the impact of a specific problem or concern related to the patient's expected health outcome use the Prognosis Observation template 2.16.840.1.113883.10.20.22.4.113.

Table 303: Health Status Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09)					
@classCode	1..1	SHALL		1098-9057	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-9072	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-16756	
@root	1..1	SHALL		1098-16757	2.16.840.1.113883.10.20.22.4.5
@extension	1..1	SHALL		1098-32558	2014-06-09
id	1..*	SHALL		1098-32486	
code	1..1	SHALL		1098-19143	
@code	1..1	SHALL		1098-19144	11323-3
@codeSystem	1..1	SHALL		1098-32161	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1098-9074	
@code	1..1	SHALL		1098-19103	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1098-9075	urn:oid:2.16.840.1.113883.1.11.20.12 (HealthStatus)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-9057).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-9072).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-16756) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.5" (CONF:1098-16757).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32558).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-32486).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-19143).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="11323-3" Health status (CONF:1098-19144).
 - 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:1098-32161).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-9074).

- 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:1098-19103).
7. **SHALL** contain exactly one [1..1] value with @xsi:type="CD", where the code **SHALL** be selected from ValueSet HealthStatus urn:oid:2.16.840.1.113883.1.11.20.12 **DYNAMIC** (CONF:1098-9075).

Table 304: HealthStatus

Value Set: HealthStatus urn:oid:2.16.840.1.113883.1.11.20.12			
Represents the general health status of the patient.			
Value Set Source: https://www.hl7.org/			
Code	Code System	Code System OID	Print Name
81323004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Alive and well
313386006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	In remission
162467007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Symptom free
161901003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Chronically ill
271593001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Severely ill
21134002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Disabled
161045001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Severely disabled
419099009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Deceased
135818000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	General health poor
135815002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	General health good
...			

Figure 157: Health Status Observation (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.5" extension="2014-06-09"/>
  <code code="11323-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Health status" />
  <text>
    <reference value="#healthstatus" />
  </text>
  <statusCode code="completed" />
  <value xsi:type="CD" code="81323004" codeSystem="2.16.840.1.113883.6.96"
  codeSystemName="SNOMED CT" displayName="Alive and well" />
</observation>
```

3.38 Highest Pressure Ulcer Stage

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.77 (open)]

Table 305: Highest Pressure Ulcer Stage Contexts

Contained By:	Contains:
Longitudinal Care Wound Observation (V2) (optional)	

This observation contains a description of the wound tissue of the most severe or highest staged pressure ulcer observed on a patient.

Table 306: Highest Pressure Ulcer Stage Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.77)					
@classCode	1..1	SHALL		81-14726	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-14727	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		81-14728	
@root	1..1	SHALL		81-14729	2.16.840.1.113883.10.20.22.4.77
id	1..*	SHALL		81-14730	
code	1..1	SHALL		81-14731	
@code	1..1	SHALL		81-14732	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 420905001
value	1..1	SHALL		81-14733	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-14726).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-14727).
3. **SHALL** contain exactly one [1..1] templateId (CONF:81-14728) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.77" (CONF:81-14729).
4. **SHALL** contain at least one [1..*] id (CONF:81-14730).
5. **SHALL** contain exactly one [1..1] code (CONF:81-14731).
 - a. This code **SHALL** contain exactly one [1..1] @code="420905001" Highest Pressure Ulcer Stage (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:81-14732).
6. **SHALL** contain exactly one [1..1] value (CONF:81-14733).

Figure 158: Highest Pressure Ulcer Stage Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.77"/>
  <id root="08edb7c0-2111-43f2-a784-9a5fdfaa67f0"/>
  <code code="420905001" codeSystem="2.16.840.1.113883.6.96"
    displayName="Highest Pressure Ulcer Stage"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" code="421306004"
    codeSystem="2.16.840.1.113883.6.96"
    displayName="necrotic eschar"/>
</observation>

```

3.39 Hospital Admission Diagnosis (V3)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.34:2015-08-01 (open)]

Table 307: Hospital Admission Diagnosis (V3) Contexts

Contained By:	Contains:
Admission Diagnosis Section (V3) (optional) Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional)	Problem Observation (V3)

This template represents problems or diagnoses identified by the clinician at the time of the patient's admission.

Table 308: Hospital Admission Diagnosis (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.34:2015-08-01)					
@classCode	1..1	SHALL		1198-7671	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1198-7672	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-16747	
@root	1..1	SHALL		1198-16748	2.16.840.1.113883.10.20.22.4.34
@extension	1..1	SHALL		1198-32535	2015-08-01
code	1..1	SHALL		1198-19145	
@code	1..1	SHALL		1198-19146	46241-6
@codeSystem	1..1	SHALL		1198-32162	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entryRelationship	1..*	SHALL		1198-7674	
@typeCode	1..1	SHALL		1198-7675	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
observation	1..1	SHALL		1198-15535	Problem Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01)

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-7671).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-7672).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-16747) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.34"** (CONF:1198-16748).
 - b. **SHALL** contain exactly one [1..1] **@extension="2015-08-01"** (CONF:1198-32535).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-19145).
 - a. This code **SHALL** contain exactly one [1..1] **@code="46241-6"** Admission diagnosis (CONF:1198-19146).
 - 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:1198-32162).
5. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1198-7674) 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:1198-7675).
- b. **SHALL** contain exactly one [1..1] [Problem Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) (CONF:1198-15535).

Figure 159: Hospital Admission Diagnosis (V3) Example

```

<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.34" extension="2015-08-01" />
  <id root="5a784260-6856-4f38-9638-80c751aff2fb" />
  <code code="46241-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Hospital Admission Diagnosis" />
  <statusCode code="active" />
  <effectiveTime>
    <low value="20090303" />
  </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" extension="2015-08-01" />
      ...
    </observation>
  </entryRelationship>
</act>

```

3.40 Hospital Discharge Diagnosis (V3)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.33:2015-08-01 (open)]

Table 309: Hospital Discharge Diagnosis (V3) Contexts

Contained By:	Contains:
Discharge Diagnosis Section (V3) (optional)	Problem Observation (V3)

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 310: Hospital Discharge Diagnosis (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.33:2015-08-01)					
@classCode	1..1	SHALL		1198-7663	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1198-7664	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-16764	
@root	1..1	SHALL		1198-16765	2.16.840.1.113883.10.20.22.4.33
@extension	1..1	SHALL		1198-32534	2015-08-01
code	1..1	SHALL		1198-19147	
@code	1..1	SHALL		1198-19148	11535-2
@codeSystem	1..1	SHALL		1198-32163	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entryRelationship	1..*	SHALL		1198-7666	
@typeCode	1..1	SHALL		1198-7667	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
observation	1..1	SHALL		1198-15536	Problem Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01)

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-7663).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-7664).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-16764) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.33"** (CONF:1198-16765).
 - b. **SHALL** contain exactly one [1..1] **@extension="2015-08-01"** (CONF:1198-32534).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-19147).
 - a. This code **SHALL** contain exactly one [1..1] **@code="11535-2"** Hospital discharge diagnosis (CONF:1198-19148).
 - 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:1198-32163).
5. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1198-7666) 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:1198-7667).
- b. **SHALL** contain exactly one [1..1] Problem Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) (CONF:1198-15536).

Figure 160: Hospital Discharge Diagnosis (V3) Example

```

<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.33" extension="2015-08-01"/>
  <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" extension="2015-08-01" />
      ...
    </observation>
  </entryRelationship>
</act>

```

3.41 Immunization Activity (V3)

[substanceAdministration: identifier
urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01 (open)]

Table 311: Immunization Activity (V3) Contexts

Contained By:	Contains:
<p>Immunizations Section (entries required) (V3) (required)</p> <p>Immunizations Section (entries optional) (V3) (optional)</p> <p>Planned Intervention Act (V2) (optional)</p> <p>Intervention Act (V2) (optional)</p>	<p>Author Participation</p> <p>Drug Vehicle</p> <p>Immunization Medication Information (V2)</p> <p>Immunization Refusal Reason</p> <p>Indication (V2)</p> <p>Instruction (V2)</p> <p>Medication Dispense (V2)</p> <p>Medication Supply Order (V2)</p> <p>Precondition for Substance Administration (V2)</p> <p>Reaction Observation (V2)</p> <p>Substance Administered Act</p>

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 312: Immunization Activity (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01)					
@classCode	1..1	SHALL		1198-8826	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM
@moodCode	1..1	SHALL		1198-8827	urn:oid:2.16.840.1.113883.11.20.9.18 (MoodCodeEvnInt)
@negationInd	1..1	SHALL		1198-8985	
templateId	1..1	SHALL		1198-8828	
@root	1..1	SHALL		1198-10498	2.16.840.1.113883.10.20.22.4.52
@extension	1..1	SHALL		1198-32528	2015-08-01
id	1..*	SHALL		1198-8829	
code	0..1	MAY		1198-8830	
statusCode	1..1	SHALL		1198-8833	
@code	1..1	SHALL		1198-32359	urn:oid:2.16.840.1.113883.1.11.159331 (ActStatus)
effectiveTime	1..1	SHALL		1198-8834	
repeatNumber	0..1	MAY		1198-8838	
routeCode	0..1	MAY		1198-8839	urn:oid:2.16.840.1.113883.3.88.12.3221.8.7 (Medication Route FDA)
approachSiteCode	0..1	MAY	SET<CD>	1198-8840	urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 (Body Site)
doseQuantity	0..1	SHOULD		1198-8841	
@unit	0..1	SHOULD		1198-8842	urn:oid:2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive)
administrationUnitCode	0..1	MAY		1198-8846	urn:oid:2.16.840.1.113762.1.4.1021.30 (AdministrationUnitDoseForm)
consumable	1..1	SHALL		1198-8847	
manufacturedProduct	1..1	SHALL		1198-15546	Immunization Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09)

performer	0..1	SHOULD		1198-8849	
author	0..*	SHOULD		1198-31151	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
participant	0..*	MAY		1198-8850	
@typeCode	1..1	SHALL		1198-8851	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM
participantRole	1..1	SHALL		1198-15547	Drug Vehicle (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.24)
entryRelationship	0..*	MAY		1198-8853	
@typeCode	1..1	SHALL		1198-8854	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1198-15537	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09)
entryRelationship	0..1	MAY		1198-8856	
@typeCode	1..1	SHALL		1198-8857	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1198-8858	true
act	1..1	SHALL		1198-31392	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09)
entryRelationship	0..1	MAY		1198-8860	
@typeCode	1..1	SHALL		1198-8861	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
supply	1..1	SHALL		1198-15539	Medication Supply Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09)
entryRelationship	0..1	MAY		1198-8863	
@typeCode	1..1	SHALL		1198-8864	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
supply	1..1	SHALL		1198-15540	Medication Dispense (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09)
entryRelationship	0..1	MAY		1198-	

				8866	
@typeCode	1..1	SHALL		1198-8867	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = CAUS
observation	1..1	SHALL		1198-15541	Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09)
entryRelationship	0..1	MAY		1198-8988	
@typeCode	1..1	SHALL		1198-8989	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1198-15542	Immunization Refusal Reason (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.53)
entryRelationship	0..*	SHOULD		1198-31510	
@typeCode	1..1	SHALL		1198-31511	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
@inversionInd	1..1	SHALL		1198-31512	true
sequenceNumber	0..1	MAY		1198-31513	
act	1..1	SHALL		1198-31514	Substance Administered Act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.118)
precondition	0..*	MAY		1198-8869	
@typeCode	1..1	SHALL		1198-8870	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = PRCN
criterion	1..1	SHALL		1198-15548	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:1198-8826).
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** (CONF:1198-8827).
3. **SHALL** contain exactly one [1..1] @negationInd (CONF:1198-8985).
Note: Use negationInd="true" to indicate that the immunization was not given.
4. **SHALL** contain exactly one [1..1] templateId (CONF:1198-8828) such that it

- a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.52" (CONF:1198-10498).
 - b. **SHALL** contain exactly one [1..1] @extension="2015-08-01" (CONF:1198-32528).
5. **SHALL** contain at least one [1..*] id (CONF:1198-8829).
6. **MAY** contain zero or one [0..1] code (CONF:1198-8830).
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:1198-8833).
 - 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:1198-32359).
8. **SHALL** contain exactly one [1..1] effectiveTime (CONF:1198-8834).

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:1198-8838).
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:1198-8839).
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:1198-8840).
12. **SHOULD** contain zero or one [0..1] doseQuantity (CONF:1198-8841).
 - 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:1198-8842).
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:1198-8846).
14. **SHALL** contain exactly one [1..1] consumable (CONF:1198-8847).
 - 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:1198-15546).
15. **SHOULD** contain zero or one [0..1] performer (CONF:1198-8849).
16. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-31151).
17. **MAY** contain zero or more [0..*] participant (CONF:1198-8850) 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:1198-8851).
 - b. **SHALL** contain exactly one [1..1] [Drug Vehicle](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.24) (CONF:1198-15547).
18. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-8853) 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:1198-8854).
 - 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:1198-15537).
19. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8856) 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:1198-8857).
 - b. **SHALL** contain exactly one [1..1] @inversionInd="true" True (CONF:1198-8858).
 - 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:1198-31392).
20. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8860) 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:1198-8861).
 - 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:1198-15539).
21. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8863) 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:1198-8864).
 - 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:1198-15540).
22. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8866) 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:1198-8867).
 - 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:1198-15541).
23. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8988) 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:1198-8989).

- b. **SHALL** contain exactly one [1..1] Immunization Refusal Reason (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.53) (CONF:1198-15542).

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:1198-31510) 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:1198-31511).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** (CONF:1198-31512).
 - c. **MAY** contain zero or one [0..1] **sequenceNumber** (CONF:1198-31513).
 - d. **SHALL** contain exactly one [1..1] Substance Administered Act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.118) (CONF:1198-31514).
- 25. **MAY** contain zero or more [0..*] **precondition** (CONF:1198-8869) 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:1198-8870).
 - b. **SHALL** contain exactly one [1..1] Precondition for Substance Administration (V2) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09) (CONF:1198-15548).

Table 313: MoodCodeEvnInt

Value Set: MoodCodeEvnInt urn:oid:2.16.840.1.113883.11.20.9.18			
Contains moodCode EVN and INT			
Value Set Source:			
http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/inrastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
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 314: 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	FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.3.26.1.1	AURICULAR (OTIC)
C38193	FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.3.26.1.1	BUCCAL
C38194	FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.3.26.1.1	CONJUNCTIVAL
C38675	FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.3.26.1.1	CUTANEOUS
C38197	FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.3.26.1.1	DENTAL
C38633	FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.3.26.1.1	ELECTRO-OSMOSIS
C38205	FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.3.26.1.1	ENDOCERVICAL
C38206	FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.3.26.1.1	ENDOSINUSIAL
C38208	FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.3.26.1.1	ENDOTRACHEAL
C38209	FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.3.26.1.1	ENTERAL
...			

Table 315: Body Site

<p>Value Set: Body Site urn:oid:2.16.840.1.113883.3.88.12.3221.8.9</p> <p>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.</p> <p>Value Set Source: http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.3221.8.9</p>			
Code	Code System	Code System OID	Print Name
362783006	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	entire medial surface of lower extremity (body structure)
302539009	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	entire hand (body structure)
287679003	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	left hip region structure (body structure)
3341006	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	right lung structure (body structure)
87878005	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	left ventricular structure (body structure)
49848007	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	structure of myocardium of left ventricle (body structure)
38033009	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	amputation stump (body structure)
305005006	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	6/7 interchondral joint (body structure)
28726007	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	corneal structure (body structure)
75324005	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	70 to 79 percent of body surface (body structure)
...			

Table 316: 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 317: Administration Unit Dose Form Value Set

<p>Value Set: AdministrationUnitDoseForm Value Set 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 Value Set Source: https://vsac.nlm.nih.gov/</p>			
Code	Code System	Code System OID	Print Name
C122629	FDA RouteOfAdministration	urn:oid:2.16.840.1.11388 3.3.26.1.1	Actuation Dosing Unit
C25397	FDA RouteOfAdministration	urn:oid:2.16.840.1.11388 3.3.26.1.1	Application Unit
C102405	FDA RouteOfAdministration	urn:oid:2.16.840.1.11388 3.3.26.1.1	Capful Dosing Unit
C122631	FDA RouteOfAdministration	urn:oid:2.16.840.1.11388 3.3.26.1.1	Dropperful Dosing Unit
C48501	FDA RouteOfAdministration	urn:oid:2.16.840.1.11388 3.3.26.1.1	Inhalation Dosing Unit
C48491	FDA RouteOfAdministration	urn:oid:2.16.840.1.11388 3.3.26.1.1	Metric Drop
C71204	FDA RouteOfAdministration	urn:oid:2.16.840.1.11388 3.3.26.1.1	Nebule Dosing Unit
C65060	FDA RouteOfAdministration	urn:oid:2.16.840.1.11388 3.3.26.1.1	Puff Dosing Unit
C48536	FDA RouteOfAdministration	urn:oid:2.16.840.1.11388 3.3.26.1.1	Scoopful Dosing Unit
C48537	FDA RouteOfAdministration	urn:oid:2.16.840.1.11388 3.3.26.1.1	Spray Dosing Unit
C44278	FDA RouteOfAdministration	urn:oid:2.16.840.1.11388 3.3.26.1.1	Unit
...			

Figure 161: Immunization Activity (V3) Example

```
<substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="false">
  <!-- ** Immunization activity ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.52" extension="2015-08-01" />
  <id root="e6f1ba43-c0ed-4b9b-9f12-f435d8ad8f92" />
  <statusCode code="completed" />
  <effectiveTime value="19981215" />
  <routeCode code="C28161" codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="National Cancer Institute (NCI) Thesaurus" displayName="Intramuscular
injection" />
  <doseQuantity value="50" unit="ug" />
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- ** Immunization medication information ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.54" extension="2014-06-09" />
      <manufacturedMaterial>
        <code code="33" codeSystem="2.16.840.1.113883.6.59"
displayName="Pneumococcal polysaccharide vaccine" codeSystemName="CVX">
          <translation code="854981" displayName="Pneumovax 23 (Pneumococcal
vaccine polyvalent) Injectable Solution" codeSystemName="RxNORM"
codeSystem="2.16.840.1.113883.6.88" />
        </code>
        <lotNumberText>1</lotNumberText>
      </manufacturedMaterial>
      <manufacturerOrganization>
        <name>Health LS - Immuno Inc.</name>
      </manufacturerOrganization>
    </manufacturedProduct>
  </consumable>
  <performer>
    <assignedEntity>
      <id root="2.16.840.1.113883.19.5.9999.456" extension="2981824" />
      <addr>
        <streetAddressLine>1007 Health Drive</streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
      <telecom use="WP" value="tel: +(555)-555-1030" />
      <assignedPerson>
        <name>
          <given>Harold</given>
          <family>Hippocrates</family>
        </name>
      </assignedPerson>
      <representedOrganization>
        <id root="2.16.840.1.113883.19.5.9999.1394" />
        <name>Good Health Clinic</name>
        <telecom use="WP" value="tel: +(555)-555-1030" />
        <addr>
          <streetAddressLine>1007 Health Drive</streetAddressLine>
          <city>Portland</city>
          <state>OR</state>
          <postalCode>99123</postalCode>
          <country>US</country>
        </addr>
      </representedOrganization>
    </assignedEntity>
  </performer>
</substanceAdministration>
```

```

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

```

3.42 Immunization Medication Information (V2)

```

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

```

Table 318: Immunization Medication Information (V2) Contexts

Contained By:	Contains:
Planned Supply (V2) (optional) Medication Supply Order (V2) (optional) Medication Dispense (V2) (optional) Planned Immunization Activity (required) Immunization Activity (V3) (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 319: 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 320: 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 321: 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 intentionally 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 322: 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 162: 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>

```

3.43 Immunization Refusal Reason

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

Table 323: Immunization Refusal Reason Contexts

Contained By:	Contains:
Immunization Activity (V3) (optional)	

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

Table 324: 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 325: 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: http://www.hl7.org			
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 163: 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>

```

3.44 Indication (V2)

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

Table 326: 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) Planned Act (V2) (optional) Planned Encounter (V2) (optional) Planned Procedure (V2) (optional) Planned Observation (V2) (optional) Planned Supply (V2) (optional) Planned Medication Activity (V2) (optional) Procedure Indications Section (V2) (optional) Patient Referral Act (optional) Planned Immunization Activity (optional) Immunization Activity (V3) (optional) Encounter Activity (V3) (optional)	

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

Table 327: 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).

Figure 164: 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"/> -->

```


3.45 Instruction (V2)

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

Table 328: Instruction (V2) Contexts

Contained By:	Contains:
Medication Activity (V2) (optional) Plan of Treatment Section (V2) (optional) Procedure Activity Act (V2) (optional) Procedure Activity Procedure (V2) (optional) Procedure Activity Observation (V2) (optional) Non-Medicinal Supply Activity (V2) (optional) Planned Act (V2) (optional) Planned Procedure (V2) (optional) Planned Observation (V2) (optional) Planned Supply (V2) (optional) Planned Medication Activity (V2) (optional) Medication Supply Order (V2) (optional) Instructions Section (V2) (required) Planned Immunization Activity (optional) Immunization Activity (V3) (optional) Planned Intervention Act (V2) (optional) Intervention Act (V2) (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 329: 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 330: 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. Specific URL Pending Value Set Source: http://browser.ihtsdotools.org/			
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 165: 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>
```

3.46 Intervention Act (V2)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.131:2015-08-01
(open)]

Table 331: Intervention Act (V2) Contexts

Contained By:	Contains:
Planned Intervention Act (V2) (optional) Interventions Section (V3) (optional)	Advance Directive Observation (V3) Author Participation Encounter Activity (V3) Entry Reference External Document Reference Handoff Communication Participants Immunization Activity (V3) Instruction (V2) Intervention Act (V2) Medication Activity (V2) Non-Medicinal Supply Activity (V2) Nutrition Recommendation Planned Intervention Act (V2) Procedure Activity Act (V2) Procedure Activity Observation (V2) Procedure Activity Procedure (V2)

This template represents an Intervention Act. It is a wrapper for intervention-type activities considered to be parts of the same intervention. For example, an activity such as "elevate head of bed" combined with "provide humidified O2 per nasal cannula" may be the interventions performed for a health concern of "respiratory insufficiency" to achieve a goal of "pulse oximetry greater than 92%". These intervention activities may be newly described or derived from a variety of sources within an EHR.

Interventions are actions taken to increase the likelihood of achieving the patient's or providers' goals. An Intervention Act should contain a reference to a Goal Observation representing the reason for the intervention.

Intervention Acts can be related to each other, or to Planned Intervention Acts. (E.g., a Planned Intervention Act with moodCode of INT could be related to a series of Intervention Acts with moodCode of EVN, each having an effectiveTime containing the time of the intervention.)

All interventions referenced in an Intervention Act must have a moodCode of EVN, indicating that they have occurred.

Table 332: Intervention Act (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.131:2015-08-01)					
@classCode	1..1	SHALL		1198-30971	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1198-30972	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-30973	
@root	1..1	SHALL		1198-30974	2.16.840.1.113883.10.20.22.4.131
@extension	1..1	SHALL		1198-32916	2015-08-01
id	1..*	SHALL		1198-30975	
code	1..1	SHALL		1198-30976	
@code	1..1	SHALL		1198-30977	362956003
@codeSystem	1..1	SHALL		1198-30978	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
statusCode	1..1	SHALL		1198-30979	
@code	1..1	SHALL		1198-32316	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	0..1	SHOULD		1198-31624	
author	0..*	SHOULD		1198-31552	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	0..*	MAY		1198-30980	
@typeCode	1..1	SHALL		1198-30981	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-30982	Advance Directive Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.48:2015-08-01)
entryRelationship	0..*	MAY		1198-30984	
@typeCode	1..1	SHALL		1198-30985	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
substanceAdministration	1..1	SHALL		1198-30986	Immunization Activity (V3) (identifier:)

					urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.52:2015-08-01
entryRelationship	0..*	MAY		1198-30988	
@typeCode	1..1	SHALL		1198-30989	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
substanceAdministration	1..1	SHALL		1198-30990	Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.16:2014-06-09)
entryRelationship	0..*	MAY		1198-30991	
@typeCode	1..1	SHALL		1198-30992	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-30993	Procedure Activity Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.12:2014-06-09)
entryRelationship	0..*	MAY		1198-31154	
@typeCode	1..1	SHALL		1198-31155	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-32460	Intervention Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.131:2015-08-01)
entryRelationship	0..*	MAY		1198-31164	
@typeCode	1..1	SHALL		1198-31165	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31166	Procedure Activity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.13:2014-06-09)
entryRelationship	0..*	MAY		1198-31168	
@typeCode	1..1	SHALL		1198-31169	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
procedure	1..1	SHALL		1198-31170	Procedure Activity Procedure (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.14:2014-06-09)
entryRelationship	0..*	MAY		1198-31171	
@typeCode	1..1	SHALL		1198-31172	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) =

					REFR
encounter	1..1	SHALL		1198-31173	Encounter Activity (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.49:2015-08-01)
entryRelationship	0..*	MAY		1198-31174	
typeId	0..1	MAY		1198-31175	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-31176	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.20:2014-06-09)
entryRelationship	0..*	MAY		1198-31177	
@typeCode	1..1	SHALL		1198-31178	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
supply	1..1	SHALL		1198-31179	Non-Medicinal Supply Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.50:2014-06-09)
entryRelationship	0..*	MAY		1198-31413	
procedure	1..1	SHALL		1198-31414	Nutrition Recommendation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.130)
entryRelationship	0..*	MAY		1198-31545	
@typeCode	1..1	SHALL		1198-31554	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-31555	Entry Reference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122)
entryRelationship	0..*	SHOULD		1198-31621	
@typeCode	1..1	SHALL		1198-31622	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
act	1..1	SHALL		1198-31623	Entry Reference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122)
entryRelationship	0..*	MAY		1198-32317	
@typeCode	1..1	SHALL		1198-32318	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-	Handoff Communication Participants (identifier:

				32319	urn:oid:2.16.840.1.113883.10.20.22.4.141
entryRelationship	0..*	MAY		1198-32914	
@typeCode	1..1	SHALL		1198-32773	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-32915	Planned Intervention Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.146:2015-08-01)
reference	0..*	MAY		1198-32760	
@typeCode	1..1	SHALL		1198-32761	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
externalDocument	1..1	SHALL		1198-32762	External Document Reference (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09)

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1198-30971).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-30972).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-30973) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.131"** (CONF:1198-30974).
 - b. **SHALL** contain exactly one [1..1] **@extension="2015-08-01"** (CONF:1198-32916).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-30975).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1198-30976).
 - a. This code **SHALL** contain exactly one [1..1] **@code="362956003"** procedure / intervention (navigational concept) (CONF:1198-30977).
 - 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:1198-30978).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-30979).
 - 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:1198-32316).
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1198-31624).
8. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-31552).
9. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-30980) 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:1198-30981).
 - b. **SHALL** contain exactly one [1..1] [Advance Directive Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.48:2015-08-01) (CONF:1198-30982).
10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-30984) 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:1198-30985).
 - b. **SHALL** contain exactly one [1..1] [Immunization Activity \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01) (CONF:1198-30986).
11. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-30988) 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:1198-30989).
 - 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:1198-30990).
12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-30991) 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:1198-30992).
 - b. **SHALL** contain exactly one [1..1] [Procedure Activity Act \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.12:2014-06-09) (CONF:1198-30993).

The following entryRelationship represents the relationship between two Intervention Acts (Intervention RELATES TO Intervention).

13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31154) 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:1198-31155).
 - b. **SHALL** contain exactly one [1..1] [Intervention Act \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.131:2015-08-01) (CONF:1198-32460).
14. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31164) 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:1198-31165).
 - b. **SHALL** contain exactly one [1..1] [Procedure Activity Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09) (CONF:1198-31166).
15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31168) 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:1198-31169).
 - b. **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:1198-31170).
16. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31171) 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:1198-31172).
 - b. **SHALL** contain exactly one [1..1] [Encounter Activity \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2015-08-01) (CONF:1198-31173).
17. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31174) such that it
- a. **MAY** contain zero or one [0..1] typeId="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-31175).
 - 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:1198-31176).
18. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31177) 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:1198-31178).
 - b. **SHALL** contain exactly one [1..1] [Non-Medicinal Supply Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.50:2014-06-09) (CONF:1198-31179).
19. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31413) such that it
- a. **SHALL** contain exactly one [1..1] [Nutrition Recommendation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.130) (CONF:1198-31414).

Where an Intervention needs to reference another entry already described in the CDA document instance, rather than repeating the full content of the entry, the Entry Reference template may be used to reference this entry.

20. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31545) 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:1198-31554).
 - b. **SHALL** contain exactly one [1..1] [Entry Reference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) (CONF:1198-31555).

An Intervention Act should reference a Goal Observation. Because the Goal Observation is already described in the CDA document instance's Goals section, rather than repeating the full content of the Goal Observation, the Entry Reference template can be used to reference this entry. The following entryRelationship represents an Entry Reference to Goal Observation.

21. **SHOULD** contain zero or more [0..*] **entryRelationship** (CONF:1198-31621) 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:1198-31622).
 - b. **SHALL** contain exactly one [1..1] [Entry Reference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) (CONF:1198-31623).
 - c. This entryReference template **SHALL** reference an instance of a Goal Observation template (CONF:1198-32459).
22. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32317) 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:1198-32318).
 - b. **SHALL** contain exactly one [1..1] [Handoff Communication Participants](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.141) (CONF:1198-32319).
23. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32914) 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:1198-32773).
 - b. **SHALL** contain exactly one [1..1] [Planned Intervention Act \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.146:2015-08-01) (CONF:1198-32915).
24. **MAY** contain zero or more [0..*] **reference** (CONF:1198-32760).
- 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:1198-32761).
 - b. 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:1198-32762).

Figure 166: Intervention Act (moodCode="INT") Example

```
<!--
  This entry shows an act in intent mood (planned intervention-
  meaning this is intended to be done), with the reason "RSN" for the act
  being the already defined Goal (pulse ox reading > 92)
  The intervention contains relationships to different components of
  the intervention.
-->
<!-- Intervention Act -->
<act classCode="ACT" moodCode="INT">
  <templateId root="2.16.840.1.113883.10.20.22.4.131" />
  <id root="85fa4b62-e3a9-4385-b064-fe04cca35adb" />
  <code code="code_for_intervention" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Intervention" />
  <statusCode code="active" />
  <entryRelationship typeCode="REFR">
    <!-- The following act is one part of the intervention -
      "Elevate head of bed" -->
    <!-- Procedure Activity Act -->
    <act classCode="ACT" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.12" extension="2015-08-01" />
      <id root="7658963e-54da-496f-bf18-dealdddaa3b0" />
      <code code="423171007" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Elevate head of bed" />
      <statusCode code="active" />
    </act>
  </entryRelationship>
  <entryRelationship typeCode="REFR">
    <!-- The following procedure is one part of the intervention -
      "Oxygen administration by nasal cannula" -->
    <!-- Procedure Activity Procedure -->
    <procedure classCode="PROC" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.14" extension="2014-06-09" />
      <id root="6a560f3d-88fd-4292-9415-f9371adaec46" />
      <code code="371907003" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Oxygen administration by nasal cannula" />
      <statusCode code="active" />
    </procedure>
  </entryRelationship>
  <!-- This entryRelationship represents the relationship between an
  Intervention Act and a Goal Observation (Intervention HAS REASON Goal).
  The Entry Reference template is being used here as this Goal is
  defined elsewhere in the CDA document -->
  <entryRelationship typeCode="RSON">
    <!-- Entry Reference template -->
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.122" />
      <!-- This id points to an already defined Goal
      (pulse ox reading > 92) in the Goals Section -->
      <id root="3700b3b0-fbed-11e2-b778-0800200c9a66" />
      <code nullFlavor="NP" />
      <statusCode code="completed" />
    </act>
  </entryRelationship>
</act>
```

3.47 Medical Equipment Organizer

[organizer: identifier urn:oid:2.16.840.1.113883.10.20.22.4.135 (open)]

Table 333: Medical Equipment Organizer Contexts

Contained By:	Contains:
Medical Equipment Section (V2) (optional)	Non-Medicinal Supply Activity (V2) Procedure Activity Procedure (V2)

This template represents a set of current or historical medical devices, supplies, aids and equipment used by the patient. Examples are hearing aids, orthotic devices, ostomy supplies, visual aids, diabetic supplies such as syringes and pumps, and wheelchairs.

Devices that are applied during a procedure (e.g., cardiac pacemaker, gastrostomy tube, port catheter), whether permanent or temporary, are represented within the Procedure Activity Procedure (V2) template (templateId: 2.16.840.1.113883.10.20.22.4.14.2).

Table 334: Medical Equipment Organizer Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.135)					
@classCode	1..1	SHALL		1098-31020	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		1098-31021	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-31022	
@root	1..1	SHALL		1098-31023	2.16.840.1.113883.10.20.22.4.135
id	1..*	SHALL		1098-31024	
code	0..1	MAY		1098-31025	
statusCode	1..1	SHALL		1098-31026	
@code	1..1	SHALL		1098-31029	urn:oid:2.16.840.1.113883.11.20.9.39 (Result Status)
effectiveTime	1..1	SHALL		1098-32136	
low	1..1	SHALL		1098-32378	
high	1..1	SHALL		1098-32379	
component	0..*	MAY		1098-31027	
supply	1..1	SHALL		1098-31862	Non-Medicinal Supply Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.50:2014-06-09)
component	0..*	MAY		1098-31887	
procedure	1..1	SHALL		1098-31888	Procedure Activity Procedure (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09)

1. **SHALL** contain exactly one [1..1] **@classCode**="CLUSTER" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-31020).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-31021).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-31022) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.135" (CONF:1098-31023).

4. **SHALL** contain at least one [1..*] **id** (CONF:1098-31024).

This code can represent a category of devices. The code is strictly optional, and is not currently limited to any value set or code system. Implementers may use it if they wish to provide optional coded information about this grouping of medical equipment.

5. **MAY** contain zero or one [0..1] **code** (CONF:1098-31025).

The organizer is a collection of statuses for contained entries. The organizer remains active until all contained entries are done.

6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-31026).
 - 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** 2014-09-01 (CONF:1098-31029).

The effectiveTime can be used to show the time period over which the patient will be using the set of equipment. The organizer would probably not be used with devices applied in or on the patient.

7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-32136).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1098-32378).
 - b. This effectiveTime **SHALL** contain exactly one [1..1] **high** (CONF:1098-32379).
8. **MAY** contain zero or more [0..*] **component** (CONF:1098-31027) such that it
 - a. **SHALL** contain exactly one [1..1] [Non-Medicinal Supply Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.50:2014-06-09) (CONF:1098-31862).
9. **MAY** contain zero or more [0..*] **component** (CONF:1098-31887) such that it
 - a. **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:1098-31888).
10. Either Non-Medicinal Supply Activity (V2) (templateId:2.16.840.1.113883.10.20.22.4.50:2014-06-09) **OR** Procedure Activity Procedure (V2) (templateId:2.16.840.1.113883.10.20.22.4.14:2014-06-09) **SHALL** be present (CONF:1098-32380).

Table 335: Result Status

Value Set: Result Status urn:oid:2.16.840.1.113883.11.20.9.39			
Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/inrastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
aborted	ActStatus	urn:oid:2.16.840.1.113883.3.5.14	aborted
active	ActStatus	urn:oid:2.16.840.1.113883.3.5.14	active
cancelled	ActStatus	urn:oid:2.16.840.1.113883.3.5.14	cancelled
completed	ActStatus	urn:oid:2.16.840.1.113883.3.5.14	completed
held	ActStatus	urn:oid:2.16.840.1.113883.3.5.14	held
suspended	ActStatus	urn:oid:2.16.840.1.113883.3.5.14	suspended

Figure 167: Medical Equipment Organizer Example

```

<organizer classCode="CLUSTER" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.135" />
  <!-- Medical Equipment Organizer template -->
  <id root="3e414708-0e61-4d48-8863-484a2d473a02" />
  <code code="337588003" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"
  displayName="Incontinence appliances">
    <originalText>Incontinence appliances</originalText>
  </code>
  <statusCode code="completed" />
  <effectiveTime xsi:type="IVL_TS">
    <low value="20070103" />
    <high nullFlavor="UNK" />
  </effectiveTime>
  <component>
    <supply classCode="SPLY" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.50" extension="2014-06-09" />
      <!-- Non-medicinal supply activity V2 template ***** -->
      ...
    </supply>
  </component>
  <component>
    <supply classCode="SPLY" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.50" extension="2014-06-09" />
      <!-- Non-medicinal supply activity V2 template ***** -->
      ...
    </supply>
  </component>
</organizer>

```


3.48 Medication Activity (V2)

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

Table 336: Medication Activity (V2) Contexts

Contained By:	Contains:
Medications Section (entries required) (V2) (required) 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) Discharge Medication (V2) (required) Admission Medication (V2) (required) Medications Administered Section (V2) (optional) Anesthesia Section (V2) (optional) Planned Intervention Act (V2) (optional) Intervention Act (V2) (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 337: 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<P Q, 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:2.16.840.1.113883.10.2.0.22.4.17:2014-06-09)
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:2.16.840.1.113883.10.2.0.22.4.18:2014-06-09)
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:2.16.840.1.113883.10.2.0.22.4.9:2014-06-09)
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 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 168: Medication Activity (V2) Example

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

Figure 169: 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>

```

3.49 Medication Dispense (V2)

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

Table 338: Medication Dispense (V2) Contexts

Contained By:	Contains:
Medication Activity (V2) (optional) Immunization Activity (V3) (optional)	Immunization Medication Information (V2) Medication Information (V2) Medication Supply Order (V2) US Realm Address (AD.US.FIELDDED)

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

Table 339: 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.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
entryRelationship	0..1	MAY		1098-7473	

@typeCode	1..1	SHALL		1098-7474	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 \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1098-7468).

1. The content of addr **SHALL** be a conformant US Realm Address (AD.US.FIELDDED) (2.16.840.1.113883.10.20.22.5.2) (CONF:1098-10565).
12. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-7473) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CodeSystem: HL7ActRelationshipType 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:h17ii: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 340: Medication Fill Status

Value Set: Medication Fill Status urn:oid:2.16.840.1.113883.3.88.12.80.64			
Value Set Source: https://phinvads.cdc.gov/			
Code	Code System	Code System OID	Print Name
aborted	ActStatus	urn:oid:2.16.840.1.113883.3.5.14	Aborted
completed	ActStatus	urn:oid:2.16.840.1.113883.3.5.14	Completed

Figure 170: 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>

```

3.50 Medication Free Text Sig

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

Table 341: 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 342: 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 171: 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>

```

3.51 Medication Information (V2)

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

Table 343: Medication Information (V2) Contexts

Contained By:	Contains:
Medication Activity (V2) (required) Planned Supply (V2) (optional) 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), BPCCK (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 344: 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:2.16.840.1.113762.1.4.1010.4 (Medication Clinical Drug)
translation	0..*	MAY		1098-31884	urn:oid:2.16.840.1.113762.1.4.1010.2 (Clinical Substance)
manufacturerOrganization	0..1	MAY		1098-7416	

1. **SHALL** contain exactly one [1..1] **@classCode**="MANU" (CodeSystem: RoleClass 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 345: 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://phinivads.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 346: Clinical Substance

<p>Value Set: Clinical Substance urn:oid:2.16.840.1.113762.1.4.1010.2</p> <p>All substances that may need to be represented in the context of health care related activities. This value set is quite broad in coverage and includes concepts that may never be needed in a health care activity event, particularly the included SNOMED CT concepts. The code system-specific value sets in this grouping value set are intended to provide broad coverage of all kinds of agents, but the expectation for use is that the chosen concept identifier for a substance should be appropriately specific and drawn from the appropriate code system as noted: prescribable medications should use RXNORM concepts, more specific drugs and chemicals should be represented using UNII concepts, and any substances not found in either of those two code systems, should use the appropriate SNOMED CT concept. This overarching grouping value set is intended to support identification of prescribable medications, foods, general substances and environmental entities.</p> <p>Value set intensionally defined as a GROUPING made up of: Value Set: Medication Clinical Drug (2.16.840.1.113762.1.4.1010.4) (RxNorm generic and brand codes); Value Set: Unique Ingredient Identifier - Complete Set (2.16.840.1.113883.3.88.12.80.20) (UNII codes); Value Set: Substance Other Than Clinical Drug (2.16.840.1.113762.1.4.1010.9) (SNOMED CT codes).</p> <p>Value Set Source: https://vsac.nlm.nih.gov/</p>			
Code	Code System	Code System OID	Print Name
369436	RxNorm	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	Procabazine hydrochloride (substance)
102259006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Citrus fruit (substance)
...			

Figure 172: 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>

```

3.52 Medication Supply Order (V2)

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

Table 347: Medication Supply Order (V2) Contexts

Contained By:	Contains:
Medication Activity (V2) (optional)	Immunization Medication Information (V2)
Medication Dispense (V2) (optional)	Instruction (V2)
Immunization Activity (V3) (optional)	Medication Information (V2)

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

Table 348: 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		1098-7445	true
act	1..1	SHALL		1098-31391	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.20:2014-06-09)

1. **SHALL** contain exactly one [1..1] @classCode="SPLY" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7427).
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 [ActStatus](#) 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] [Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) (CONF:1098-16093).
10. **MAY** contain zero or one [0..1] product (CONF:1098-9334) such that it
 - a. **SHALL** contain exactly one [1..1] [Immunization Medication Information \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) (CONF:1098-31695).
 - i. A supply act **SHALL** contain one product/Medication Information **OR** one product/Immunization Medication Information template (CONF:1098-16870).
11. **MAY** contain zero or one [0..1] author (CONF:1098-7438).
12. **MAY** contain zero or one [0..1] entryRelationship (CONF:1098-7442).
 - a. The entryRelationship, if present, **SHALL** contain exactly one [1..1] @typeCode="SUBJ" (CodeSystem: HL7ActRelationshipType 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 173: 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>

```

3.53 Mental Status Observation (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.74:2015-08-01 (open)]

Table 349: Mental Status Observation (V3) Contexts

Contained By:	Contains:
Mental Status Organizer (V3) (required) Mental Status Section (V2) (optional) Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional)	Assessment Scale Observation Author Participation

The Mental Status Observation template represents an observation about mental status that can come from a broad range of subjective and objective information (including measured data) to address those categories described in the Mental Status Section. See also Assessment Scale Observation for specific collections of observations that together yield a summary evaluation of a particular condition.

Table 350: Mental Status Observation (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.74:2015-08-01)					
@classCode	1..1	SHALL		1198-14249	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1198-14250	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-14255	
@root	1..1	SHALL		1198-14256	2.16.840.1.113883.10.20.22.4.74
@extension	1..1	SHALL		1198-32565	2015-08-01
id	1..*	SHALL		1198-14257	
code	1..1	SHALL		1198-14591	
@code	1..1	SHALL		1198-32788	373930000
@codeSystem	1..1	SHALL		1198-32789	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
translation	1..1	SHALL		1198-32790	
@code	1..1	SHALL		1198-32791	75275-8
@codeSystem	0..1	SHALL		1198-32792	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1198-14254	
@code	1..1	SHALL		1198-19092	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1198-14261	
value	1..1	SHALL		1198-14263	
author	0..*	SHOULD		1198-14266	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	0..*	MAY		1198-14469	
@typeCode	1..1	SHALL		1198-14595	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1198-14470	Assessment Scale Observation (identifier:

					urn:oid:2.16.840.1.113883.10.20.22.4.69
referenceRange	0..*	MAY		1198-14267	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-14249).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-14250).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-14255) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.74"** (CONF:1198-14256).
 - b. **SHALL** contain exactly one [1..1] **@extension="2015-08-01"** (CONF:1198-32565).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-14257).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1198-14591).
 - a. This code **SHALL** contain exactly one [1..1] **@code="373930000"** Cognitive function (CONF:1198-32788).
 - 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:1198-32789).
 - c. This code **SHALL** contain exactly one [1..1] **translation** (CONF:1198-32790) such that it
 - i. **SHALL** contain exactly one [1..1] **@code="75275-8"** Cognitive Function (CONF:1198-32791).
 - ii. **SHALL** 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 **STATIC**) (CONF:1198-32792).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-14254).
 - 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:1198-19092).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-14261).
8. **SHALL** contain exactly one [1..1] **value** (CONF:1198-14263).
 - a. If xsi:type="CD", **SHOULD** contain a code from SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96) (CONF:1198-14271).
9. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-14266).
10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-14469) 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:1198-14595).
 - b. **SHALL** contain exactly one [1..1] [Assessment Scale Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.69) (CONF:1198-14470).

The referenceRange could be used to represent normal or expected capability for the mental function being evaluated.

11. **MAY** contain zero or more [0..*] **referenceRange** (CONF:1198-14267).

Figure 174: Mental Status Observation (V3) Example

```

<entry>
  <organizer classCode="CLUSTER" moodCode="EVN">
    <!-- Mental Status Organizer-->
    <templateId root="2.16.840.1.113883.10.20.22.4.75" extension="2015-08-01" />
    <id root="a7bc1062-8649-42a0-833d-ekd65bd013c9" />
    <code code="75275-8"
          displayName="Cognitive function"
          codeSystem="2.16.840.1.113883.6.1"
          codeSystemName="LOINC" />
    <statusCode code="completed" />
    <component>
      <observation classCode="OBS" moodCode="EVN">
        <!-- Mental Status Observation V2 -->
        <templateId root="2.16.840.1.113883.10.20.22.4.74" extension="2015-08-01"
        />
        ...

        <code code="373930000" displayName="Cognitive function"
              codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED
CT">
          <translation code="75275-8"
                      displayName="Cognitive function"
                      codeSystem="2.16.840.1.113883.6.1"
                      codeSystemName="LOINC"></translation>
        </code>
        <statusCode code="completed"/>
        ...

        <!-- Value element holds the Cognitive Function assessment -->
        ...
      </observation>
    </component>
    <component>
      <observation classCode="OBS" moodCode="EVN">
        <!-- Mental Status Observation V2 -->
        <templateId root="2.16.840.1.113883.10.20.22.4.74" extension="2015-08-01"
        />
        ...

        </observation>
      </component>
    </organizer>
  </entry>

```

3.54 Mental Status Organizer (V3)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.75:2015-08-01 (open)]

Table 351: Mental Status Organizer (V3) Contexts

Contained By:	Contains:
Mental Status Section (V2) (optional)	Mental Status Observation (V3)

The Mental Status Organizer template may be used to group related Mental Status Observations (e.g., results of mental tests) and associated Assessment Scale Observations into subcategories and/or groupings by time. Subcategories can be things such as Mood and Affect, Behavior, Thought Process, Perception, Cognition, etc.

Table 352: Mental Status Organizer (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.75:2015-08-01)					
@classCode	1..1	SHALL		1198-14369	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		1198-14371	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-14375	
@root	1..1	SHALL		1198-14376	2.16.840.1.113883.10.20.22.4.75
@extension	1..1	SHALL		1198-32566	2015-08-01
id	1..*	SHALL		1198-14377	
code	1..1	SHALL		1198-14378	
@code	1..1	SHALL		1198-14697	
statusCode	1..1	SHALL		1198-14372	
@code	1..1	SHALL		1198-19093	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	0..1	SHOULD		1198-32424	
component	1..*	SHALL		1198-14373	
observation	1..1	SHALL		1198-14381	Mental Status Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.74:2015-08-01)

1. **SHALL** contain exactly one [1..1] **@classCode="CLUSTER"** Cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1198-14369).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-14371).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-14375) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.75"** (CONF:1198-14376).
 - b. **SHALL** contain exactly one [1..1] **@extension="2015-08-01"** (CONF:1198-32566).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-14377).

The code selected indicates the category that groups the contained mental status observations (e.g., communication, learning and applying knowledge).

5. **SHALL** contain exactly one [1..1] **code** (CONF:1198-14378).
 - a. This code **SHALL** contain exactly one [1..1] **@code** (CONF:1198-14697).
 - i. **SHOULD** be selected from ICF (codeSystem 2.16.840.1.113883.6.254) **OR** LOINC (codeSystem 2.16.840.1.113883.6.96) (CONF:1198-14698).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-14372).
 - 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:1198-19093).

The effectiveTime is an interval that spans the effectiveTimes of the contained mental status observations. Because all contained mental status observations have a required time stamp, it is not required that this effectiveTime be populated.

7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1198-32424).
 - a. The Organizer **SHALL** have at least one of **code** or **effectiveTime** (CONF:1198-32426).
8. **SHALL** contain at least one [1..*] **component** (CONF:1198-14373) such that it
 - a. **SHALL** contain exactly one [1..1] **Mental Status Observation (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.74:2015-08-01) (CONF:1198-14381).

Figure 175: Mental Status Organizer (V3) Example

```
<entry>
  <organizer classCode="CLUSTER" moodCode="EVN">
    <!-- Mental Status Organizer V3-->
    <templateId root="2.16.840.1.113883.10.20.22.4.75" extension="2015-08-01" />
    <id root="a7bc1062-8649-42a0-833d-ekd65bd013c9" />
    <code code="75275-8"
          displayName="Cognitive function"
          codeSystem="2.16.840.1.113883.6.1"
          codeSystemName="LOINC" />
    <statusCode code="completed" />
    <component>
      <observation classCode="OBS" moodCode="EVN">
        <!-- Mental Status Observation V3-->
        <templateId root="2.16.840.1.113883.10.20.22.4.74" extension="2015-08-01"
        />
        ...
        <code code="373930000" displayName="Cognitive function"
              codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED
CT">
          <translation code="75275-8"
                      displayName="Cognitive function"
                      codeSystem="2.16.840.1.113883.6.1"
                      codeSystemName="LOINC"></translation>
        </code>
        <statusCode code="completed"/>
        ...
        <!-- Value element holds the Cognitive Function assessment -->
        ...
      </observation>
    </component>
    <component>
      <observation classCode="OBS" moodCode="EVN">
        <!-- Mental Status Observation V3 -->
        <templateId root="2.16.840.1.113883.10.20.22.4.74" extension="2015-08-01"
        />
        ...
        ...
      </observation>
    </component>
  </organizer>
</entry>
```

3.55 Non-Medicinal Supply Activity (V2)

[supply: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.50:2014-06-09
(open)]

Table 353: Non-Medicinal Supply Activity (V2) Contexts

Contained By:	Contains:
Medical Equipment Section (V2) (optional) Medical Equipment Organizer (optional) Functional Status Section (V2) (optional) Functional Status Observation (V2) (optional) Planned Intervention Act (V2) (optional) Intervention Act (V2) (optional)	Instruction (V2) Product Instance

This template represents equipment supplied to the patient (e.g., pumps, inhalers, wheelchairs). Devices applied to, or placed in, the patient are represented with the Product Instance entry contained within a Procedure Activity Procedure (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.14)

Table 354: Non-Medicinal Supply Activity (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.50:2014-06-09)					
@classCode	1..1	SHALL		1098-8745	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SPLY
@moodCode	1..1	SHALL		1098-8746	urn:oid:2.16.840.1.113883.11.20.9.18 (MoodCodeEvnInt)
templateId	1..1	SHALL		1098-8747	
@root	1..1	SHALL		1098-10509	2.16.840.1.113883.10.20.22.4.50
@extension	1..1	SHALL		1098-32514	2014-06-09
id	1..*	SHALL		1098-8748	
statusCode	1..1	SHALL		1098-8749	
@code	1..1	SHALL		1098-32363	urn:oid:2.16.840.1.113883.1.11.159331 (ActStatus)
effectiveTime	0..1	SHOULD	IVL_TS	1098-15498	
quantity	0..1	SHOULD		1098-8751	
participant	0..1	MAY		1098-8752	
@typeCode	1..1	SHALL		1098-8754	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRD
participantRole	1..1	SHALL		1098-15900	Product Instance (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.37)
entryRelationship	0..1	MAY		1098-30277	
@typeCode	1..1	SHALL		1098-30278	SUBJ
@inversionInd	1..1	SHALL		1098-30279	TRUE
act	1..1	SHALL		1098-31393	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09)

1. **SHALL** contain exactly one [1..1] **@classCode**="SPLY" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8745).
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:1098-8746).

3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-8747) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.50" (CONF:1098-10509).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32514).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8748).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-8749).
 - 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:1098-32363).
6. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-15498).
 - a. The effectiveTime, if present, **SHOULD** contain zero or one [0..1] **high** (CONF:1098-16867).
7. **SHOULD** contain zero or one [0..1] **quantity** (CONF:1098-8751).
8. **MAY** contain zero or one [0..1] **participant** (CONF:1098-8752) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="PRD" Product (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-8754).
 - b. **SHALL** contain exactly one [1..1] [Product Instance](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.37) (CONF:1098-15900).
9. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-30277) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" (CONF:1098-30278).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd**="TRUE" (CONF:1098-30279).
 - c. **SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-31393).

Figure 176: Non-Medicinal Supply Activity (V2) Example

```

<supply classCode="SPLY" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.50" extension="2014-06-09" />
  <!-- Non-medicinal supply activity V2 template ***** -->
  <id root="39b5f1b4-a8e1-4ad7-8849-0deab10c97b1" />
  <statusCode code="completed" />
  <effectiveTime xsi:type="IVL_TS">
    <high value="20130703" />
  </effectiveTime>
  <quantity value="1" />
  <participant typeCode="PRD">
    <participantRole classCode="MANU">
      <templateId root="2.16.840.1.113883.10.20.22.4.37" />
      <!-- Product instance template -->
      <id root="24993f33-6222-41ce-add6-37a9d3da6acb" />
      <playingDevice>
        <code code="14106009" displayName="cardiac pacemaker, device (physical object)" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT">
          <originalText>Cardiac Pacemaker</originalText>
        </code>
      </playingDevice>
      <scopingEntity>
        <id root="eb936010-7b17-11db-9fe1-0800200c9b65" />
        <desc>Good Health Durable Medical Equipment</desc>
      </scopingEntity>
    </participantRole>
  </participant>
</supply>

```

3.56 Number of Pressure Ulcers Observation (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.76:2015-08-01 (open)]

Table 355: Number of Pressure Ulcers Observation (V3) Contexts

Contained By:	Contains:
Longitudinal Care Wound Observation (V2) (optional)	

This template represents the number of pressure ulcers observed at a particular stage.

Table 356: Number of Pressure Ulcers Observation (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.76:2015-08-01)					
@classCode	1..1	SHALL		1198-14705	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1198-14706	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-14707	
@root	1..1	SHALL		1198-14708	2.16.840.1.113883.10.20.22.4.76
@extension	1..1	SHALL		1198-32604	2015-08-01
id	1..*	SHALL		1198-14709	
code	1..1	SHALL		1198-14767	
@code	1..1	SHALL		1198-14768	2264892003
@codeSystem	1..1	SHALL		1198-32164	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
translation	1..1	SHALL		1198-32849	
@code	1..1	SHALL		1198-32850	75277-4
@codeSystem	1..1	SHALL		1198-32851	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1198-14714	
@code	1..1	SHALL		1198-19108	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1198-14715	
value	1..1	SHALL	INT	1198-14771	
author	0..1	MAY		1198-14717	
entryRelationship	1..1	SHALL		1198-14718	
@typeCode	1..1	SHALL		1198-14719	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
observation	1..1	SHALL		1198-14720	
@classCode	1..1	SHALL		1198-	urn:oid:2.16.840.1.113883.5.6

				14721	(HL7ActClass) = OBS
@moodCode	1..1	SHALL		1198-14722	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
code	1..1	SHALL		1198-31930	urn:oid:2.16.840.1.113883.5.4 (ActCode) = ASSERTION
value	1..1	SHALL	CD	1198-14725	urn:oid:2.16.840.1.113883.11.20.9.35 (Pressure Ulcer Stage)

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-14705).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-14706).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-14707) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.76"** (CONF:1198-14708).
 - b. **SHALL** contain exactly one [1..1] **@extension="2015-08-01"** (CONF:1198-32604).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-14709).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1198-14767).
 - a. This code **SHALL** contain exactly one [1..1] **@code="2264892003"** Number of pressure ulcers (CONF:1198-14768).
 - 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 **STATIC**) (CONF:1198-32164).
 - c. This code **SHALL** contain exactly one [1..1] **translation** (CONF:1198-32849) such that it
 - i. **SHALL** contain exactly one [1..1] **@code="75277-4"** Number of pressure ulcers (CONF:1198-32850).
 - ii. **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:1198-32851).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-14714).
 - 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:1198-19108).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-14715).
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="INT"** (CONF:1198-14771).
9. **MAY** contain zero or one [0..1] **author** (CONF:1198-14717).
10. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1198-14718) 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:1198-14719).
 - b. **SHALL** contain exactly one [1..1] **observation** (CONF:1198-14720).
 - i. This observation **SHALL** contain exactly one [1..1] **@classCode="OBS"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-14721).

- ii. This observation **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-14722).
- iii. This observation **SHALL** contain exactly one [1..1] **code="ASSERTION"** Assertion (CodeSystem: ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1198-31930).
- iv. This observation **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"**, where the code **SHOULD** be selected from ValueSet [Pressure Ulcer Stage](#) urn:oid:2.16.840.1.113883.11.20.9.35 **STATIC** (CONF:1198-14725).

Table 357: Pressure Ulcer Stage

Value Set: Pressure Ulcer Stage urn:oid:2.16.840.1.113883.11.20.9.35			
This value set enumerates the type of a pressure ulcer.			
Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
421076008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Pressure Ulcer Stage 1
420324007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Pressure Ulcer Stage 2
421927004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Pressure Ulcer Stage 3
420597008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Pressure Ulcer Stage 4
421594008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Nonstageable pressure

Figure 177: Number of Pressure Ulcers Observation (V3) Example

```

<entryRelationship typeCode="COMP">
  <observation classCode="OBS" moodCode="EVN">
    <!-- Number of Pressure Ulcers -->
    <templateId root="2.16.840.1.113883.10.20.22.4.76" extension="2015-08-01"/>
    <id root="08edb7c0-2111-43f2-a784-9a5fdfaa67f0" />
    <code code="2264892003" displayName="Number of pressure ulcers"
          codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED
CT">
      <translation code="75277-4"
                    displayName="Number of pressure ulcers"
                    codeSystem="2.16.840.1.113883.6.1"
                    codeSystemName="LOINC"></translation>
    </code>
    <statusCode code="completed" />
    <value xsi:type="INT" value="3" />
    <entryRelationship typeCode="SUBJ">
      <observation classCode="OBS" moodCode="EVN">
        <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
        <value xsi:type="CD" code="421927004" codeSystem="2.16.840.1.113883.6.96"
              displayName="Pressure ulcer stage 3" />
      </observation>
    </entryRelationship>
  </observation>
</entryRelationship>

```

3.57 Nutrition Assessment

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.138 (open)]

Table 358: Nutrition Assessment Contexts

Contained By:	Contains:
Nutritional Status Observation (required) Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional)	Author Participation

This template represents the patient's nutrition abilities and habits including intake, diet requirements or diet followed.

Table 359: Nutrition Assessment Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.138)					
@classCode	1..1	SHALL		1098-30324	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-30325	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-30326	
@root	1..1	SHALL		1098-30327	2.16.840.1.113883.10.20.22.4.138
id	1..*	SHALL		1098-30328	
code	1..1	SHALL		1098-30329	
@code	1..1	SHALL		1098-32784	75303-8
@codeSystem	1..1	SHALL		1098-32785	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1098-30332	
@code	1..1	SHALL		1098-30333	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-31666	
value	1..1	SHALL		1098-30334	
author	0..*	SHOULD		1098-31667	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:1098-30324).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-30325).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-30326) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.138"** (CONF:1098-30327).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-30328).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-30329).
 - a. This code **SHALL** contain exactly one [1..1] **@code="75303-8"** Nutrition assessment (CONF:1098-32784).

- 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:1098-32785).
- 6. **SHALL** contain exactly one [1..1] `statusCode` (CONF:1098-30332).
 - 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:1098-30333).
- 7. **SHALL** contain exactly one [1..1] `effectiveTime` (CONF:1098-31666).
- 8. **SHALL** contain exactly one [1..1] `value` (CONF:1098-30334).
 - a. If `xsi:type="CD"`, **SHOULD** contain a code from SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96) (CONF:1098-32433).
- 9. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31667).

Figure 178: Nutrition Assessment Example

```

<entryRelationship typeCode="SUBJ">
  <observation classCode="OBS" moodCode="EVN">
    <!-- ** Nutrition Assessment** -->
    <templateId root="2.16.840.1.113883.10.20.22.4.138" />
    <id root="ab1791b0-5c71-11db-b0de-0800200c9a66" />
    <code code="75303-8"
          displayName="Nutrition assessment"
          codeSystem="2.16.840.1.113883.6.1"
          codeSystemName="LOINC" />
    <statusCode code="completed" />
    <effectiveTime value="20130512" />
    <value xsi:type="CD" code="437421000124105"
            displayName="Decreased sodium diet (regime/therapy)"
            codeSystem="2.16.840.1.113883.6.96"
            codeSystemName="SNOMED CT" />
    <author typeCode="AUT">
      <templateId root="2.16.840.1.113883.10.20.22.4.119" />
      <time value="201300512" />
      ...
    </author>
  </observation>
</entryRelationship>

```


3.58 Nutrition Recommendation

[act: identifier urn:oid:2.16.840.1.113883.10.20.22.4.130 (open)]

Table 360: Nutrition Recommendation Contexts

Contained By:	Contains:
Plan of Treatment Section (V2) (optional) Planned Intervention Act (V2) (optional) Intervention Act (V2) (optional)	Planned Act (V2) Planned Encounter (V2) Planned Medication Activity (V2) Planned Observation (V2) Planned Procedure (V2) Planned Supply (V2)

This template represents nutrition regimens (e.g., fluid restrictions, calorie minimum), interventions (e.g., NPO, nutritional supplements), and procedures (e.g., G-Tube by bolus, TPN by central line). It may also depict the need for nutrition education.

Table 361: Nutrition Recommendation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.130)					
@classCode	1..1	SHALL		1098-30385	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1098-30386	urn:oid:2.16.840.1.113883.11.20.9.23 (Planned moodCode (Act/Encounter/Procedure))
templateId	1..1	SHALL		1098-30340	
@root	1..1	SHALL		1098-30341	2.16.840.1.113883.10.20.22.4.130
code	1..1	SHALL		1098-30342	urn:oid:2.16.840.1.113883.1.11.20.2.9 (Nutrition Recommendations)
statusCode	1..1	SHALL		1098-31697	
@code	1..1	SHALL		1098-31698	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = active
effectiveTime	0..1	SHOULD		1098-31699	
entryRelationship	0..*	MAY		1098-32382	
encounter	1..1	SHALL		1098-32383	Planned Encounter (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09)
entryRelationship	0..*	MAY		1098-32384	
substanceAdministration	1..1	SHALL		1098-32385	Planned Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09)
entryRelationship	0..*	MAY		1098-32386	
observation	1..1	SHALL		1098-32387	Planned Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09)
entryRelationship	0..*	MAY		1098-32388	
procedure	1..1	SHALL		1098-32389	Planned Procedure (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09)
entryRelationship	0..*	MAY		1098-32390	

supply	1..1	SHALL		1098-32391	Planned Supply (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09)
entryRelationship	0..*	MAY		1098-32632	
act	1..1	SHALL		1098-32633	Planned Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09)

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1098-30385).
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** 2014-09-01 (CONF:1098-30386).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-30340) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.130"** (CONF:1098-30341).
4. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Nutrition Recommendations](#) urn:oid:2.16.840.1.113883.1.11.20.2.9 **DYNAMIC** (CONF:1098-30342).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-31697).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="active"** Active (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-31698).

The effectiveTime indicates the time when the activity is intended to take place.

6. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-31699).
7. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32382).
 - a. The entryRelationship, if present, **SHALL** contain exactly one [1..1] [Planned Encounter \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09) (CONF:1098-32383).
8. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32384).
 - a. The entryRelationship, if present, **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:1098-32385).
9. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32386).
 - a. The entryRelationship, if present, **SHALL** contain exactly one [1..1] [Planned Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09) (CONF:1098-32387).
10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32388).
 - a. The entryRelationship, if present, **SHALL** contain exactly one [1..1] [Planned Procedure \(V2\)](#) (identifier:

urn:h17ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09) (CONF:1098-32389).

11. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32390).

a. The entryRelationship, if present, **SHALL** contain exactly one [1..1] **Planned Supply (V2)** (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09) (CONF:1098-32391).

12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32632).

a. The entryRelationship, if present, **SHALL** contain exactly one [1..1] **Planned Act (V2)** (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09) (CONF:1098-32633).

Table 362: Nutrition Recommendations

Value Set: Nutrition Recommendations urn:oid:2.16.840.1.113883.1.11.20.2.9			
Types of nutritional regimes, therapies or interventions. Specific URL Pending			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
61310001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	nutrition education (procedure)
386373004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	nutrition therapy (regime/therapy)
418995006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	feeding regime (regime/therapy)
413315001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	nutrition / feeding management (regime/therapy)
182922004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	dietary regime (regime/therapy)
229912004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	enteral feeding (regime/therapy)
225372007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	total parenteral nutrition (regime/therapy)
448556005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	oral nutritional support

Table 363: 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:			
http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
INT	ActMood	urn:oid:2.16.840.1.113883.3.5.1001	Intent
ARQ	ActMood	urn:oid:2.16.840.1.113883.3.5.1001	Appointment Request
PRMS	ActMood	urn:oid:2.16.840.1.113883.3.5.1001	Promise
PRP	ActMood	urn:oid:2.16.840.1.113883.3.5.1001	Proposal
RQO	ActMood	urn:oid:2.16.840.1.113883.3.5.1001	Request
APT	ActMood	urn:oid:2.16.840.1.113883.3.5.1001	Appointment

Figure 179: Nutrition Recommendation Example

```

<entry>
  <act moodCode="INT" classCode="ACT">
    <!-- Nutrition Recommendation ACT-->
    <templateId root="2.16.840.1.113883.10.20.22.4.130" />
    <id root="9a6d1bac-17d3-4195-89a4-1121bc809a5c" />
    <code code="61310001"
      displayName="nutrition education"
      codeSystem="2.16.840.1.113883.6.96"
      codeSystemName="SNOMED CT" />
    <statusCode code="active" />
    <effectiveTime value="20130512" />
  </act>
</entry>

```

3.59 Nutritional Status Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.124 (open)]

Table 364: Nutritional Status Observation Contexts

Contained By:	Contains:
Nutrition Section (optional) Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional)	Nutrition Assessment

This template describes the overall nutritional status of the patient including findings related to nutritional status.

Table 365: Nutritional Status Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.124)					
@classCode	1..1	SHALL		1098-29841	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-29842	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-29843	
@root	1..1	SHALL		1098-29844	2.16.840.1.113883.10.20.22.4.124
id	1..*	SHALL		1098-29845	
code	1..1	SHALL		1098-29846	
@code	1..1	SHALL		1098-29897	75305-3
@codeSystem	1..1	SHALL		1098-29898	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1098-29852	
@code	1..1	SHALL		1098-29853	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-31867	
value	1..1	SHALL		1098-29854	urn:oid:2.16.840.1.113883.1.11.20.2.7 (Nutritional Status)
entryRelationship	1..*	SHALL		1098-30323	
@typeCode	1..1	SHALL		1098-30335	SUBJ
observation	1..1	SHALL		1098-30336	Nutrition Assessment (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.138)

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-29841).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-29842).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-29843) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.124" (CONF:1098-29844).

4. **SHALL** contain at least one [1..*] **id** (CONF:1098-29845).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-29846).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="75305-3" Nutrition status (CONF:1098-29897).
 - 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:1098-29898).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-29852).
 - 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:1098-29853).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-31867).
8. **SHALL** contain exactly one [1..1] **value**, which **SHOULD** be selected from ValueSet [Nutritional Status](#) urn:oid:2.16.840.1.113883.1.11.20.2.7 **DYNAMIC** (CONF:1098-29854).
9. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1098-30323) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" Has subject (CONF:1098-30335).
 - b. **SHALL** contain exactly one [1..1] [Nutrition Assessment](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.138) (CONF:1098-30336).

Table 366: Nutritional Status

Value Set: Nutritional Status urn:oid:2.16.840.1.113883.1.11.20.2.7			
A Value Set of SNOMED-CT codes representing nutrition problems.			
Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
371597004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	emaciated (finding)
284670008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	nutritionally compromised (finding)
248325000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	undernourished (finding)
248324001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	well nourished (finding)
75051000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Food intolerance (finding)
414285001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Food allergy (disorder)
414915002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Obese (finding)
288939007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Swallowing difficulty (finding)
61578001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Altered GI function
95907004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	drug interaction with food (finding)
...			

Figure 180: Nutritional Status Observation Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- Nutritional Status Observation -->
  <templateId root="2.16.840.1.113883.10.20.22.4.124" />
  <id root="c12ecaaf-53f8-4593-8f79-359aeaa3948b" />
  <code code="75305-3"
    displayName="Nutrition status"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC">
    <originalText>Nutritional Status</originalText>
  </code>
  <statusCode code="completed" />
  <effectiveTime value="20130512" />
  <value xsi:type="CD" code="248324001"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED-CT"
    displayName="well nourished" />
  <entryRelationship typeCode="SUBJ">
    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Nutrition Assessment** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.138" />
      ...
    </observation>

    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Nutrition Assessment** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.138" />
      ...
    </observation>
  </entryRelationship>
</observation>

```

3.60 Outcome Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.144 (open)]

Table 367: Outcome Observation Contexts

Contained By:	Contains:
Health Status Evaluations and Outcomes Section (required)	Author Participation Entry Reference External Document Reference Progress Toward Goal Observation

This template represents the outcome of care resulting from the interventions used to treat the patient. In the Care Planning workflow, the judgment about how well the person is progressing towards the goal is based on the observations made about the status of the patient with respect to interventions performed in the pursuit of achieving that goal.

Often thought of as an "actual outcome", the Outcome Observation may be related to goals, progression toward goals, and the associated interventions. For example, an observation

outcome of a blood oxygen saturation level of 95% is related to the goal of "Maintain Pulse Ox greater than 92", which in turn is related to the health concern of respiratory insufficiency and the problem of pneumonia. The template makes use of the Entry Reference (templateId:2.16.840.1.113883.10.20.22.4.122) to reference the interventions and goals defined elsewhere in the Care Plan CDA instance.

Table 368: Outcome Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.144)					
@classCode	1..1	SHALL		1098-31219	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-31220	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-31221	
@root	1..1	SHALL		1098-31222	2.16.840.1.113883.10.20.22.4.144
id	1..*	SHALL		1098-31223	
code	1..1	SHALL		1098-32746	urn:oid:2.16.840.1.113883.6.1 (LOINC)
value	0..1	SHOULD		1098-32747	
author	0..*	SHOULD		1098-31553	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	0..*	SHOULD		1098-31224	
@typeCode	1..1	SHALL		1098-31225	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = GEVL
act	1..1	SHALL		1098-32465	Entry Reference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122)
entryRelationship	0..1	SHOULD		1098-31427	
@typeCode	1..1	SHALL		1098-31428	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SPRT
@inversionInd	1..1	SHALL		1098-31429	true
observation	1..1	SHALL		1098-31430	Progress Toward Goal Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.110)
entryRelationship	0..*	MAY		1098-31688	
@typeCode	1..1	SHALL		1098-31689	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
act	1..1	SHALL		1098-31690	Entry Reference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122)

reference	0..*	MAY		1098-32763	
@typeCode	1..1	SHALL		1098-32764	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
externalDocument	1..1	SHALL		1098-32765	External Document Reference (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09)

1. **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1098-31219).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1098-31220).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-31221) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.144" (CONF:1098-31222).
4. **SHALL** contain at least one [1..*] id (CONF:1098-31223).
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:1098-32746).
6. **SHOULD** contain zero or one [0..1] value (CONF:1098-32747).
7. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31553).

The following entryRelationship represents the relationship between an Outcome Observation and a Goal Observation. Because the Goal Observation is already described in the CDA document instance's Goals section, rather than repeating the full content of the Goal Observation, the Entry Reference template can be used to reference this entry.

8. **SHOULD** contain zero or more [0..*] entryRelationship (CONF:1098-31224) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="GEVL" Evaluates goal (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31225).
 - b. **SHALL** contain exactly one [1..1] [Entry Reference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) (CONF:1098-32465).
 - c. This entryReference template **SHALL** reference an instance of a Goal Observation template (CONF:1098-32461).

The following entryRelationship represents the relationship between an Outcome Observation and a Progress Toward Goal Observation (Outcome Observation SUPPORTS Progress Toward Goal Observation). In the Care Planning workflow, the judgment about how well the person is progressing towards the goal is based on the observations made about the status of the patient with respect to interventions performed in the pursuit of achieving that goal.

9. **SHOULD** contain zero or one [0..1] entryRelationship (CONF:1098-31427) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="SPRT" Has support (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31428).

- b. **SHALL** contain exactly one [1..1] `@inversionInd="true"` (CONF:1098-31429).
- c. **SHALL** contain exactly one [1..1] [Progress Toward Goal Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.110) (CONF:1098-31430).

Where an Outcome Observation needs to reference an Intervention Act already described in the CDA document instance, rather than repeating the full content of the Intervention Act, the Entry Reference template may be used to reference this entry.

- 10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31688) 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:1098-31689).
 - b. **SHALL** contain exactly one [1..1] [Entry Reference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) (CONF:1098-31690).
 - c. This entryReference template **SHALL** reference an instance of a Intervention Act template (CONF:1098-32462).
- 11. **MAY** contain zero or more [0..*] **reference** (CONF:1098-32763).
 - 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:1098-32764).
 - b. 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:1098-32765).
- 12. **SHALL** contain at least one [1..*] **entryRelationships** (CONF:1098-32782).

Figure 181: Outcome Observation Example

```

<!-- Outcome Observation -->
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.144" />
  <id root="0aaaa123-24e2-46b3-9d49-6b753c712dec" />
  <code code="44616-1" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Pulse oximetry panel" />
  <statusCode code="completed" />
  <effectiveTime value="20130806" />
  <value xsi:type="PQ" value="95" unit="%" />
  <author>
    ...
  </author>
  <!-- This Outcome Observation EVALUATES a Goal
(Pulse ox reading of 95 evaluates the goal of Pulse ox reading > 92) -->
  <entryRelationship typeCode="GEVL">
    ...
  </entryRelationship>
  <!-- This Outcome Observation SUPPORTS the Progress Toward Goal Observation -->
  <entryRelationship typeCode="SPRT" inversionInd="true">
    ...
  </entryRelationship>
</observation>

```

3.61 Patient Referral Act

[act: identifier urn:oid:2.16.840.1.113883.10.20.22.4.140 (open)]

Table 369: Patient Referral Act Contexts

Contained By:	Contains:
Reason for Referral Section (V2) (optional)	Author Participation Indication (V2)

This template represents the type of referral (e.g., for dental care, to a specialist, for aging problems) and represents whether the referral is for full care or shared care. It may contain a reference to another act in the document instance representing the clinical reason for the referral (e.g., problem, concern, procedure).

Table 370: Patient Referral Act Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.140)					
@classCode	1..1	SHALL		1098-30884	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PCPR
@moodCode	1..1	SHALL		1098-30885	urn:oid:2.16.840.1.113883.11.20.9.66 (Patient Referral Act moodCode)
templateId	1..1	SHALL		1098-30886	
@root	1..1	SHALL		1098-30887	2.16.840.1.113883.10.20.22.4.140
id	1..*	SHALL		1098-30888	
code	1..1	SHALL		1098-30889	urn:oid:2.16.840.1.113883.11.20.9.56 (Referral Types)
statusCode	1..1	SHALL		1098-30892	
@code	1..1	SHALL		1098-31598	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = active
effectiveTime	1..1	SHALL		1098-30893	
priorityCode	0..1	SHOULD		1098-32623	
author	0..*	SHOULD		1098-31612	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
participant	0..*	MAY		1098-32635	
@typeCode	1..1	SHALL		1098-32638	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFT
participantRole	1..1	SHALL		1098-32636	
code	0..1	MAY		1098-32637	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
entryRelationship	0..*	MAY		1098-31604	
@typeCode	1..1	SHALL		1098-31613	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
observation	1..1	SHALL		1098-31605	
@classCode	1..1	SHALL		1098-31606	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS

@moodCode	1..1	SHALL		1098-31607	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = RQO
code	1..1	SHALL		1098-31608	
@code	1..1	SHALL		1098-31619	ASSERTION
@codeSystem	1..1	SHALL		1098-31620	urn:oid:2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		1098-31614	
@code	1..1	SHALL		1098-31615	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
priorityCode	0..1	SHOULD		1098-32443	urn:oid:2.16.840.1.113883.1.11.16866 (Act Priority)
value	1..1	SHALL	CD	1098-31611	urn:oid:2.16.840.1.113883.11.20.9.61 (Care Model)
entryRelationship	0..*	MAY		1098-31635	
@typeCode	1..1	SHALL		1098-31636	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-32634	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09

1. **SHALL** contain exactly one [1..1] @classCode="PCPR" provision of care (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-30884).
2. **SHALL** contain exactly one [1..1] @moodCode, which **SHALL** be selected from ValueSet [Patient Referral Act moodCode](#) urn:oid:2.16.840.1.113883.11.20.9.66 **STATIC** 2014-09-01 (CONF:1098-30885).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-30886) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.140" (CONF:1098-30887).

In the case of a Consultation Note where this referral is being fulfilled by this consultation, this id would be referenced in the inFullfilmentOf/order/id of the Consultation Note.

4. **SHALL** contain at least one [1..*] id (CONF:1098-30888).
5. **SHALL** contain exactly one [1..1] code, which **SHALL** be selected from ValueSet [Referral Types](#) urn:oid:2.16.840.1.113883.11.20.9.56 **DYNAMIC** (CONF:1098-30889).
6. **SHALL** contain exactly one [1..1] statusCode (CONF:1098-30892).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="active" Active (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-31598).

The effectiveTime represents the time when the future referral is intended to take place.

7. **SHALL** contain exactly one [1..1] effectiveTime (CONF:1098-30893).

8. **SHOULD** contain zero or one [0..1] **priorityCode** (CONF:1098-32623).
9. **SHOULD** contain zero or more [0..*] **Author Participation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31612).
10. **MAY** contain zero or more [0..*] **participant** (CONF:1098-32635).
 - a. The participant, if present, **SHALL** contain exactly one [1..1] **@typeCode="REFT"** Referred to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32638).
 - b. The participant, if present, **SHALL** contain exactly one [1..1] **participantRole** (CONF:1098-32636).
 - i. This participantRole **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:1098-32637).

The following entryRelationship represents whether the referral is for full or shared care.

11. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31604) 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:1098-31613).
 - b. **SHALL** contain exactly one [1..1] **observation** (CONF:1098-31605).
 - i. This observation **SHALL** contain exactly one [1..1] **@classCode="OBS"** observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1098-31606).
 - ii. This observation **SHALL** contain exactly one [1..1] **@moodCode="RQO"** request (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1098-31607).
 - iii. This observation **SHALL** contain exactly one [1..1] **code** (CONF:1098-31608).
 1. This code **SHALL** contain exactly one [1..1] **@code="ASSERTION"** assertion (CONF:1098-31619).
 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:1098-31620).
 - iv. This observation **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-31614).
 1. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-31615).
 - v. This observation **SHOULD** contain zero or one [0..1] **priorityCode** (ValueSet: **Act Priority** urn:oid:2.16.840.1.113883.1.11.16866 **DYNAMIC**) (CONF:1098-32443).
 - vi. This observation **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"**, where the code **SHOULD** be selected from ValueSet **Care Model** urn:oid:2.16.840.1.113883.11.20.9.61 **STATIC** 2014-06-19 (CONF:1098-31611).

The following entryRelationship represents a reference to another act in the document instance representing the clinical reason for the referral (e.g., problem, concern, procedure).

12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31635) such that it
- SHALL** contain exactly one [1..1] **@typeCode="RSON"** has reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31636).
 - 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:1098-32634).

Table 371: Patient Referral Act moodCode

Value Set: Patient Referral Act moodCode urn:oid:2.16.840.1.113883.11.20.9.66 Contains all the moodCode values it is possible to have for an Patient Referral Act. Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
INT	ActMood	urn:oid:2.16.840.1.113883.5.1001	Intent
RQO	ActMood	urn:oid:2.16.840.1.113883.5.1001	Request

Table 372: Referral Types

Value Set: Referral Types urn:oid:2.16.840.1.113883.11.20.9.56 A value set of SNOMED-CT codes descending from "3457005" patient referral (procedure). Value Set Source: http://vtsl.vetmed.vt.edu/TerminologyMgt/RF2Browser/ISA.cfm?SCT_ConceptID=3457005			
Code	Code System	Code System OID	Print Name
44383000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Patient referral for consultation
391034007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Refer for falls assessment (procedure)
86395003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	patient referral for family planning (procedure)
306106002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	referral to intensive care service (procedure)
306140002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	referral to clinical oncology service (procedure)
396150002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Referral for substance abuse (procedure)
...			

Table 373: Care Model

Value Set: Care Model urn:oid:2.16.840.1.113883.11.20.9.61
 A value set of SNOMED-CT codes representing care management styles (e.g., shared care, full care) descending from "170932006" "Chronic disease - care arrangement".
 Value Set Source:
http://vts1.vetmed.vt.edu/TerminologyMgt/RF2Browser/ISA.cfm?SCT_ConceptID=170932006

Code	Code System	Code System OID	Print Name
370985002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	care by local physician (finding)
170941001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	full care by GP (finding)
170935008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	full care by hospice (finding)
268528005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	full care by specialist (finding)
170939002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	full care: nurse practitioner (finding)
268529002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	shared care - consultant and GP (finding)
170936009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	shared care - hospice and GP (finding)
170937000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	shared care: district nurse and GP (finding)
170940000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	shared care: practice nurse and GP (finding)

Table 374: Act Priority

Value Set: Act Priority urn:oid:2.16.840.1.113883.1.11.16866			
Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.htm			
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
...			

Figure 182: Patient Referral Act Example

```
<entry>
  <act classCode="ACT" moodCode="INT">
    <!--Patient Referral Act-->
    <templateId root="2.16.840.1.113883.10.20.22.4.140" />
    <id root="70bdd7db-e02d-4eff-9829-35e3b7d9e154" />
    <code code="44383000" displayName="Patient referral for consultation"
codeSystemName="SNOMED" codeSystem="2.16.840.1.113883.6.96" />
    <statusCode code="active" />
    <effectiveTime value="20130311" />
    <priorityCode code="A"
      codeSystem="2.16.840.1.113883.5.7"
      codeSystemName="ActPriority"
      displayName="ASAP"/>
    <author>
      <time value="200130311" />
      <assignedAuthor>
        <id extension="KP00017" root="2.16.840.1.113883.19.5" />
        <addr>
          <streetAddressLine>1003 Health Care
            Drive</streetAddressLine>
          <city>Ann Arbor</city>
          <state>MI</state>
          <postalCode>02368</postalCode>
          <country>US</country>
        </addr>
        <telecom use="WP" value="tel:(555)555-1003" />
        <assignedPerson>
          <name>
            <given>Assigned</given>
            <family>Amanda</family>
          </name>
        </assignedPerson>
      </assignedAuthor>
    </author>
    <entryRelationship typeCode="SUBJ">
      <observation classCode="OBS" moodCode="EVN">
        <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
        <statusCode code="completed" />
        <value xsi:type="CD" code="268528005" displayName="full care by specialist"
codeSystem="2.16.840.1.113883.6.96" />
      </observation>
    </entryRelationship>
  </act>
</entry>
```

3.62 Planned Act (V2)

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

Table 375: Planned Act (V2) Contexts

Contained By:	Contains:
Plan of Treatment Section (V2) (optional)	Author Participation
Nutrition Recommendation (optional)	Indication (V2)
Assessment and Plan Section (V2) (optional)	Instruction (V2)
Planned Intervention Act (V2) (optional)	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 376: 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).

Figure 183: 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>

```

3.63 Planned Coverage

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

Table 377: Planned Coverage Contexts

Contained By:	Contains:
Planned Procedure (V2) (optional) Planned Observation (V2) (optional) Planned Supply (V2) (optional)	Author Participation

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

Table 378: 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 379: 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: http://www.phdsc.org/standards/payer-typology.asp			
Code	Code System	Code System OID	Print Name
1	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.113883.3.221.5	Medicare
2	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.113883.3.221.5	Medicaid
311	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.113883.3.221.5	Tricare (CHAMPUS)
33	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.113883.3.221.5	Indian Health Service or Tribe
62	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.113883.3.221.5	BC Indemnity
61	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.113883.3.221.5	BC Managed Care
611	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.113883.3.221.5	BC Managed Care - HMO
619	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.113883.3.221.5	BC Managed Care - Other
613	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.113883.3.221.5	BC Managed Care - POS
612	Source of Payment Typology (PHDSC)	urn:oid:2.16.840.1.113883.3.221.5	BC Managed Care - PPO
...			

Figure 184: 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>

```

3.64 Planned Encounter (V2)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09
(open)]

Table 380: Planned Encounter (V2) Contexts

Contained By:	Contains:
Plan of Treatment Section (V2) (optional) Nutrition Recommendation (optional) Planned Intervention Act (V2) (optional)	Author Participation Indication (V2) Priority Preference Service Delivery Location

This template represents a planned or ordered encounter. The type of encounter (e.g., comprehensive outpatient visit) is represented. Clinicians participating in the encounter and the location of the planned encounter may be captured. The priority that the patient and providers place on the encounter may be represented.

Table 381: Planned Encounter (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09)					
@classCode	1..1	SHALL		1098-8564	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1098-8565	urn:oid:2.16.840.1.113883.11.20.9.23 (Planned moodCode (Act/Encounter/Procedure))
templateId	1..1	SHALL		1098-30437	
@root	1..1	SHALL		1098-30438	2.16.840.1.113883.10.20.22.4.40
@extension	1..1	SHALL		1098-32553	2014-06-09
id	1..*	SHALL		1098-8567	
code	0..1	SHOULD		1098-31032	urn:oid:2.16.840.1.113883.11.20.9.52 (Encounter Planned)
statusCode	1..1	SHALL		1098-30439	
@code	1..1	SHALL		1098-31880	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = active
effectiveTime	0..1	SHOULD		1098-30440	
performer	0..*	MAY		1098-30442	
assignedEntity	1..1	SHALL		1098-31874	
author	0..*	SHOULD		1098-32045	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
participant	0..*	MAY		1098-30443	
@typeCode	1..1	SHALL		1098-31875	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = LOC
participantRole	1..1	SHALL		1098-31876	Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32)
entryRelationship	0..1	MAY		1098-31033	
@typeCode	1..1	SHALL		1098-31034	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1098-31035	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.

					22.4.143
entryRelationship	0..*	MAY		1098-31877	
@typeCode	1..1	SHALL		1098-31878	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-31879	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09)

1. **SHALL** contain exactly one [1..1] **@classCode="ENC"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8564).
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:1098-8565).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-30437) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.40"** (CONF:1098-30438).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32553).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8567).

Records the type of encounter ordered or recommended.

5. **SHOULD** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [Encounter Planned](#) urn:oid:2.16.840.1.113883.11.20.9.52 **DYNAMIC** (CONF:1098-31032).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-30439).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="active"** Active (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-31880).
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-30440).

Performers represent clinicians who are responsible for assessing and treating the patient.

8. **MAY** contain zero or more [0..*] **performer** (CONF:1098-30442) such that it
 - a. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-31874).

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

9. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32045).

This location participation captures where the planned or ordered encounter may take place.

10. **MAY** contain zero or more [0..*] **participant** (CONF:1098-30443) 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:1098-31875).
 - b. **SHALL** contain exactly one [1..1] [Service Delivery Location](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) (CONF:1098-31876).

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

11. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-31033) 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:1098-31034).
 - b. **SHALL** contain exactly one [1..1] **Priority Preference** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-31035).

The following entryRelationship captures the reason for the planned or ordered encounter

12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31877) 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:1098-31878).
 - 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:1098-31879).

Table 382: Encounter Planned

Value Set: Encounter Planned urn:oid:2.16.840.1.113883.11.20.9.52 A value set of SNOMED-CT codes descending from "308335008" patient encounter procedure (procedure). Value Set Source: http://vts1.vetmed.vt.edu/TerminologyMgt/RF2Browser/ISA.cfm?SCT_ConceptID=308335008			
Code	Code System	Code System OID	Print Name
185349003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	encounter for "check-up" (procedure)
439740005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	postoperative follow-up visit (procedure)
439708006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	home visit (procedure)
438515009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	E-mail encounter from carer (procedure)
14736009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	patient evaluation and management
4525004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	emergency department patient visit
12586001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	physician direction of emergency medical systems
11429006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	consultation
680007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	radiation physics consultation
726007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	pathology consultation, comprehensive, records and specimen with report
...			

Figure 185: Planned Encounter (V2) Example

```

<entry>
  <encounter moodCode="INT" classCode="ENC">
    <templateId root="2.16.840.1.113883.10.20.22.4.40" extension="2014-06-09" />
    <!-- Planned Encounter V2 template -->
    <id root="9a6d1bac-17d3-4195-89a4-1121bc809b4d" />
    <code code="185349003" displayName="encounter for check-up (procedure)"
codeSystemName="SNOMED CT" codeSystem="2.16.840.1.113883.6.96"> </code>
    <statusCode code="active" />
    <effectiveTime value="20130615" />
    <performer>
      <assignedEntity>
        ...
      </assignedEntity>
    </performer>
    <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-->
        ...
      </observation>
    </entryRelationship>
  </encounter>
</entry>

```

3.65 Planned Immunization Activity

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

Table 383: Planned Immunization Activity Contexts

Contained By:	Contains:
Plan of Treatment Section (V2) (optional) Planned Intervention Act (V2) (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 384: 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:2.16.840.1.113883.3.88.1.2.3221.8.7 (Medication Route FDA)
approachSiteCode	0..*	MAY		1098-32128	urn:oid:2.16.840.1.113883.3.88.1.2.3221.8.9 (Body Site)
doseQuantity	0..1	MAY		1098-32129	
@unit	0..1	SHOULD		1098-32130	urn:oid:2.16.840.1.113883.1.11.1.2839 (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:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-32116	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09)
entryRelationship	0..*	MAY		1098-32117	
@typeCode	1..1	SHALL		1098-32118	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
act	1..1	SHALL		1098-32119	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09)
precondition	0..*	MAY		1098-32123	
@typeCode	1..1	SHALL		1098-32124	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = PRCN
criterion	1..1	SHALL		1098-32125	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" (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 385: 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:			
http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/inrastructure/vocabulary/vocabulary.html			
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 186: 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>
```

3.66 Planned Intervention Act (V2)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.146:2015-08-01
(open)]

Table 386: Planned Intervention Act (V2) Contexts

Contained By:	Contains:
Intervention Act (V2) (optional) Interventions Section (V3) (optional)	Advance Directive Observation (V3) Author Participation Encounter Activity (V3) Entry Reference External Document Reference Handoff Communication Participants Immunization Activity (V3) Instruction (V2) Intervention Act (V2) Medication Activity (V2) Non-Medicinal Supply Activity (V2) Nutrition Recommendation Planned Act (V2) Planned Encounter (V2) Planned Immunization Activity Planned Medication Activity (V2) Planned Observation (V2) Planned Procedure (V2) Planned Supply (V2) Procedure Activity Act (V2) Procedure Activity Observation (V2) Procedure Activity Procedure (V2)

This template represents a Planned Intervention Act. It is a wrapper for planned intervention-type activities considered to be parts of the same intervention. For example, an activity such as "elevate head of bed" combined with "provide humidified O2 per nasal cannula" may be the interventions planned for a health concern of "respiratory insufficiency" in order to attempt to achieve a goal of "pulse oximetry greater than 92%". These intervention activities may be newly described or derived from a variety of sources within an EHR.

Interventions are actions taken to increase the likelihood of achieving the patient's or providers' goals. An Intervention Act should contain a reference to a Goal Observation representing the reason for the intervention.

Planned Intervention Acts can be related to each other or to Intervention Acts. (E.g., a Planned Intervention Act with moodCode of INT could be related to a series of Intervention Acts with moodCode of EVN, each having an effectiveTime containing the time of the intervention.)

All interventions referenced in a Planned Intervention Act must have moodCodes indicating that that are planned (have not yet occurred).

Table 387: Planned Intervention Act (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.146:2015-08-01)					
@classCode	1..1	SHALL		1198-32678	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1198-32679	urn:oid:2.16.840.1.113883.11.20.9.54 (Planned Intervention moodCode)
templateId	1..1	SHALL		1198-32653	
@root	1..1	SHALL		1198-32680	2.16.840.1.113883.10.20.22.4.146
@extension	1..1	SHALL		1198-32912	2015-08-01
id	1..*	SHALL		1198-32681	
code	1..1	SHALL		1198-32654	
@code	1..1	SHALL		1198-32682	362956003
@codeSystem	1..1	SHALL		1198-32683	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
statusCode	1..1	SHALL		1198-32655	
@code	1..1	SHALL		1198-32684	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = active
effectiveTime	0..1	SHOULD		1198-32723	
author	0..*	SHOULD		1198-32719	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	0..*	MAY		1198-32652	
@typeCode	1..1	SHALL		1198-32685	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32677	Advance Directive Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.48:2015-08-01)
entryRelationship	0..*	MAY		1198-32656	
@typeCode	1..1	SHALL		1198-32686	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
substanceAdministration	1..1	SHALL		1198-	Immunization Activity (V3)

				32687	(identifier: urn:hl7ii:2.16.840.1.113883.10.2 0.22.4.52:2015-08-01)
entryRelationship	0..*	MAY		1198-32657	
@typeCode	1..1	SHALL		1198-32688	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
substanceAdministration	1..1	SHALL		1198-32689	Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2 0.22.4.16:2014-06-09)
entryRelationship	0..*	MAY		1198-32658	
@typeCode	1..1	SHALL		1198-32690	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-32691	Procedure Activity Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2 0.22.4.12:2014-06-09)
entryRelationship	0..*	MAY		1198-32659	
@typeCode	1..1	SHALL		1198-32692	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-32693	Intervention Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2 0.22.4.131:2015-08-01)
entryRelationship	0..*	MAY		1198-32660	
@typeCode	1..1	SHALL		1198-32694	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32695	Procedure Activity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2 0.22.4.13:2014-06-09)
entryRelationship	0..*	MAY		1198-32661	
@typeCode	1..1	SHALL		1198-32696	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
procedure	1..1	SHALL		1198-32697	Procedure Activity Procedure (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2 0.22.4.14:2014-06-09)
entryRelationship	0..*	MAY		1198-32662	
@typeCode	1..1	SHALL		1198-	urn:oid:2.16.840.1.113883.5.100

				32698	2 (HL7ActRelationshipType) = REFR
encounter	1..1	SHALL		1198-32699	Encounter Activity (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.49:2015-08-01)
entryRelationship	0..*	MAY		1198-32663	
typeId	0..1	MAY		1198-32700	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-32701	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.20:2014-06-09)
entryRelationship	0..*	MAY		1198-32664	
@typeCode	1..1	SHALL		1198-32702	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
supply	1..1	SHALL		1198-32703	Non-Medicinal Supply Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.50:2014-06-09)
entryRelationship	0..*	MAY		1198-32665	
@typeCode	1..1	SHALL		1198-32704	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-32705	Planned Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.39:2014-06-09)
entryRelationship	0..*	MAY		1198-32666	
@typeCode	1..1	SHALL		1198-32706	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
encounter	1..1	SHALL		1198-32707	Planned Encounter (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.40:2014-06-09)
entryRelationship	0..*	MAY		1198-32667	
@typeCode	1..1	SHALL		1198-32708	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32709	Planned Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.44:2014-06-09)
entryRelationship	0..*	MAY		1198-32668	

@typeCode	1..1	SHALL		1198-32710	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
procedure	1..1	SHALL		1198-32711	Planned Procedure (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09)
entryRelationship	0..*	MAY		1198-32669	
@typeCode	1..1	SHALL		1198-32712	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
substanceAdministration	1..1	SHALL		1198-32713	Planned Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09)
entryRelationship	0..*	MAY		1198-32670	
@typeCode	1..1	SHALL		1198-32714	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
supply	1..1	SHALL		1198-32715	Planned Supply (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09)
entryRelationship	0..*	MAY		1198-32671	
procedure	1..1	SHALL		1198-32716	Nutrition Recommendation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.130)
entryRelationship	0..*	MAY		1198-32672	
@typeCode	1..1	SHALL		1198-32717	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-32718	Entry Reference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122)
entryRelationship	1..1	SHALL		1198-32673	
@typeCode	1..1	SHALL		1198-32720	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
act	1..1	SHALL		1198-32721	Entry Reference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122)
entryRelationship	0..*	MAY		1198-32675	
@typeCode	1..1	SHALL		1198-32726	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) =

					REFR
act	1..1	SHALL		1198-32727	Handoff Communication Participants (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.141)
entryRelationship	0..*	MAY		1198-32676	
@typeCode	1..1	SHALL		1198-32728	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
substanceAdministration	1..1	SHALL		1198-32729	Planned Immunization Activity (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.120)
reference	0..*	MAY		1198-32766	
@typeCode	1..1	SHALL		1198-32767	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
externalDocument	1..1	SHALL		1198-32768	External Document Reference (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09)

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1198-32678).
2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [Planned Intervention moodCode](#) urn:oid:2.16.840.1.113883.11.20.9.54 **DYNAMIC** (CONF:1198-32679).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-32653) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.146"** (CONF:1198-32680).
 - b. **SHALL** contain exactly one [1..1] **@extension="2015-08-01"** (CONF:1198-32912).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-32681).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1198-32654).
 - a. This code **SHALL** contain exactly one [1..1] **@code="362956003"** procedure / intervention (navigational concept) (CONF:1198-32682).
 - 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:1198-32683).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-32655).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="active"** Active (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1198-32684).
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1198-32723).
8. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-32719).

9. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32652) 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:1198-32685).
 - b. **SHALL** contain exactly one [1..1] **Advance Directive Observation (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.48:2015-08-01) (CONF:1198-32677).
10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32656) 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:1198-32686).
 - b. **SHALL** contain exactly one [1..1] **Immunization Activity (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01) (CONF:1198-32687).
11. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32657) 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:1198-32688).
 - 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:1198-32689).
12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32658) 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:1198-32690).
 - b. **SHALL** contain exactly one [1..1] **Procedure Activity Act (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.12:2014-06-09) (CONF:1198-32691).

The following entryRelationship represents the relationship between two Intervention Acts (Intervention RELATES TO Intervention).

13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32659) 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:1198-32692).
 - b. **SHALL** contain exactly one [1..1] **Intervention Act (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.131:2015-08-01) (CONF:1198-32693).
14. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32660) 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:1198-32694).
 - b. **SHALL** contain exactly one [1..1] **Procedure Activity Observation (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09) (CONF:1198-32695).
15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32661) 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:1198-32696).
 - b. **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:1198-32697).
16. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32662) 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:1198-32698).
 - b. **SHALL** contain exactly one [1..1] [Encounter Activity \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2015-08-01) (CONF:1198-32699).
17. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32663) such that it
- a. **MAY** contain zero or one [0..1] typeId="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-32700).
 - 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:1198-32701).
18. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32664) 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:1198-32702).
 - b. **SHALL** contain exactly one [1..1] [Non-Medicinal Supply Activity \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.50:2014-06-09) (CONF:1198-32703).
19. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32665) 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:1198-32704).
 - b. **SHALL** contain exactly one [1..1] [Planned Act \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09) (CONF:1198-32705).
20. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32666) 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:1198-32706).
 - b. **SHALL** contain exactly one [1..1] [Planned Encounter \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09) (CONF:1198-32707).
21. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32667) 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:1198-32708).

- b. **SHALL** contain exactly one [1..1] [Planned Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09) (CONF:1198-32709).
22. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32668) 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:1198-32710).
 - b. **SHALL** contain exactly one [1..1] [Planned Procedure \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09) (CONF:1198-32711).
23. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32669) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-32712).
 - b. **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:1198-32713).
24. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32670) 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:1198-32714).
 - b. **SHALL** contain exactly one [1..1] [Planned Supply \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09) (CONF:1198-32715).
25. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32671) such that it
- a. **SHALL** contain exactly one [1..1] [Nutrition Recommendation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.130) (CONF:1198-32716).

Where an Intervention needs to reference another entry already described in the CDA document instance, rather than repeating the full content of the entry, the Entry Reference template may be used to reference this entry.

26. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32672) 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:1198-32717).
 - b. **SHALL** contain exactly one [1..1] [Entry Reference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) (CONF:1198-32718).

An Intervention Act **SHALL** reference a Goal Observation. Because the Goal Observation is already described in the CDA document instance's Goals section, rather than repeating the full content of the Goal Observation, the Entry Reference template can be used to reference this entry. The following entryRelationship represents an Entry Reference to Goal Observation.

27. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1198-32673) 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:1198-32720).

- b. **SHALL** contain exactly one [1..1] [Entry Reference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) (CONF:1198-32721).
 - c. This entryReference template **SHALL** reference an instance of a Goal Observation template (CONF:1198-32722).
28. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32675) 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:1198-32726).
 - b. **SHALL** contain exactly one [1..1] [Handoff Communication Participants](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.141) (CONF:1198-32727).
29. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32676) 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:1198-32728).
 - b. **SHALL** contain exactly one [1..1] [Planned Immunization Activity](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.120) (CONF:1198-32729).
30. **MAY** contain zero or more [0..*] **reference** (CONF:1198-32766).
- 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:1198-32767).
 - b. 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:1198-32768).

Table 388: Planned Intervention moodCode

Value Set: Planned Intervention moodCode urn:oid:2.16.840.1.113883.11.20.9.54 Contains all the moodCode values it is possible to have for a Planned Intervention. Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
APT	ActMood	urn:oid:2.16.840.1.113883.5.1001	Appointment
ARQ	ActMood	urn:oid:2.16.840.1.113883.5.1001	Appointment Request
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

3.67 Planned Medication Activity (V2)

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

Table 389: Planned Medication Activity (V2) Contexts

Contained By:	Contains:
Plan of Treatment Section (V2) (optional) Nutrition Recommendation (optional) Planned Intervention Act (V2) (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 390: 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
- SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31105).
 - 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
- SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32070).
 - SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:h17ii: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
- SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has Subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32073).
 - SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:h17ii: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).
- 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).
 - The precondition, if present, **SHALL** contain exactly one [1..1] [Precondition for Substance Administration \(V2\)](#) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09) (CONF:1098-32086).

Figure 187: 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="cbbd33f0-6cde-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>

```

3.68 Planned Observation (V2)

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

Table 391: Planned Observation (V2) Contexts

Contained By:	Contains:
Plan of Treatment Section (V2) (optional) Nutrition Recommendation (optional) Planned Intervention Act (V2) (optional)	Author Participation Indication (V2) Instruction (V2) Planned Coverage Priority Preference

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

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

The Planned Observation template may also indicate the potential insurance coverage for the observation.

Table 392: 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
- SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31074).
 - 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
- SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32035).
 - 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
- SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32038).
 - 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 393: 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:			
http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html			
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 188: 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>

```

3.69 Planned Procedure (V2)

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

Table 394: Planned Procedure (V2) Contexts

Contained By:	Contains:
Plan of Treatment Section (V2) (optional) Nutrition Recommendation (optional) Planned Procedure Section (V2) (optional) Planned Intervention Act (V2) (optional)	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 395: 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:2.16.840.1.113883.10.2.0.22.4.19:2014-06-09)
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:2.16.840.1.113883.10.2.0.22.4.20:2014-06-09)
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

- SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31080).
- 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

- SHALL** contain exactly one [1..1] **@typeCode="RSON"** Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31983).
- 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

- SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** Has Subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31986).
- SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1098-31987).
- 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 189: 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>
```

3.70 Planned Supply (V2)

[supply: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09
(open)]

Table 396: Planned Supply (V2) Contexts

Contained By:	Contains:
Plan of Treatment Section (V2) (optional) Nutrition Recommendation (optional) Planned Intervention Act (V2) (optional)	Author Participation Immunization Medication Information (V2) Indication (V2) Instruction (V2) Medication Information (V2) Planned Coverage Priority Preference Product Instance

This template represents both medicinal and non-medicinal supplies ordered, requested, or intended for the patient (e.g., medication prescription, order for wheelchair). The importance of the supply order or request to the patient and provider may be indicated in the Priority Preference.

The effective time indicates the time when the supply is intended to take place and author time indicates when the documentation of the plan occurred. The Planned Supply template may also indicate the potential insurance coverage for the procedure.

Depending on the type of supply, the product or participant will be either a Medication Information product (medication), an Immunization Medication Information product (immunization), or a Product Instance participant (device/equipment).

Table 397: Planned Supply (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
supply (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09)					
@classCode	1..1	SHALL		1098-8577	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SPLY
@moodCode	1..1	SHALL		1098-8578	urn:oid:2.16.840.1.113883.11.20.9.24 (Planned moodCode (SubstanceAdministration/Supply))
templateId	1..1	SHALL		1098-30463	
@root	1..1	SHALL		1098-30464	2.16.840.1.113883.10.20.22.4.43
@extension	1..1	SHALL		1098-32556	2014-06-09
id	1..*	SHALL		1098-8580	
statusCode	1..1	SHALL		1098-30458	
@code	1..1	SHALL		1098-32047	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = active
effectiveTime	0..1	SHOULD		1098-30459	
repeatNumber	0..1	MAY		1098-32063	
quantity	0..1	MAY		1098-32064	
product	0..1	MAY		1098-32049	
manufacturedProduct	1..1	SHALL		1098-32050	Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09)
product	0..1	MAY		1098-32051	
manufacturedProduct	1..1	SHALL		1098-32052	Immunization Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09)
product	0..1	SHOULD		1098-32325	
performer	0..*	MAY		1098-32048	
author	0..1	SHOULD		1098-31129	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
participant	0..1	MAY		1098-	

				32094	
participantRole	1..1	SHALL		1098-32095	Product Instance (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.37)
entryRelationship	0..*	MAY		1098-31110	
@typeCode	1..1	SHALL		1098-31111	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1098-31112	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143)
entryRelationship	0..*	MAY		1098-32054	
@typeCode	1..1	SHALL		1098-32055	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-32056	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09)
entryRelationship	0..*	MAY		1098-32057	
@typeCode	1..1	SHALL		1098-32058	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
act	1..1	SHALL		1098-32059	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09)
entryRelationship	0..*	MAY		1098-32060	
@typeCode	1..1	SHALL		1098-32061	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
act	1..1	SHALL		1098-32062	Planned Coverage (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.129)

1. **SHALL** contain exactly one [1..1] **@classCode="SPLY"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8577).
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:1098-8578).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-30463) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.43"** (CONF:1098-30464).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32556).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8580).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-30458).

- a. This statusCode **SHALL** contain exactly one [1..1] @code="active" Active (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-32047).

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

6. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-30459).

In a Planned Supply, repeatNumber indicates the number of times the supply event can occur. For example, if a medication is filled at a pharmacy and the prescription may be refilled 3 more times, the supply RepeatNumber equals 4.

7. **MAY** contain zero or one [0..1] **repeatNumber** (CONF:1098-32063).
8. **MAY** contain zero or one [0..1] **quantity** (CONF:1098-32064).

This product represents medication that is ordered, requested or intended for the patient.

9. **MAY** contain zero or one [0..1] **product** (CONF:1098-32049) such that it
 - a. **SHALL** contain exactly one [1..1] Medication Information (V2) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) (CONF:1098-32050).
 - b. If the product is Medication Information (V2) (2.16.840.1.113883.10.20.22.4.23.2) then the product **SHALL NOT** be Immunization Medication Information (2.16.840.1.113883.10.20.22.4.54.2) and the participant **SHALL NOT** be Product Instance (CONF:1098-32092).

This product represents immunization medication that is ordered, requested or intended for the patient.

10. **MAY** contain zero or one [0..1] **product** (CONF:1098-32051) such that it
 - a. **SHALL** contain exactly one [1..1] Immunization Medication Information (V2) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) (CONF:1098-32052).
 - b. If the product is Medication Information (V2) (2.16.840.1.113883.10.20.22.4.23.2) then the product **SHALL NOT** be Immunization Medication Information (2.16.840.1.113883.10.20.22.4.54.2) and the participant **SHALL NOT** be Product Instance (CONF:1098-32093).

A product is recommended or even required under certain implementations. This IG makes product as recommended (SHOULD).

11. **SHOULD** contain zero or one [0..1] **product** (CONF:1098-32325).

The clinician who is expected to perform the supply could be identified using supply/performer.

12. **MAY** contain zero or more [0..*] **performer** (CONF:1098-32048).

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

13. **SHOULD** contain zero or one [0..1] Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31129).

This participant represents a device that is ordered, requested or intended for the patient.

14. **MAY** contain zero or one [0..1] **participant** (CONF:1098-32094) such that it

- a. **SHALL** contain exactly one [1..1] [Product Instance](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.37) (CONF:1098-32095).
- b. If the participant is Product Instance then the product **SHALL NOT** be Medication Information (V2) (2.16.840.1.113883.10.20.22.4.23.2) and the product **SHALL NOT** be Immunization Medication Information (V2) (2.16.840.1.113883.10.20.22.4.54.2) (CONF:1098-32096).

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

- 15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31110) 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:1098-31111).
 - b. **SHALL** contain exactly one [1..1] [Priority Preference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-31112).

The following entryRelationship represents the indication for the supply.

- 16. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32054) 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:1098-32055).
 - 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:1098-32056).

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

- 17. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32057) 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:1098-32058).
 - 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:1098-32059).

The following entryRelationship represents the insurance coverage the patient may have for the supply.

- 18. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32060) 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:1098-32061).
 - b. **SHALL** contain exactly one [1..1] [Planned Coverage](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.129) (CONF:1098-32062).

Figure 190: Planned Supply (V2) Example

```
<supply moodCode="INT" classCode="SPLY">
  <templateId root="2.16.840.1.113883.10.20.22.4.43" extension="2014-06-09" />
  <!-- Planned Supply (V2) -->
  <id root="9a6d1bac-17d3-4195-89c4-1121bc809b5d" />
  <statusCode code="active" />
  <!-- The effectiveTime in a planned supply represents
the time that the supply should occur. -->
  <effectiveTime value="20130615" />
  <repeatNumber value="1" />
  <quantity value="3" />
  <!-- This product represents medication that is ordered,
requested or intended for the patient. -->
  <product>
    <manufacturedProduct classCode="MANU">
      <!-- Medication Information (V2) -->
      <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" codeSystem="2.16.840.1.113883.6.88"
displayName="Proventil 0.09 MG/ACTUAT inhalant solution">
          <originalText>
            <reference value="#MedSec_1" />
          </originalText>
          <translation code="573621" displayName="Proventil 0.09 MG/ACTUAT
inhalant solution" codeSystem="2.16.840.1.113883.6.88" codeSystemName="RxNorm" />
        </code>
      </manufacturedMaterial>
      <manufacturerOrganization>
        <name>Medication Factory Inc.</name>
      </manufacturerOrganization>
    </manufacturedProduct>
  </product>
  <!-- The clinician who is expected to perform the supply
could be identified using supply/performer. -->
  <performer>
    ...
  </performer>
  <!-- The author in a supply represents the clinician
who is requesting or planning the supply. -->
  <author typeCode="AUT">
    ...
  </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>
<entryRelationship typeCode="COMP">
    <!-- Planned Coverage -->
    ...

</entryRelationship>
</supply>

```

3.71 Policy Activity (V3)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.61:2015-08-01 (open)]

Table 398: Policy Activity (V3) Contexts

Contained By:	Contains:
Coverage Activity (V3) (required)	US Realm Address (AD.US.FIELDDED)

A policy activity represents the policy or program providing the coverage. The person for whom payment is being provided (i.e., the patient) is the covered party. The subscriber of the policy or program is represented as a participant that is the holder of the coverage. The payer is represented as the performer of the policy activity.

Table 399: Policy Activity (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.61:2015-08-01)					
@classCode	1..1	SHALL		1198-8898	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1198-8899	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-8900	
@root	1..1	SHALL		1198-10516	2.16.840.1.113883.10.20.22.4.61
@extension	1..1	SHALL		1198-32595	2015-08-01
id	1..*	SHALL		1198-8901	
code	1..1	SHALL		1198-8903	urn:oid:2.16.840.1.113883.3.88.12.3221.5.2 (Health Insurance Type)
translation	1..*	SHALL		1198-32852	urn:oid:2.16.840.1.114222.4.11.3591 (Payer)
statusCode	1..1	SHALL		1198-8902	
@code	1..1	SHALL		1198-19109	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
performer	1..1	SHALL		1198-8906	
@typeCode	1..1	SHALL		1198-8907	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF
templateId	1..1	SHALL		1198-16808	
@root	1..1	SHALL		1198-16809	2.16.840.1.113883.10.20.22.4.87
assignedEntity	1..1	SHALL		1198-8908	
id	1..*	SHALL		1198-8909	
code	0..1	SHOULD		1198-8914	
@code	1..1	SHALL		1198-15992	urn:oid:2.16.840.1.113883.1.11.10416 (HL7FinanciallyResponsibleParty Type)
addr	0..1	MAY		1198-8910	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)

telecom	0..*	MAY		1198-8911	
representedOrganization	0..1	SHOULD		1198-8912	
name	0..1	SHOULD		1198-8913	
performer	0..1	SHOULD		1198-8961	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF
templateId	1..1	SHALL		1198-16810	
@root	1..1	SHALL		1198-16811	2.16.840.1.113883.10.20.22.4.88
time	0..1	SHOULD		1198-8963	
assignedEntity	1..1	SHALL		1198-8962	
code	1..1	SHALL		1198-8968	
@code	1..1	SHALL		1198-16096	GUAR
@codeSystem	1..1	SHALL		1198-32165	2.16.840.1.113883.5.110
addr	0..1	SHOULD		1198-8964	US Realm Address (AD.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)
telecom	0..*	SHOULD		1198-8965	
participant	1..1	SHALL		1198-8916	
@typeCode	1..1	SHALL		1198-8917	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = COV
templateId	1..1	SHALL		1198-16812	
@root	1..1	SHALL		1198-16814	2.16.840.1.113883.10.20.22.4.89
time	0..1	SHOULD		1198-8918	
low	0..1	SHOULD		1198-8919	
high	0..1	SHOULD		1198-8920	
participantRole	1..1	SHALL		1198-8921	
id	1..*	SHALL		1198-8922	
code	1..1	SHALL		1198-8923	

@code	0..1	SHOULD		1198-16078	urn:oid:2.16.840.1.113883.1.11.18877 (Coverage Role Type)
addr	0..1	SHOULD		1198-8956	
playingEntity	0..1	SHOULD		1198-8932	
name	1..*	SHALL		1198-8930	
sdct:birthTime	1..1	SHALL		1198-31344	
participant	0..1	SHOULD		1198-8934	
@typeCode	1..1	SHALL		1198-8935	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = HLD
templateId	1..1	SHALL		1198-16813	
@root	1..1	SHALL		1198-16815	2.16.840.1.113883.10.20.22.4.90
time	0..1	MAY		1198-8938	
participantRole	1..1	SHALL		1198-8936	
id	1..*	SHALL		1198-8937	
addr	0..1	SHOULD		1198-8925	
entryRelationship	1..*	SHALL		1198-8939	
@typeCode	1..1	SHALL		1198-8940	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:1198-8898).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-8899).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1198-8900) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.61" (CONF:1198-10516).
 - b. **SHALL** contain exactly one [1..1] @extension="2015-08-01" (CONF:1198-32595).

This id is a unique identifier for the policy or program providing the coverage

4. **SHALL** contain at least one [1..*] id (CONF:1198-8901).
5. **SHALL** contain exactly one [1..1] code, which **SHOULD** be selected from ValueSet [Health Insurance Type](#) urn:oid:2.16.840.1.113883.3.88.12.3221.5.2 **DYNAMIC** (CONF:1198-8903).

- a. This code **SHALL** contain at least one [1..*] **translation**, which **SHOULD** be selected from ValueSet [Payer](#) urn:oid:2.16.840.1.114222.4.11.3591 (CONF:1198-32852).
- 6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-8902).
 - 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:1198-19109).

This performer represents the Payer.

- 7. **SHALL** contain exactly one [1..1] **performer** (CONF:1198-8906) 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:1198-8907).
 - b. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-16808).
 - i. This templateId **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.87"** Payer Performer (CONF:1198-16809).
 - c. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-8908).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-8909).
 - ii. This assignedEntity **SHOULD** contain zero or one [0..1] **code** (CONF:1198-8914).
 - 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:1198-15992).
 - iii. This assignedEntity **MAY** contain zero or one [0..1] [US Realm Address \(AD.US.FIELDDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-8910).
 - iv. This assignedEntity **MAY** contain zero or more [0..*] **telecom** (CONF:1198-8911).
 - v. This assignedEntity **SHOULD** contain zero or one [0..1] **representedOrganization** (CONF:1198-8912).
 - 1. The representedOrganization, if present, **SHOULD** contain zero or one [0..1] **name** (CONF:1198-8913).

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:1198-8961) such that it
 - a. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-16810).
 - i. This templateId **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.88"** Guarantor Performer (CONF:1198-16811).
 - b. **SHOULD** contain zero or one [0..1] **time** (CONF:1198-8963).
 - c. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-8962).

- i. This assignedEntity **SHALL** contain exactly one [1..1] **code** (CONF:1198-8968).
 - 1. This code **SHALL** contain exactly one [1..1] **@code="GUAR"** Guarantor (CONF:1198-16096).
 - 2. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.5.110"** (CONF:1198-32165).
 - ii. This assignedEntity **SHOULD** contain zero or one [0..1] **US Realm Address (AD.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-8964).
 - iii. This assignedEntity **SHOULD** contain zero or more [0..*] **telecom** (CONF:1198-8965).
 - iv. **SHOULD** include assignedEntity/assignedPerson/name AND/OR assignedEntity/representedOrganization/name (CONF:1198-8967).
9. **SHALL** contain exactly one [1..1] **participant** (CONF:1198-8916) 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:1198-8917).
 - b. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-16812).
 - i. This templateId **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.89"** Covered Party Participant (CONF:1198-16814).
 - c. **SHOULD** contain zero or one [0..1] **time** (CONF:1198-8918).
 - i. The time, if present, **SHOULD** contain zero or one [0..1] **low** (CONF:1198-8919).
 - ii. The time, if present, **SHOULD** contain zero or one [0..1] **high** (CONF:1198-8920).
 - d. **SHALL** contain exactly one [1..1] **participantRole** (CONF:1198-8921).
 - i. This participantRole **SHALL** contain at least one [1..*] **id** (CONF:1198-8922).
 - 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:1198-8984).
 - ii. This participantRole **SHALL** contain exactly one [1..1] **code** (CONF:1198-8923).
 - 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:1198-16078).
 - iii. This participantRole **SHOULD** contain zero or one [0..1] **addr** (CONF:1198-8956).
 - 1. The content of addr **SHALL** be a conformant US Realm Address (AD.US.FIELDDED) (2.16.840.1.113883.10.20.22.5.2) (CONF:1198-10484).
 - iv. This participantRole **SHOULD** contain zero or one [0..1] **playingEntity** (CONF:1198-8932).

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:1198-8930).

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:1198-31344).
 - a. The prefix sdtc: **SHALL** be bound to the namespace "urn:h17-org:sdtc". The use of the namespace provides a necessary extension to CDA R2 for the use of the birthTime element (CONF:1198-31345).

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:1198-8934) 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:1198-8935).
 - b. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-16813).
 - i. This templateId **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.90"** Policy Holder Participant (CONF:1198-16815).
 - c. **MAY** contain zero or one [0..1] **time** (CONF:1198-8938).
 - d. **SHALL** contain exactly one [1..1] **participantRole** (CONF:1198-8936).
 - i. This participantRole **SHALL** contain at least one [1..*] **id** (CONF:1198-8937).
 1. This id is a unique identifier for the subscriber of the coverage (CONF:1198-10120).
 - ii. This participantRole **SHOULD** contain zero or one [0..1] **addr** (CONF:1198-8925).
 1. The content of addr **SHALL** be a conformant US Realm Address (AD.US.FIELDDED) (2.16.840.1.113883.10.20.22.5.2) (CONF:1198-10483).
 - 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:1198-17139).
11. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1198-8939) 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:1198-8940).

- 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:1198-8942).
- 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:1198-8943).

Table 400: Health Insurance Type

Value Set: Health Insurance Type urn:oid:2.16.840.1.113883.3.88.12.3221.5.2			
Code	Code System	Code System OID	Print Name
12	Insurance Type Code	urn:oid:2.16.840.1.113883.3.88.12.3221.5.2	Medicare Secondary Working Aged Beneficiary or Spouse with Employer Group Health Plan
13	Insurance Type Code	urn:oid:2.16.840.1.113883.3.88.12.3221.5.2	Medicare Secondary End-Stage Renal Disease Beneficiary in the 12 month coordination period with an employer's group health plan
14	Insurance Type Code	urn:oid:2.16.840.1.113883.3.88.12.3221.5.2	Medicare Secondary, No-fault Insurance including Auto is Primary
15	Insurance Type Code	urn:oid:2.16.840.1.113883.3.88.12.3221.5.2	Medicare Secondary Worker's Compensation
16	Insurance Type Code	urn:oid:2.16.840.1.113883.3.88.12.3221.5.2	Medicare Secondary Public Health Service (PHS) or Other Federal Agency
41	Insurance Type Code	urn:oid:2.16.840.1.113883.3.88.12.3221.5.2	Medicare Secondary Black Lung
42	Insurance Type Code	urn:oid:2.16.840.1.113883.3.88.12.3221.5.2	Medicare Secondary Veteran's Administration
43	Insurance Type Code	urn:oid:2.16.840.1.113883.3.88.12.3221.5.2	Medicare Secondary Disabled Beneficiary Under Age 65 with Large Group Health Plan (LGHP)
47	Insurance Type Code	urn:oid:2.16.840.1.113883.3.88.12.3221.5.2	Medicare Secondary, Other Liability Insurance is Primary
AP	Insurance Type Code	urn:oid:2.16.840.1.113883.3.88.12.3221.5.2	Auto Insurance Policy
...			

Table 401: 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: http://www.hl7.org			
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 402: 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:			
http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/inrastructure/vocabulary/vocabulary.html			
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 191: Policy Activity (V3) Example

```
<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.61" extension="2015-08-01" />
  <id root="3e676a50-7aac-11db-9fe1-0800200c9a66" />
  <code code="12" displayName="Medicare Secondary Working Aged Beneficiary or Spouse with
Employer Group Health Plan"
    codeSystemName="ASC X12"
    codeSystem="2.16.840.1.113883.6.255.1336">
<translation code="2" displayName="Medicare"
    codeSystem="2.16.840.1.113883.3.221.5"
codeSystemName="Source of Payment Typology (PHDSC)"></translation>
</code>
  <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="329fcd0-7ab3-11db-9fe1-0800200c9a66" />
```

```

    <code code="GUAR" codeSystem="2.16.840.1.113883.5.111" codeSystemName="HL7
RoleCode" />
    <addr use="HP">
        <streetAddressLine>17 Daws Rd.</streetAddressLine>
        <city>Blue Bell</city>
        <state>MA</state>
        <postalCode>02368</postalCode>
        <country>US</country>
    </addr>
    <telecom value="tel:+(781)555-1212" use="HP" />
    <assignedPerson>
        <name>
            <prefix>Mr.</prefix>
            <given>Adam</given>
            <given>Frankie</given>
            <family>Everyman</family>
        </name>
    </assignedPerson>
</assignedEntity>
</performer>
<!-- Covered party -->
<participant typeCode="COV">
    <templateId root="2.16.840.1.113883.10.20.22.4.89.2" />
    <time>
        <low nullFlavor="UNK" />
        <high nullFlavor="UNK" />
    </time>
    <participantRole classCode="PAT">
        <!-- Health plan ID for patient. -->
        <id root="1.1.1.1.1.1.1.14" extension="1138345" />
        <code code="SELF" codeSystem="2.16.840.1.113883.5.111" />
        <addr use="HP">
            <streetAddressLine>17 Daws Rd.</streetAddressLine>
            <city>Blue Bell</city>
            <state>MA</state>
            <postalCode>02368</postalCode>
            <country>US</country>
        </addr>
        <playingEntity>
            <name>
                <!-- Name is needed if different than name on health plan. -->
                <prefix>Mr.</prefix>
                <given>Frank</given>
                <given>A.</given>
                <family>Everyman</family>
            </name>
        </playingEntity>
    </participantRole>
</participant>
<!-- Policy holder -->
<participant typeCode="HLD">
    <templateId root="2.16.840.1.113883.10.20.22.4.90.2" />
    <participantRole>
        <id extension="1138345" root="2.16.840.1.113883.19" />
        <addr use="HP">
            <streetAddressLine>17 Daws Rd.</streetAddressLine>
            <city>Blue Bell</city>

```

```

        <state>MA</state>
        <postalCode>02368</postalCode>
        <country>US</country>
    </addr>
</participantRole>
</participant>
<entryRelationship typeCode="REFR">
    <act classCode="ACT" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.1.19" />
        . . .
    </act>
</entryRelationship>
</act>

```

3.72 Postprocedure Diagnosis (V3)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.51:2015-08-01 (open)]

Table 403: Postprocedure Diagnosis (V3) Contexts

Contained By:	Contains:
Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional) Postprocedure Diagnosis Section (V3) (optional)	Problem Observation (V3)

This template represents the diagnosis or diagnoses discovered or confirmed during the procedure. They may be the same as preprocedure diagnoses or indications.

Table 404: Postprocedure Diagnosis (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.51:2015-08-01)					
@classCode	1..1	SHALL		1198-8756	ACT
@moodCode	1..1	SHALL		1198-8757	EVN
templateId	1..1	SHALL		1198-16766	
@root	1..1	SHALL		1198-16767	2.16.840.1.113883.10.20.22.4.51
@extension	1..1	SHALL		1198-32539	2015-08-01
code	1..1	SHALL		1198-19151	
@code	1..1	SHALL		1198-19152	59769-0
@codeSystem	1..1	SHALL		1198-32166	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entryRelationship	1..*	SHALL		1198-8759	
@typeCode	1..1	SHALL		1198-8760	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
observation	1..1	SHALL		1198-15583	Problem Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01)

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" (CONF:1198-8756).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CONF:1198-8757).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-16766) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.51" (CONF:1198-16767).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32539).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-19151).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="59769-0" Postprocedure diagnosis (CONF:1198-19152).
 - 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:1198-32166).
5. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1198-8759) 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:1198-8760).

- b. **SHALL** contain exactly one [1..1] [Problem Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) (CONF:1198-15583).

Figure 192: Postprocedure Diagnosis (V3) Example

```

<section>
  <templateId root="2.16.840.1.113883.10.20.22.2.36" extension="2015-08-01" />
  <code code="59769-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="POSTPROCEDURE DIAGNOSIS" />
  <title>Postprocedure Diagnosis</title>
  <text>
    ...
  </text>
  <entry>
    <act moodCode="EVN" classCode="ACT">
      <templateId root="2.16.840.1.113883.10.20.22.4.51" extension="2015-08-01" />
      <!-- ** Postprocedure Diagnosis ** -->
      ...
    </act>
  </entry>
</section>

```

3.73 Precondition for Substance Administration (V2)

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

Table 405: Precondition for Substance Administration (V2) Contexts

Contained By:	Contains:
Medication Activity (V2) (optional) Planned Medication Activity (V2) (optional) Planned Immunization Activity (optional) Immunization Activity (V3) (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 406: 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:2.16.840.1.113883.3.88.12.3221.7.4 (Problem)

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7372) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.25" (CONF:1098-10517).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32603).
2. **SHALL** contain exactly one [1..1] **code** with **@xsi:type**="CD" (CONF:1098-32396).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:1098-32397).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: ActCode 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 193: 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>

```

3.74 Pregnancy Observation

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

Table 407: Pregnancy Observation Contexts

Contained By:	Contains:
Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional) Social History 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 408: 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 194: 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>

```

3.75 Preoperative Diagnosis (V3)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.65:2015-08-01 (open)]

Table 409: Preoperative Diagnosis (V3) Contexts

Contained By:	Contains:
Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional) Preoperative Diagnosis Section (V3) (optional)	Problem Observation (V3)

This template represents the surgical diagnosis or diagnoses assigned to the patient before the surgical procedure and is the reason for the surgery. The preoperative diagnosis is, in the opinion of the surgeon, the diagnosis that will be confirmed during surgery.

Table 410: Preoperative Diagnosis (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.65:2015-08-01)					
@classCode	1..1	SHALL		1198-10090	ACT
@moodCode	1..1	SHALL		1198-10091	EVN
templateId	1..1	SHALL		1198-16770	
@root	1..1	SHALL		1198-16771	2.16.840.1.113883.10.20.22.4.65
@extension	1..1	SHALL		1198-32540	2015-08-01
code	1..1	SHALL		1198-19155	
@code	1..1	SHALL		1198-19156	10219-4
@codeSystem	1..1	SHALL		1198-32167	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entryRelationship	1..*	SHALL		1198-10093	
@typeCode	1..1	SHALL		1198-10094	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
observation	1..1	SHALL		1198-15605	Problem Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01)

1. **SHALL** contain exactly one [1..1] @classCode="ACT" (CONF:1198-10090).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CONF:1198-10091).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1198-16770) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.65" (CONF:1198-16771).
 - b. **SHALL** contain exactly one [1..1] @extension="2015-08-01" (CONF:1198-32540).
4. **SHALL** contain exactly one [1..1] code (CONF:1198-19155).
 - a. This code **SHALL** contain exactly one [1..1] @code="10219-4" Preoperative Diagnosis (CONF:1198-19156).
 - 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:1198-32167).

5. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1198-10093) 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:1198-10094).
 - b. **SHALL** contain exactly one [1..1] **Problem Observation (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) (CONF:1198-15605).

Figure 195: Preoperative Diagnosis (V3) Example

```

<act moodCode="EVN" classCode="ACT">
  <templateId root="2.16.840.1.113883.10.20.22.4.65" extension="2015-08-01" />
  <code code="10219-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Preoperative Diagnosis" />
  <entryRelationship typeCode="SUBJ">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01" />
      . . .
    </observation>
  </entryRelationship>
</act>

```

3.76 Pressure Ulcer Observation (DEPRECATED)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.70:2014-06-09 (open)]

Table 411: Pressure Ulcer Observation (DEPRECATED) Contexts

Contained By:	Contains:
Functional Status Section (V2) (optional)	

The pressure ulcer observation contains details about the pressure ulcer such as the stage of the ulcer, location, and dimensions. If the pressure ulcer is a diagnosis, you may find this on the problem list. An example of how this would appear is in the Problem Section.

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: This template has been replaced by Longitudinal Care Wound Observation (2.16.840.1.113883.10.20.22.4.114).

Table 412: Pressure Ulcer Observation (DEPRECATED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.70:2014-06-09)					
@classCode	1..1	SHALL		1098-14383	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-14384	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
@negationInd	0..1	MAY		1098-14385	
templateId	1..1	SHALL		1098-14387	
@root	1..1	SHALL		1098-14388	2.16.840.1.113883.10.20.22.4.70
@extension	1..1	SHALL		1098-32594	2014-06-09
id	1..*	SHALL		1098-14389	
code	1..1	SHALL		1098-14759	
@code	1..1	SHALL		1098-14760	urn:oid:2.16.840.1.113883.5.4 (ActCode) = ASSERTION
text	0..1	SHOULD		1098-14391	
reference	0..1	SHOULD		1098-14392	
@value	1..1	SHALL		1098-15585	
statusCode	1..1	SHALL		1098-14394	
@code	1..1	SHALL		1098-19111	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-14395	
value	1..1	SHALL	CD	1098-14396	urn:oid:2.16.840.1.113883.11.20.9.35 (Pressure Ulcer Stage)
targetSiteCode	0..*	SHOULD		1098-14797	
@code	1..1	SHALL		1098-14798	urn:oid:2.16.840.1.113883.11.20.9.36 (Pressure Point)
qualifier	0..1	SHOULD		1098-14799	
name	1..1	SHALL		1098-14800	
@code	0..1	SHOULD		1098-14801	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 272741003

value	1..1	SHALL		1098-14802	
@code	0..1	SHOULD		1098-14803	urn:oid:2.16.840.1.113883.11.20.9.37 (TargetSite Qualifiers)
entryRelationship	0..1	SHOULD		1098-14410	
@typeCode	1..1	SHALL		1098-14411	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1098-14619	
@classCode	1..1	SHALL		1098-14685	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-14686	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
code	1..1	SHALL		1098-14620	
@code	1..1	SHALL		1098-14621	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 401238003
value	1..1	SHALL	PQ	1098-14622	
entryRelationship	0..1	SHOULD		1098-14601	
@typeCode	1..1	SHALL		1098-14602	COMP
observation	1..1	SHALL		1098-14623	
@classCode	1..1	SHALL		1098-14687	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-14688	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
code	1..1	SHALL		1098-14624	
@code	1..1	SHALL		1098-14625	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 401239006
value	1..1	SHALL	PQ	1098-14626	
entryRelationship	0..1	SHOULD		1098-14605	
@typeCode	1..1	SHALL		1098-14606	COMP
observation	1..1	SHALL		1098-14627	
@classCode	1..1	SHALL		1098-14689	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-14690	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN

code	1..1	SHALL		1098-14628	
@code	1..1	SHALL		1098-14629	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 425094009
value	1..1	SHALL	PQ	1098-14630	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-14383).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-14384).

Use negationInd="true" to indicate that the problem was not observed.

3. **MAY** contain zero or one [0..1] **@negationInd** (CONF:1098-14385).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-14387) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.70"** (CONF:1098-14388).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32594).
5. **SHALL** contain at least one [1..*] **id** (CONF:1098-14389).
6. **SHALL** contain exactly one [1..1] **code** (CONF:1098-14759).
 - a. This code **SHALL** contain exactly one [1..1] **@code="ASSERTION"** Assertion (CodeSystem: ActCode urn:oid:2.16.840.1.113883.5.4 **STATIC**) (CONF:1098-14760).
7. **SHOULD** contain zero or one [0..1] **text** (CONF:1098-14391).
 - a. The text, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1098-14392).
 - i. The reference, if present, **SHALL** contain exactly one [1..1] **@value** (CONF:1098-15585).
 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:1098-15586).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-14394).
 - 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:1098-19111).
9. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-14395).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"**, where the code **SHOULD** be selected from ValueSet [Pressure Ulcer Stage](#) urn:oid:2.16.840.1.113883.11.20.9.35 **STATIC** 2014-09-01 (CONF:1098-14396).
11. **SHOULD** contain zero or more [0..*] **targetSiteCode** (CONF:1098-14797).
 - a. The targetSiteCode, if present, **SHALL** contain exactly one [1..1] **@code**, which **SHOULD** be selected from ValueSet [Pressure Point](#) urn:oid:2.16.840.1.113883.11.20.9.36 **STATIC** (CONF:1098-14798).
 - b. The targetSiteCode, if present, **SHOULD** contain zero or one [0..1] **qualifier** (CONF:1098-14799).

- i. The qualifier, if present, **SHALL** contain exactly one [1..1] **name** (CONF:1098-14800).
 - 1. This name **SHOULD** contain zero or one [0..1] **@code**="272741003" laterality (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:1098-14801).
 - ii. The qualifier, if present, **SHALL** contain exactly one [1..1] **value** (CONF:1098-14802).
 - 1. This value **SHOULD** contain zero or one [0..1] **@code**, which **SHOULD** be selected from ValueSet [TargetSite Qualifiers](#) urn:oid:2.16.840.1.113883.11.20.9.37 **STATIC** 2014-09-01 (CONF:1098-14803).
12. **SHOULD** contain zero or one [0..1] **entryRelationship** (CONF:1098-14410) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-14411).
 - b. **SHALL** contain exactly one [1..1] **observation** (CONF:1098-14619).
 - i. This observation **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-14685).
 - ii. This observation **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-14686).
 - iii. This observation **SHALL** contain exactly one [1..1] **code** (CONF:1098-14620).
 - 1. This code **SHALL** contain exactly one [1..1] **@code**="401238003" Length of Wound (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:1098-14621).
 - iv. This observation **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:1098-14622).
13. **SHOULD** contain zero or one [0..1] **entryRelationship** (CONF:1098-14601) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" (CONF:1098-14602).
 - b. **SHALL** contain exactly one [1..1] **observation** (CONF:1098-14623).
 - i. This observation **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-14687).
 - ii. This observation **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-14688).
 - iii. This observation **SHALL** contain exactly one [1..1] **code** (CONF:1098-14624).
 - 1. This code **SHALL** contain exactly one [1..1] **@code**="401239006" Width of Wound (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:1098-14625).
 - iv. This observation **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:1098-14626).
14. **SHOULD** contain zero or one [0..1] **entryRelationship** (CONF:1098-14605) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" (CONF:1098-14606).

- b. **SHALL** contain exactly one [1..1] **observation** (CONF:1098-14627).
- i. This observation **SHALL** contain exactly one [1..1] **@classCode="OBS"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-14689).
 - ii. This observation **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-14690).
 - iii. This observation **SHALL** contain exactly one [1..1] **code** (CONF:1098-14628).
 1. This code **SHALL** contain exactly one [1..1] **@code="425094009"** Depth of Wound (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:1098-14629).
 - iv. This observation **SHALL** contain exactly one [1..1] **value** with **@xsi:type="PQ"** (CONF:1098-14630).

Table 413: Pressure Point

Value Set: Pressure Point urn:oid:2.16.840.1.113883.11.20.9.36			
This value set represents points on the body that are susceptible to pressure ulcer development. Specific URL Pending			
Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
43631005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	occipital region structure
23747009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	skin structure of chin
91774008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	structure of right shoulder
7874003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	structure of scapular region of back; 272741003 = laterality; 24028007 = right (qualifier value)
368149001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	right elbow region structure
368148009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	left elbow region structure
87141009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	sacral vertebra structure
122495006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	thoracic spine structure
122496007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	lumbar spine structure
287579007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	right hip region structure
...			

Table 414: TargetSite Qualifiers

Value Set: TargetSite Qualifiers urn:oid:2.16.840.1.113883.11.20.9.37			
Specific URL Pending			
Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
255549009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	anterior
7771000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	left
255561001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	medial
255551008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	posterior
24028007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	right

3.77 Priority Preference

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

Table 415: Priority Preference Contexts

Contained By:	Contains:
Goal Observation (V2) (optional) Planned Act (V2) (optional) Planned Encounter (V2) (optional) Planned Procedure (V2) (optional) Planned Observation (V2) (optional) Planned Supply (V2) (optional) Planned Medication Activity (V2) (optional) Planned Immunization Activity (V2) (optional) Problem Observation (V3) (optional) Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional) Problem Concern Act (V3) (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 416: 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 417: 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:2.16.840.1.113883.3.6.96	High priority
394848005	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	Normal priority
441808003	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	Delayed priority

Figure 196: 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>

```


3.78 Problem Concern Act (V3)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01 (open)]

Table 418: Problem Concern Act (V3) Contexts

Contained By:	Contains:
Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional) Problem Section (entries optional) (V3) (optional) Problem Section (entries required) (V3) (required)	Author Participation Priority Preference Problem Observation (V3)

This template reflects an ongoing concern on behalf of the provider that placed the concern on a patient’s problem list. So long as the underlying condition is of concern to the provider (i.e., as long as the condition, whether active or resolved, is of ongoing concern and interest to the provider), the statusCode is “active”. Only when the underlying condition is no longer of concern is the statusCode set to “completed”. The effectiveTime reflects the time that the underlying condition was felt to be a concern; it may or may not correspond to the effectiveTime of the condition (e.g., even five years later, the clinician may remain concerned about a prior heart attack).

The statusCode of the Problem Concern Act is the definitive indication of the status of the concern, whereas the effectiveTime of the nested Problem Observation is the definitive indication of whether or not the underlying condition is resolved.

The effectiveTime/low of the Problem Concern Act asserts when the concern became active. This equates to the time the concern was authored in the patient's chart. The effectiveTime/high asserts when the concern was completed (e.g., when the clinician deemed there is no longer any need to track the underlying condition).

A Problem Concern Act can contain many Problem Observations (templateId 2.16.840.1.113883.10.20.22.4.4). Each Problem Observation is a discrete observation of a condition, and therefore will have a statusCode of “completed”. The many Problem Observations nested under a Problem Concern Act reflect the change in the clinical understanding of a condition over time. For instance, a Concern may initially contain a Problem Observation of “chest pain”:

- Problem Concern 1
 - Problem Observation: Chest Pain

Later, a new Problem Observation of “esophagitis” will be added, reflecting a better understanding of the nature of the chest pain. The later problem observation will have a more recent author time stamp.

- Problem Concern 1
 - Problem Observation (author/time Jan 3, 2012): Chest Pain
 - Problem Observation (author/time Jan 6, 2012): Esophagitis

Many systems display the nested Problem Observation with the most recent author time stamp, and provide a mechanism for viewing prior observations.

Table 419: Problem Concern Act (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01)					
@classCode	1..1	SHALL		1198-9024	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1198-9025	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-16772	
@root	1..1	SHALL		1198-16773	2.16.840.1.113883.10.20.22.4.3
@extension	1..1	SHALL		1198-32509	2015-08-01
id	1..*	SHALL		1198-9026	
code	1..1	SHALL		1198-9027	
@code	1..1	SHALL		1198-19184	CONC
@codeSystem	1..1	SHALL		1198-32168	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = 2.16.840.1.113883.5.6
statusCode	1..1	SHALL		1198-9029	
@code	1..1	SHALL		1198-31525	urn:oid:2.16.840.1.113883.11.20.9.19 (ProblemAct statusCode)
effectiveTime	1..1	SHALL		1198-9030	
low	1..1	SHALL		1198-9032	
high	0..1	MAY		1198-9033	
author	0..*	SHOULD		1198-31146	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	1..*	SHALL		1198-9034	
@typeCode	1..1	SHALL		1198-9035	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
observation	1..1	SHALL		1198-15980	Problem Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01)
entryRelationship	0..*	MAY		1198-31638	

@typeCode	1..1	SHALL		1198-31639	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31640	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143)

1. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-9024).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-9025).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1198-16772) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.3" (CONF:1198-16773).
 - b. **SHALL** contain exactly one [1..1] @extension="2015-08-01" (CONF:1198-32509).
4. **SHALL** contain at least one [1..*] id (CONF:1198-9026).
5. **SHALL** contain exactly one [1..1] code (CONF:1198-9027).
 - a. This code **SHALL** contain exactly one [1..1] @code="CONC" Concern (CONF:1198-19184).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.6" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1198-32168).
6. **SHALL** contain exactly one [1..1] statusCode (CONF:1198-9029).

The statusCode of the Problem Concern Act is the definitive indication of the status of the concern, whereas the effectiveTime of the nested Problem Observation is the definitive indication of whether or not the underlying condition is resolved.

- a. This statusCode **SHALL** contain exactly one [1..1] @code, which **SHALL** be selected from ValueSet [ProblemAct statusCode](#) urn:oid:2.16.840.1.113883.11.20.9.19 **STATIC** (CONF:1198-31525).
7. **SHALL** contain exactly one [1..1] effectiveTime (CONF:1198-9030).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] low (CONF:1198-9032).
Note: The effectiveTime/low asserts when the concern became active. This equates to the time the concern was authored in the patient's chart.
 - b. This effectiveTime **MAY** contain zero or one [0..1] high (CONF:1198-9033).
Note: The effectiveTime/high asserts when the concern was completed (e.g., when the clinician deemed there is no longer any need to track the underlying condition).
8. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-31146).
9. **SHALL** contain at least one [1..*] entryRelationship (CONF:1198-9034) 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:1198-9035).
 - b. **SHALL** contain exactly one [1..1] [Problem Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) (CONF:1198-15980).

The following entryRelationship represents the importance of the concern to a provider.

10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31638) 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:1198-31639).
 - b. **SHALL** contain exactly one [1..1] **Priority Preference** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1198-31640).

Figure 197: Problem Concern Act (V3) Example

```
<act classCode="ACT" moodCode="EVN">
  <!-- ** Problem Concern Act (V2) ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.3"
    extension="2015-08-01" />
  <id root="ec8a6ff8-ed4b-4f7e-82c3-e98e58b45de7" />
  <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 of ongoing concern to the provider -->
  <statusCode code="active" />
  <effectiveTime>
    <!-- The low value represents when the problem was first recorded in the patient's
chart -->
    <!-- Concern was documented on July 6, 2013 -->
    <low value="201307061145-0800" />
  </effectiveTime>
  <author typeCode="AUT">
    <templateId root="2.16.840.1.113883.10.20.22.4.119" />
    <!-- Same as Concern effectiveTime/low -->
    <time value="201307061145-0800" />
    <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="2015-08-01" />
      <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>
</entryRelationship>
</act>

```

3.79 Problem Observation (V3)

```
[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01
(open) ]
```

Table 420: Problem Observation (V3) Contexts

Contained By:	Contains:
Health Concern Act (V2) (optional) Complications Section (V3) (optional) Deceased Observation (V3) (optional) Hospital Discharge Diagnosis (V3) (required) Encounter Diagnosis (V3) (required) History of Past Illness Section (V3) (optional) Hospital Admission Diagnosis (V3) (required) Risk Concern Act (V2) (optional) Procedure Findings Section (V3) (optional) Problem Concern Act (V3) (required) Preoperative Diagnosis (V3) (required) Postprocedure Diagnosis (V3) (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 421: Problem Observation (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01)					
@classCode	1..1	SHALL		1198-9041	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1198-9042	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
@negationInd	0..1	MAY		1198-10139	
templateId	1..1	SHALL		1198-14926	
@root	1..1	SHALL		1198-14927	2.16.840.1.113883.10.20.22.4.4
@extension	1..1	SHALL		1198-32508	2015-08-01
id	1..*	SHALL		1198-9043	
code	1..1	SHALL		1198-9045	urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 (Problem Type)
translation	1..*	SHALL		1198-32848	urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 (Problem Type)
statusCode	1..1	SHALL		1198-9049	
@code	1..1	SHALL		1198-19112	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1198-9050	
low	1..1	SHALL		1198-15603	
high	0..1	MAY		1198-15604	
value	1..1	SHALL	CD	1198-9058	urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 (Problem)
qualifier	0..*	MAY		1198-31870	
translation	0..*	MAY		1198-16749	
@code	0..1	MAY		1198-16750	urn:oid:2.16.840.1.113883.6.90 (ICD10CM)
@code	0..1	MAY		1198-31871	
author	0..*	SHOULD		1198-31147	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	0..1	MAY		1198-9059	

@typeCode	1..1	SHALL		1198-9060	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1198-9069	true
observation	1..1	SHALL		1198-15590	Age Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.31)
entryRelationship	0..1	MAY		1198-29951	
@typeCode	1..1	SHALL		1198-31531	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-29952	Prognosis Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.113)
entryRelationship	0..*	MAY		1198-31063	
@typeCode	1..1	SHALL		1198-31532	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31064	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143)
entryRelationship	0..1	MAY		1198-9063	
@typeCode	1..1	SHALL		1198-9068	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-15591	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:1198-9041).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-9042).

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:1198-10139).
4. **SHALL** contain exactly one [1..1] templateId (CONF:1198-14926) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:1198-14927).
 - b. **SHALL** contain exactly one [1..1] @extension="2015-08-01" (CONF:1198-32508).
5. **SHALL** contain at least one [1..*] id (CONF:1198-9043).

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** 2012-06-01 (CONF:1198-9045).
 - a. This code **SHALL** contain at least one [1..*] **translation**, which **SHOULD** be selected from ValueSet [Problem Type](#) urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 2014-09-02 (CONF:1198-32848).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-9049).
 - 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:1198-19112).

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:1198-9050).

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:1198-15603).

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:1198-15604).

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:1198-9058).

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:1198-31870).
- b. This value **MAY** contain zero or more [0..*] **translation** (CONF:1198-16749) such that it
 - i. **MAY** contain zero or one [0..1] **@code** (CodeSystem: ICD10CM urn:oid:2.16.840.1.113883.6.90 **STATIC**) (CONF:1198-16750).

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:1198-31871).
- 10. **SHOULD** contain zero or more [0..*] Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-31147).
- 11. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-9059) 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:1198-9060).
 - b. **SHALL** contain exactly one [1..1] @inversionInd="true" True (CONF:1198-9069).
 - c. **SHALL** contain exactly one [1..1] Age Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.31) (CONF:1198-15590).
- 12. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-29951) 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:1198-31531).
 - b. **SHALL** contain exactly one [1..1] Prognosis Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.113) (CONF:1198-29952).
- 13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31063) 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:1198-31532).
 - b. **SHALL** contain exactly one [1..1] Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1198-31064).
- 14. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-9063) 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:1198-9068).
 - b. **SHALL** contain exactly one [1..1] Problem Status (DEPRECATED) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.6:2014-06-09) (CONF:1198-15591).

Figure 198: Problem Observation (V3) Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- ** Problem Observation (V3) ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01" />
  <id root="ab1791b0-5c71-11db-b0de-0800200c9a66" />
  <code code="64572001" displayName="Condition"
        codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT">
    <translation code="75323-6"
      codeSystem="2.16.840.1.113883.6.1"
      codeSystemName="LOINC"
      displayName="Condition"/>
  </code>
  <!-- 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>
```

3.79.1 Longitudinal Care Wound Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.114:2015-08-01 (open)]

Table 422: Longitudinal Care Wound Observation (V2) Contexts

Contained By:	Contains:
Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional) Physical Exam Section (V3) (optional)	Author Participation Highest Pressure Ulcer Stage Number of Pressure Ulcers Observation (V3) Wound Characteristic Wound Measurement Observation

This template represents acquired or surgical wounds and is not intended to encompass all wound types. The template applies to wounds such as pressure ulcers, surgical incisions, and deep tissue injury wounds. Information in this template may include information about the wound measurements characteristics.

Table 423: Longitudinal Care Wound Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.114:2015-08-01)					
@classCode	1..1	SHALL		1198-31012	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1198-31013	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-29473	
@root	1..1	SHALL		1198-29474	2.16.840.1.113883.10.20.22.4.114
@extension	1..1	SHALL		1198-32913	2015-08-01
code	1..1	SHALL		1198-29476	
@code	1..1	SHALL		1198-29477	ASSERTION
@codeSystem	1..1	SHALL		1198-31010	urn:oid:2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
value	1..1	SHALL	CD	1198-29485	urn:oid:2.16.840.1.113883.1.11.20.2.6 (Wound Type)
targetSiteCode	0..1	SHOULD		1198-29488	urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 (Body Site)
qualifier	0..*	MAY		1198-29490	
name	1..1	SHALL		1198-29491	
@code	1..1	SHALL		1198-29492	272741003
@codeSystem	1..1	SHALL		1198-31524	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
value	1..1	SHALL		1198-29493	
@code	1..1	SHALL		1198-29494	urn:oid:2.16.840.1.113883.11.20.9.37 (TargetSite Qualifiers)
author	0..*	SHOULD		1198-31542	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	0..*	SHOULD		1198-29495	
@typeCode	1..1	SHALL		1198-29496	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1198-	Wound Measurement

				29497	Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.133)
entryRelationship	0..*	SHOULD		1198-29503	
@typeCode	1..1	SHALL		1198-29504	COMP
observation	1..1	SHALL		1198-29505	Wound Characteristic (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.134)
entryRelationship	0..*	MAY		1198-31890	
@typeCode	1..1	SHALL		1198-31891	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1198-31892	Number of Pressure Ulcers Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.76:2015-08-01)
entryRelationship	0..1	MAY		1198-31893	
@typeCode	1..1	SHALL		1198-31894	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1198-31919	Highest Pressure Ulcer Stage (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.77)

1. Conforms to [Problem Observation \(V3\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01).
2. **SHALL** contain exactly one [1..1] **@classCode="OBS"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1198-31012).
3. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1198-31013).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-29473) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.114"** (CONF:1198-29474).
 - b. **SHALL** contain exactly one [1..1] **@extension="2015-08-01"** (CONF:1198-32913).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1198-29476).
 - a. This code **SHALL** contain exactly one [1..1] **@code="ASSERTION"** assertion (CONF:1198-29477).
 - 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:1198-31010).

6. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD", where the code **SHOULD** be selected from ValueSet Wound Type urn:oid:2.16.840.1.113883.1.11.20.2.6 **DYNAMIC** (CONF:1198-29485).
7. **SHOULD** contain zero or one [0..1] **targetSiteCode**, which **SHOULD** be selected from ValueSet Body Site urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1198-29488) such that it

If targetSite/qualifierCode name/value pairs are used, care must be taken to avoid conflict with the SNOMED-CT body structure code used in observation/value. SNOMED-CT body structure codes are often pre-coordinated with laterality.

- a. **MAY** contain zero or more [0..*] **qualifier** (CONF:1198-29490).
 - i. The qualifier, if present, **SHALL** contain exactly one [1..1] **name** (CONF:1198-29491).
 1. This name **SHALL** contain exactly one [1..1] @code="272741003" laterality (CONF:1198-29492).
 2. This name **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:1198-31524).
 - ii. The qualifier, if present, **SHALL** contain exactly one [1..1] **value** (CONF:1198-29493).
 1. This value **SHALL** contain exactly one [1..1] @code, which **SHOULD** be selected from ValueSet TargetSite Qualifiers urn:oid:2.16.840.1.113883.11.20.9.37 **STATIC** (CONF:1198-29494).
8. **SHOULD** contain zero or more [0..*] Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-31542).
9. **SHOULD** contain zero or more [0..*] **entryRelationship** (CONF:1198-29495) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-29496).
 - b. **SHALL** contain exactly one [1..1] Wound Measurement Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.133) (CONF:1198-29497).
10. **SHOULD** contain zero or more [0..*] **entryRelationship** (CONF:1198-29503) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" (CONF:1198-29504).
 - b. **SHALL** contain exactly one [1..1] Wound Characteristic (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.134) (CONF:1198-29505).

When the wound observed is a type of pressure ulcer, then this template **SHOULD** contain an entry for the Number of Pressure Ulcers.

11. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31890) 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:1198-31891).
 - b. **SHALL** contain exactly one [1..1] Number of Pressure Ulcers Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.76:2015-08-01) (CONF:1198-31892).

When the wound observed is a type of pressure ulcer, then this template SHOULD contain an entry for the Highest Pressure Ulcer Stage.

12. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-31893) 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:1198-31894).
- b. **SHALL** contain exactly one [1..1] **Highest Pressure Ulcer Stage** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.77) (CONF:1198-31919).

Table 424: Wound Type

Value Set: Wound Type urn:oid:2.16.840.1.113883.1.11.20.2.6			
A value set of SNOMED-CT high level wound codes terms commonly used in long term care.			
Specific URL Pending			
Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
420226006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Pressure ulcer
46742003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Skin ulcer
262557004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Deep wound
283396008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Incised wound
416886008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Closed wound
125643001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Open wound
421076008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Pressure ulcer stage 1
420324007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Pressure Ulcer Stage 2
421927004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Pressure Ulcer Stage 3
420597008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Pressure Ulcer Stage 4
...			

Figure 199: Longitudinal Care Wound Observation Example

```
<entry>
  <observation classCode="OBS" moodCode="EVN">
    <!-- Wound Observation template -->
    <templateId root="2.16.840.1.113883.10.20.22.4.114" extension="2015-08-01" />
    <id root="ab1791b0-5c71-11db-b0de-0800200c9a66" />
    <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
    <statusCode code="completed" />
    <effectiveTime>
      <low value="20013103" />
    </effectiveTime>
    <value xsi:type="CD" code="425144005" codeSystem="2.16.840.1.113883.6.6"
displayName="Minor open wound" />
    <targetSiteCode code="182295001" codeSystem="2.16.840.1.113883.6.96"
displayName="anterior aspect of knee" />
    <author>
      ...
    </author>
    <entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <!-- Wound Measurements Observation -->
        <templateId root="2.16.840.1.113883.10.20.22.4.133" />
        ...

      </observation>
    </entryRelationship>
    <entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <!-- Wound Measurements Observation . -->
        <templateId root="2.16.840.1.113883.10.20.22.4.133" />
        ...

      </observation>
    </entryRelationship>
    <entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <!-- Wound Characteristic -->
        <templateId root="2.16.840.1.113883.10.20.22.4.134" />
        ...

      </observation>
    </entryRelationship>
    <entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <!-- Number of Pressure Ulcers -->
        <templateId root="2.16.840.1.113883.10.20.22.4.76" />
        ...

      </observation>
    </entryRelationship>
    <entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
```



```

        <!-- Highest Pressure Ulcers Stage -->
        <templateId root="2.16.840.1.113883.10.20.22.4.77" />
        ...

    </observation>
</entryRelationship>
</observation>
</entry>

```

3.80 Problem Status (DEPRECATED)

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

Table 425: Problem Status (DEPRECATED) Contexts

Contained By:	Contains:
Problem Observation (V3) (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 426: 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).

3.81 Procedure Activity Act (V2)

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

Table 427: Procedure Activity Act (V2) Contexts

Contained By:	Contains:
Procedures Section (entries optional) (V2) (optional)	Author Participation
Procedures Section (entries required) (V2) (optional)	Indication (V2)
Planned Intervention Act (V2) (optional)	Instruction (V2)
Intervention Act (V2) (optional)	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 428: 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 429: ProcedureAct statusCode

Value Set: ProcedureAct statusCode urn:oid:2.16.840.1.113883.11.20.9.22			
Code System: ActStatus 2.16.840.1.113883.5.14			
A ValueSet of HL7 actStatus codes for use with a procedure activity			
Value Set Source:			
http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/inrastructure/vocabulary/vocabulary.html			
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 200: 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="#Procl" />
    </originalText>
  </code>
  <statusCode code="completed" />
  <effectiveTime value="20110203" />
  <priorityCode code="CR" codeSystem="2.16.840.1.113883.5.7" codeSystemName="ActPriority"
  displayName="Callback results" />
  <performer>
    <assignedEntity>
      <id root="2.16.840.1.113883.19" extension="1234" />
      <addr>
        <streetAddressLine>1001 Village Avenue</streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
      <telecom use="WP" value="tel: +1(555)-555-5000" />
      <representedOrganization>
        <id root="2.16.840.1.113883.19.5" />
        <name>Community Health and Hospitals</name>
        <telecom use="WP" value="tel:+1(555)-555-5000" />
        <addr>
          <streetAddressLine>1001 Village Avenue</streetAddressLine>
          <city>Portland</city>
          <state>OR</state>
          <postalCode>99123</postalCode>
          <country>US</country>
        </addr>
      </representedOrganization>
    </assignedEntity>
  </performer>
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <templateId root="2.16.840.1.113883.10.20.22.4.32" />
      . . .
    </participantRole>
  </participant>
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09" />
      . . .
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <act classCode="ACT" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.20" extension="2014-06-09" />
      . . .
    </act>
  </entryRelationship>
</act>
```

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

3.82 Procedure Activity Observation (V2)

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

Table 430: Procedure Activity Observation (V2) Contexts

Contained By:	Contains:
Procedures Section (entries optional) (V2) (optional) Procedures Section (entries required) (V2) (optional) Planned Intervention Act (V2) (optional) Intervention Act (V2) (optional)	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 431: 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:2.16.840.1.113883.10.2.0.22.4.20:2014-06-09)
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:2.16.840.1.113883.10.2.0.22.4.19:2014-06-09)
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:2.16.840.1.113883.10.2.0.22.4.16:2014-06-09)
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:2.16.840.1.113883.10.2.0.22.4.9:2014-06-09)

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:2.16.840.1.113883.1.11.16866 **DYNAMIC** (CONF:1098-8247).
9. **SHALL** contain exactly one [1..1] **value** (CONF:1098-16846).

If nothing is appropriate for value, use an appropriate nullFlavor.

- a. This value **MAY** contain zero or one [0..1] @nullFlavor (CONF:1098-32778).
10. **MAY** contain zero or one [0..1] **methodCode** (CONF:1098-8248).
 - a. MethodCode **SHALL NOT** conflict with the method inherent in Observation / code (CONF:1098-8249).
11. **SHOULD** contain zero or more [0..*] **targetSiteCode**, which **SHALL** be selected from ValueSet [Body Site](#) 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..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32478).
14. **MAY** contain zero or more [0..*] **participant** (CONF:1098-8261) such that it
- SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8262).
 - SHALL** contain exactly one [1..1] [Service Delivery Location](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) (CONF:1098-15904).
15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-8264) such that it
- SHALL** contain exactly one [1..1] **@typeCode="COMP"** Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-8265).
 - SHALL** contain exactly one [1..1] **@inversionInd="true"** true (CONF:1098-8266).
 - SHALL** contain exactly one [1..1] **encounter** (CONF:1098-8267).
 - 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).
 - 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).
 - This encounter **SHALL** contain exactly one [1..1] **id** (CONF:1098-8270).
 - 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
- 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).
 - SHALL** contain exactly one [1..1] **@inversionInd="true"** true (CONF:1098-8274).
 - SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:h17ii: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
- 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).
 - SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:h17ii: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
- 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).
 - SHALL** contain exactly one [1..1] [Medication Activity \(V2\)](#) (identifier: urn:h17ii: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 201: 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="#Procl" />
    </originalText>
  </code>
  <statusCode code="aborted" />
  <effectiveTime value="20110203" />
  <priorityCode code="CR" codeSystem="2.16.840.1.113883.5.7" codeSystemName="ActPriority"
  displayName="Callback results" />
  <value nullFlavor="NA" />
  <methodCode nullFlavor="UNK" />
  <targetSiteCode code="416949008" codeSystem="2.16.840.1.113883.6.96"
  codeSystemName="SNOMED CT" displayName="Abdomen and pelvis" />
  <performer>
    <assignedEntity>
      <id root="2.16.840.1.113883.19" extension="1234" />
      <addr>
        <streetAddressLine>1001 Village Avenue</streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
      <telecom use="WP" value="tel: +1(555)-555-5000" />
      <representedOrganization>
        <id root="2.16.840.1.113883.19.5" />
        <name>Community Health and Hospitals</name>
        <telecom use="WP" value="tel:+1(555)-555-5000" />
        <addr>
          <streetAddressLine>1001 Village Avenue</streetAddressLine>
          <city>Portland</city>
          <state>OR</state>
          <postalCode>99123</postalCode>
          <country>US</country>
        </addr>
      </representedOrganization>
    </assignedEntity>
  </performer>
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <templateId root="2.16.840.1.113883.10.20.22.4.32" />
      . . .
    </participantRole>
  </participant>
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09" />
      . . .
    </observation>
  </entryRelationship>
</observation>
```

```

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

```

3.83 Procedure Activity Procedure (V2)

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

Table 432: Procedure Activity Procedure (V2) Contexts

Contained By:	Contains:
Reaction Observation (V2) (optional) Medical Equipment Section (V2) (optional) Anesthesia Section (V2) (optional) Procedures Section (entries optional) (V2) (optional) Procedures Section (entries required) (V2) (optional) Medical Equipment Organizer (optional) Planned Intervention Act (V2) (optional) Intervention Act (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 433: 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 202: 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="#Procl" />
    </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>

```

3.84 Procedure Context

[act: identifier urn:oid:2.16.840.1.113883.10.20.6.2.5 (open)]

Table 434: Procedure Context Contexts

Contained By:	Contains:
Diagnostic Imaging Report (V3) (optional)	

The ServiceEvent Procedure Context of the document header may be overridden in the CDA structured body if there is a need to refer to multiple imaging procedures or acts. The selection of the Procedure or Act entry from the clinical statement choice box depends on the nature of the imaging service that has been performed. The Procedure entry shall be used for image-guided interventions and minimally invasive imaging services, whereas the Act entry shall be used for diagnostic imaging services.

Table 435: Procedure Context Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.5)					
@classCode	1..1	SHALL		81-26452	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		81-26453	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		81-9200	
@root	1..1	SHALL		81-10530	2.16.840.1.113883.10.20.6.2.5
code	1..1	SHALL		81-9201	
effectiveTime	0..1	SHOULD	TS	81-9203	
@value	1..1	SHALL		81-17173	

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:81-26452).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:81-26453).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-9200) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.6.2.5"** (CONF:81-10530).
4. **SHALL** contain exactly one [1..1] **code** (CONF:81-9201).
5. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:81-9203).
 - a. The effectiveTime, if present, **SHALL** contain exactly one [1..1] **@value** (CONF:81-17173).
6. Procedure Context **SHALL** be represented with the procedure or act elements depending on the nature of the procedure (CONF:81-9199).

Figure 203: Procedure Context Example

```

<act moodCode="EVN" classCode="ACT">
  <templateId root="2.16.840.1.113883.10.20.6.2.5"/>
  <code code="70548"
    displayName="Magnetic resonance angiography, head; with contrast material(s)"
    codeSystem="2.16.840.1.113883.6.12" codeSystemName="CPT-4"/>
  <!-- Note: This code is slightly different from the code used in the header
    documentationOf and overrides it, which is what this entry is for. -->
  <effectiveTime value="20060823123529+0400"/>
</act>

```

3.85 Product Instance

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

Table 436: Product Instance Contexts

Contained By:	Contains:
Procedure Activity Procedure (V2) (optional) Non-Medicinal Supply Activity (V2) (optional) Planned Supply (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 437: 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 204: 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>

```

3.86 Prognosis Observation

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

Table 438: Prognosis Observation Contexts

Contained By:	Contains:
Problem Observation (V3) (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 439: 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 205: 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 206: 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>

```

3.87 Progress Toward Goal Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.110 (open)]

Table 440: Progress Toward Goal Observation Contexts

Contained By:	Contains:
Outcome Observation (optional)	

This template represents a patient's progress toward a goal. It can describe whether a goal has been achieved or not and can also describe movement a patient is making toward the achievement of a goal (e.g., "Goal not achieved - no discernible change", "Goal not achieved - progressing toward goal", "Goal not achieved - declining from goal").

In the Care Planning workflow, the judgment about how well the person is progressing towards the goal is based on the observations made about the status of the patient with respect to interventions performed in the pursuit of achieving that goal.

For example, an observation outcome of a blood oxygen saturation level of 95% is related to the goal of "Maintain Pulse Ox greater than 92" and in this case the Progress Toward Goal Observation template would record that the related goal has been achieved.

Table 441: Progress Toward Goal Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.110)					
@classCode	1..1	SHALL		1098-31418	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-31419	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-31420	
@root	1..1	SHALL		1098-31421	2.16.840.1.113883.10.20.22.4.110
id	1..*	SHALL		1098-31422	
code	1..1	SHALL		1098-31423	
@code	1..1	SHALL		1098-31424	ASSERTION
@codeSystem	1..1	SHALL		1098-31425	urn:oid:2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		1098-31609	
@code	1..1	SHALL		1098-31610	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
value	1..1	SHALL	CD	1098-31426	urn:oid:2.16.840.1.113883.11.20.9.55 (Goal Achievement)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1098-31418).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1098-31419).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-31420) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.110" (CONF:1098-31421).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-31422).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-31423).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:1098-31424).
 - 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:1098-31425).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-31609).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-31610).

7. **SHALL** contain exactly one [1..1] **value** with `@xsi:type="CD"`, where the code **SHALL** be selected from ValueSet Goal Achievement urn:oid:2.16.840.1.113883.11.20.9.55 **DYNAMIC** (CONF:1098-31426).

Table 442: Goal Achievement

Value Set: Goal Achievement urn:oid:2.16.840.1.113883.11.20.9.55			
The Goal Achievement value set contains concepts that describe a patient's progression (or lack thereof) toward a goal and consists of the following codes from the US Extension of SNOMED CT.			
390802008 Goal achieved			
390801001 Goal not achieved and all its direct children			
Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
390802008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Goal achieved
390801001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Goal not achieved

Figure 207: Progress Toward Goal Observation Example

<pre> <observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.20.22.4.110" /> <id root="2afcf057-aae4-47cf-bfee-b7498e300424" /> <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" /> <value xsi:type="CD" code="390802008" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" displayName="Goal achieved" /> </observation> </pre>

3.88 Purpose of Reference Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.6.2.9 (open)]

Table 443: Purpose of Reference Observation Contexts

Contained By:	Contains:
SOP Instance Observation (optional)	

A Purpose of Reference Observation describes the purpose of the DICOM composite object reference. Appropriate codes, such as externally defined DICOM codes, may be used to specify the semantics of the purpose of reference. When this observation is absent, it implies that the reason for the reference is unknown.

Table 444: Purpose of Reference Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.9)					
@classCode	1..1	SHALL		81-9264	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-9265	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		81-9266	
@root	1..1	SHALL		81-10531	2.16.840.1.113883.10.20.6.2.9
code	1..1	SHALL		81-9267	
@code	0..1	SHOULD		81-19208	urn:oid:2.16.840.1.113883.5.4 (ActCode) = ASSERTION
value	0..1	SHOULD	CD	81-9273	urn:oid:2.16.840.1.113883.11.20.9.28 (DICOMPurposeOfReference)

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-9264).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-9265).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-9266) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.6.2.9"** (CONF:81-10531).
4. **SHALL** contain exactly one [1..1] **code** (CONF:81-9267).
 - a. This code **SHOULD** contain zero or one [0..1] **@code="ASSERTION"** Assertion (CodeSystem: ActCode urn:oid:2.16.840.1.113883.5.4 **STATIC**) (CONF:81-19208).
 - b. For backwards compatibility with the DICOM CMET, the code **MAY** be drawn from ValueSet 2.16.840.1.113883.11.20.9.28 DICOMPurposeOfReference DYNAMIC (CONF:81-19209).

The value element is a SHOULD to allow backwards compatibility with the DICOM CMET. Note that the use of ASSERTION for the code differs from the DICOM CMET. This is intentional. The DICOM CMET was created before the Term Info guidelines describing the use of the assertion pattern were released. It was determined that this IG should follow the latest Term Info guidelines. Implementers using both this IG and the DICOM CMET should be aware of this difference and apply appropriate transformations.

5. **SHOULD** contain zero or one [0..1] **value** with **@xsi:type="CD"**, where the code **SHOULD** be selected from ValueSet [DICOMPurposeOfReference](#) urn:oid:2.16.840.1.113883.11.20.9.28 **DYNAMIC** (CONF:81-9273).

Table 445: DICOMPurposeOfReference

Value Set: DICOMPurposeOfReference urn:oid:2.16.840.1.113883.11.20.9.28			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
121079	DCM	urn:oid:1.2.840.10008.2.16.4	Baseline
121080	DCM	urn:oid:1.2.840.10008.2.16.4	Best illustration of finding
121112	DCM	urn:oid:1.2.840.10008.2.16.4	Source of Measurement

Figure 208: Purpose of Reference Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.6.2.9"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
  <value xsi:type="CD" code="121112" codeSystem="1.2.840.10008.2.16.4"
    codeSystemName="DCM"
    displayName="Source of Measurement"/>
</observation>
```

3.89 Quantity Measurement Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.6.2.14 (open)]

Table 446: Quantity Measurement Observation Contexts

Contained By:	Contains:
Text Observation (optional) Code Observations (optional) Diagnostic Imaging Report (V3) (optional)	SOP Instance Observation

A Quantity Measurement Observation records quantity measurements based on image data such as linear, area, volume, and numeric measurements. The codes in DIRQuantityMeasurementTypeCodes (ValueSet: 2.16.840.1.113883.11.20.9.29) are from the qualifier hierarchy of SNOMED CT and are not valid for observation/code according to the Term Info guidelines. These codes can be used for backwards compatibility, but going forward, codes from the observable entity hierarchy will be requested and used.

Table 447: Quantity Measurement Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.14)					
@classCode	1..1	SHALL		81-9317	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-9318	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		81-9319	
@root	1..1	SHALL		81-10532	2.16.840.1.113883.10.20.6.2.14
code	1..1	SHALL		81-9320	
@code	0..1	SHOULD		81-19210	urn:oid:2.16.840.1.113883.11.20.9.29 (DIRQuantityMeasurementTypeCodes)
effectiveTime	0..1	SHOULD		81-9326	
value	1..1	SHALL	PQ	81-9324	
entryRelationship	0..*	MAY		81-9327	
@typeCode	1..1	SHALL		81-9328	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SPRT
observation	1..1	SHALL		81-15916	SOP Instance Observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.8)

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-9317).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-9318).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-9319) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.6.2.14"** (CONF:81-10532).

The value set of the observation/code includes numeric measurement types for linear dimensions, areas, volumes, and other numeric measurements. This value set is extensible and comprises the union of SNOMED codes for observable entities as reproduced in DIRQuantityMeasurementTypeCodes (ValueSet: 2.16.840.1.113883.11.20.9.29) and DICOM Codes in DICOMQuantityMeasurementTypeCodes (ValueSet: 2.16.840.1.113883.11.20.9.30).

4. **SHALL** contain exactly one [1..1] **code** (CONF:81-9320).

- a. This code **SHOULD** contain zero or one [0..1] **@code**, which **SHOULD** be selected from ValueSet [DIRQuantityMeasurementTypeCodes](#) urn:oid:2.16.840.1.113883.11.20.9.29 **DYNAMIC** (CONF:81-19210).
- 5. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:81-9326).
- 6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="PQ"** (CONF:81-9324).
- 7. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:81-9327) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SPRT"** Has Support (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:81-9328).
 - b. **SHALL** contain exactly one [1..1] [SOP Instance Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.8) (CONF:81-15916).

Table 448: DIRQuantityMeasurementTypeCodes

Value Set: DIRQuantityMeasurementTypeCodes urn:oid:2.16.840.1.113883.11.20.9.29			
These codes are used for the DIR quantity measurement observation. They are from SNOMED CT (http://www.nlm.nih.gov/research/umls/Snomed/snomed_main.html)			
Value Set Source: http://www.nlm.nih.gov/research/umls/Snomed/snomed_main.html			
Code	Code System	Code System OID	Print Name
439932008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Length of structure
440357003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Width of structure
439934009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Depth of structure
439984002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Diameter of structure
439933003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Long axis length of structure
439428006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Short axis length of structure
439982003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Major axis length of structure
439983008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Minor axis length of structure
440356007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Perpendicular axis length of structure
439429003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Radius of structure
...			

Figure 209: Quantity Measurement Observation Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.6.2.14"/>
  <code code="439984002" codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNM3"
    displayName="Diameter of structure">
    <originalText>
      <reference value="#Diam2"/>
    </originalText>
  </code>
  <statusCode code="completed"/>
  <effectiveTime value="200802260805-0800"/>
  <value xsi:type="PQ" value="45" unit="mm"
    codeSystemVersion="1.5"/>
  <!-- entryRelationships to SOP Instance Observations may go here -->
</observation>

```

3.90 Reaction Observation (V2)

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

Table 449: Reaction Observation (V2) Contexts

Contained By:	Contains:
Medication Activity (V2) (optional) Procedure Activity Procedure (V2) (optional) Procedure Activity Observation (V2) (optional) Allergy - Intolerance Observation (V2) (optional) Substance or Device Allergy - Intolerance Observation (V2) (optional) Immunization Activity (V3) (optional) Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional)	Medication Activity (V2) Procedure Activity Procedure (V2) Severity Observation (V2)

This clinical statement represents the response to an undesired symptom, finding, etc. due to administered or exposed substance. This reaction may be an undesired symptom, finding, etc. or it could be a desired response to a treatment. A reaction can be defined with respect to its severity, and can have been treated by one or more interventions.

Table 450: 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 210: 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>

```

3.91 Referenced Frames Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.6.2.10 (open)]

Table 451: Referenced Frames Observation Contexts

Contained By:	Contains:
SOP Instance Observation (optional)	Boundary Observation

A Referenced Frames Observation is used if the referenced DICOM SOP instance is a multiframe image and the reference does not apply to all frames. The list of integer values for the referenced frames of a DICOM multiframe image SOP instance is contained in a Boundary Observation nested inside this class.

Table 452: Referenced Frames Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.10)					
@classCode	1..1	SHALL		81-9276	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ROIBND
@moodCode	1..1	SHALL		81-9277	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
code	1..1	SHALL		81-19164	
@code	0..1	MAY		81-19165	urn:oid:1.2.840.10008.2.16.4 (DCM) = 121190
entryRelationship	1..1	SHALL		81-9279	
@typeCode	1..1	SHALL		81-9280	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		81-15923	Boundary Observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.11)

1. **SHALL** contain exactly one [1..1] **@classCode="ROIBND"** Bounded Region of Interest (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-9276).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-9277).
3. **SHALL** contain exactly one [1..1] **code** (CONF:81-19164).
 - a. This code **MAY** contain zero or one [0..1] **@code="121190"** Referenced Frames (CodeSystem: DCM urn:oid:1.2.840.10008.2.16.4 **STATIC**) (CONF:81-19165).
4. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:81-9279).
 - a. This entryRelationship **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:81-9280).
 - b. This entryRelationship **SHALL** contain exactly one [1..1] [Boundary Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.11) (CONF:81-15923).

Figure 211: Referenced Frames Observation Example

```

<observation classCode="ROIBND" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.6.2.10"/>
  <code code="121190" codeSystem="1.2.840.10008.2.16.4" displayName="Referenced Frames"/>
  <entryRelationship typeCode="COMP">
    <!-- Boundary Observation -->
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.6.2.11"/>
      <code code="113036" codeSystem="1.2.840.10008.2.16.4" displayName="Frames for
Display"/>
      <value xsi:type="INT" value="1"/>
    </observation>
  </entryRelationship>
</observation>

```

3.92 Result Observation (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2015-08-01 (open)]

Table 453: Result Observation (V3) Contexts

Contained By:	Contains:
Health Concern Act (V2) (optional) Result Organizer (V3) (required) Risk Concern Act (V2) (optional)	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 454: Result Observation (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2015-08-01)					
@classCode	1..1	SHALL		1198-7130	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1198-7131	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-7136	
@root	1..1	SHALL		1198-9138	2.16.840.1.113883.10.20.22.4.2
@extension	1..1	SHALL		1198-32575	2015-08-01
id	1..*	SHALL		1198-7137	
code	1..1	SHALL		1198-7133	urn:oid:2.16.840.1.113883.6.1 (LOINC)
statusCode	1..1	SHALL		1198-7134	
@code	1..1	SHALL		1198-14849	urn:oid:2.16.840.1.113883.11.20.9.39 (Result Status)
effectiveTime	1..1	SHALL		1198-7140	
value	1..1	SHALL		1198-7143	
interpretationCode	0..*	SHOULD		1198-7147	
@code	1..1	SHALL		1198-32476	urn:oid:2.16.840.1.113883.1.11.78 (Observation Interpretation (HL7))
methodCode	0..1	MAY	SET<CE>	1198-7148	
targetSiteCode	0..1	MAY	SET<CD>	1198-7153	
author	0..*	SHOULD		1198-7149	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
referenceRange	0..*	SHOULD		1198-7150	
observationRange	1..1	SHALL		1198-7151	
code	0..0	SHALL NOT		1198-7152	
value	1..1	SHALL		1198-32175	

1. **SHALL** contain exactly one [1..1] `@classCode="OBS"` Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-7130).
2. **SHALL** contain exactly one [1..1] `@moodCode="EVN"` Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-7131).
3. **SHALL** contain exactly one [1..1] `templateId` (CONF:1198-7136) such that it
 - a. **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.10.20.22.4.2"` (CONF:1198-9138).
 - b. **SHALL** contain exactly one [1..1] `@extension="2015-08-01"` (CONF:1198-32575).
4. **SHALL** contain at least one [1..*] `id` (CONF:1198-7137).
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:1198-7133).
 - 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:1198-19212).
6. **SHALL** contain exactly one [1..1] `statusCode` (CONF:1198-7134).
 - 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** (CONF:1198-14849).
7. **SHALL** contain exactly one [1..1] `effectiveTime` (CONF:1198-7140).
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. **SHALL** contain exactly one [1..1] `value` (CONF:1198-7143).
 - a. If Observation/value is a physical quantity (`xs:type="PQ"`), the unit of measure **SHALL** be selected from ValueSet UnitsOfMeasureCaseSensitive 2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1198-31484).
 - b. A coded or physical quantity value **MAY** contain zero or more [0..*] translations, which can be used to represent the original results as output by the lab (CONF:1198-31866).
 - c. If Observation/value is a CD (`xs:type="CD"`) the value **SHOULD** be SNOMED-CT (CONF:1198-32610).
9. **SHOULD** contain zero or more [0..*] `interpretationCode` (CONF:1198-7147).
 - 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** (CONF:1198-32476).
10. **MAY** contain zero or one [0..1] `methodCode` (CONF:1198-7148).
11. **MAY** contain zero or one [0..1] `targetSiteCode` (CONF:1198-7153).
12. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-7149).
13. **SHOULD** contain zero or more [0..*] `referenceRange` (CONF:1198-7150).
 - a. The `referenceRange`, if present, **SHALL** contain exactly one [1..1] `observationRange` (CONF:1198-7151).
 - i. This `observationRange` **SHALL NOT** contain [0..0] `code` (CONF:1198-7152).

- ii. This observationRange **SHALL** contain exactly one [1..1] value (CONF:1198-32175).

Table 455: Observation Interpretation (HL7)

Value Set: Observation Interpretation (HL7) urn:oid:2.16.840.1.113883.1.11.78			
Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/inrastructure/vocabulary/vocabulary.htm			
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 212: Result Observation (V3) Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.2" extension="2015-08-01" />
  <id root="7c0704bb-9c40-41b5-9c7d-26b2d59e234f" />
  <code code="20570-8" displayName="Hematocrit" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" />
  <statusCode code="completed" />
  <effectiveTime value="200803190830-0800" />
  <value xsi:type="PQ" value="35.3" unit="%" />
  <interpretationCode code="L" codeSystem="2.16.840.1.113883.5.83" />
  <author>
    <time value="200803190830-0800" />
    <assignedAuthor>
      <id extension="333444444" root="1.1.1.1.1.1.4" />
      <addr>
        <streetAddressLine>1017 Health Drive</streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
      <telecom use="WP" value="tel:+1(555)555-1017" />
      <assignedPerson>
        <name>
          <given>William</given>
          <given qualifier="CL">Bill</given>
          <family>Beaker</family>
        </name>
      </assignedPerson>
      <representedOrganization>
        <name>Good Health Laboratory</name>
      </representedOrganization>
    </assignedAuthor>
  </author>
  <referenceRange>
    <observationRange>
      <text>Low</text>
      <value xsi:type="IVL_PQ">
        <low value="34.9" unit="%" />
        <high value="44.5" unit="%" />
      </value>
      <interpretationCode code="L" codeSystem="2.16.840.1.113883.5.83"/>
    </observationRange>
  </referenceRange>
</observation>
```


3.93 Result Organizer (V3)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2015-08-01
(open)]

Table 456: Result Organizer (V3) Contexts

Contained By:	Contains:
Health Concern Act (V2) (optional) Results Section (entries optional) (V3) (optional) Results Section (entries required) (V3) (required) Risk Concern Act (V2) (optional)	Author Participation Result Observation (V3)

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 457: Result Organizer (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2015-08-01)					
@classCode	1..1	SHALL		1198-7121	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass)
@moodCode	1..1	SHALL		1198-7122	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-7126	
@root	1..1	SHALL		1198-9134	2.16.840.1.113883.10.20.22.4.1
@extension	1..1	SHALL		1198-32588	2015-08-01
id	1..*	SHALL		1198-7127	
code	1..1	SHALL		1198-7128	
statusCode	1..1	SHALL		1198-7123	
@code	1..1	SHALL		1198-14848	urn:oid:2.16.840.1.113883.11.20.9.39 (Result Status)
effectiveTime	0..1	MAY		1198-31865	
low	1..1	SHALL		1198-32488	
high	1..1	SHALL		1198-32489	
author	0..*	SHOULD		1198-31149	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
component	1..*	SHALL		1198-7124	
observation	1..1	SHALL		1198-14850	Result Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2015-08-01)

1. **SHALL** contain exactly one [1..1] **@classCode** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-7121).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-7122).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7126) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.1"** (CONF:1198-9134).
 - b. **SHALL** contain exactly one [1..1] **@extension="2015-08-01"** (CONF:1198-32588).

4. **SHALL** contain at least one [1..*] **id** (CONF:1198-7127).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1198-7128).
 - 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:1198-19218).
 - 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:1198-19219).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-7123).
 - 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** (CONF:1198-14848).
7. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:1198-31865).

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:1198-32488).
 - b. The effectiveTime, if present, **SHALL** contain exactly one [1..1] **high** (CONF:1198-32489).
8. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-31149).
9. **SHALL** contain at least one [1..*] **component** (CONF:1198-7124) such that it
 - a. **SHALL** contain exactly one [1..1] [Result Observation \(V3\)](#) (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.2:2015-08-01) (CONF:1198-14850).

Figure 213: Result Organizer (V3) Example

```
<organizer classCode="BATTERY" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.1" extension="2015-08-01" />
  <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="2015-08-01" />
      . . .

    </observation>
  </component>
</organizer>
```

3.94 Risk Concern Act (V2)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.136:2015-08-01
(open)]

Table 458: Risk Concern Act (V2) Contexts

Contained By:	Contains:
Health Concerns Section (V2) (optional)	Allergy - Intolerance Observation (V2) Assessment Scale Observation Author Participation Caregiver Characteristics Characteristics of Home Environment Cultural and Religious Observation Encounter Diagnosis (V3) Entry Reference External Document Reference Family History Organizer (V3) Functional Status Observation (V2) Hospital Admission Diagnosis (V3) Longitudinal Care Wound Observation (V2) Mental Status Observation (V3) Nutrition Assessment Nutritional Status Observation Postprocedure Diagnosis (V3) Pregnancy Observation Preoperative Diagnosis (V3) Priority Preference Problem Concern Act (V3) Problem Observation (V3) Reaction Observation (V2) Result Observation (V3) Result Organizer (V3) Self-Care Activities (ADL and IADL) Sensory Status Smoking Status - Meaningful Use (V2) Social History Observation (V3) Substance or Device Allergy - Intolerance Observation (V2) Tobacco Use (V2) Vital Sign Observation (V2)

This template represents a risk concern.

It is a wrapper for a single risk concern which may be derived from a variety of sources within an EHR (such as Problem List, Family History, Social History, Social Worker Note, etc.).

A Risk Concern Act represents a health concern that is a risk. A risk is a clinical or socioeconomic condition that the patient does not currently have, but the probability of

developing that condition rises to the level of concern such that an intervention and/or monitoring is needed.

Table 459: Risk Concern Act (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.136:2015-08-01)					
@classCode	1..1	SHALL		1198-32220	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1198-32221	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-32180	
@root	1..1	SHALL		1198-32222	2.16.840.1.113883.10.20.22.4.136
@extension	1..1	SHALL		1198-32910	2015-08-01
id	1..1	SHALL		1198-32223	
code	1..1	SHALL		1198-32305	
@code	1..1	SHALL		1198-32306	281694009
@codeSystem	1..1	SHALL		1198-32307	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
statusCode	1..1	SHALL		1198-32225	
@code	1..1	SHALL		1198-32314	urn:oid:2.16.840.1.113883.11.20.9.19 (ProblemAct statusCode)
effectiveTime	0..1	MAY		1198-32226	
author	0..*	SHOULD		1198-32300	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	0..*	MAY		1198-32179	
@typeCode	1..1	SHALL		1198-32227	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32219	Problem Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01)
entryRelationship	0..*	MAY		1198-32181	
@typeCode	1..1	SHALL		1198-32228	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32229	Allergy - Intolerance Observation (V2) (identifier:

					urn:hl7ii:2.16.840.1.113883.10.20.22.4.7:2014-06-09
entryRelationship	0..*	MAY		1198-32182	
@typeCode	1..1	SHALL		1198-32230	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-32231	Entry Reference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122)
entryRelationship	0..*	MAY		1198-32183	
@typeCode	1..1	SHALL		1198-32232	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
act	1..1	SHALL		1198-32233	Entry Reference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122)
entryRelationship	0..*	MAY		1198-32184	
@typeCode	1..1	SHALL		1198-32234	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32235	Assessment Scale Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.69)
entryRelationship	0..*	MAY		1198-32185	
@typeCode	1..1	SHALL		1198-32236	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32237	Mental Status Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.74:2015-08-01)
entryRelationship	0..*	MAY		1198-32186	
@typeCode	1..1	SHALL		1198-32238	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32239	Self-Care Activities (ADL and IADL) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.128)
entryRelationship	0..*	MAY		1198-32188	
@typeCode	1..1	SHALL		1198-32242	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR

observation	1..1	SHALL		1198-32243	Mental Status Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.74:2015-08-01)
entryRelationship	0..*	MAY		1198-32189	
@typeCode	1..1	SHALL		1198-32244	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32245	Smoking Status - Meaningful Use (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.78:2014-06-09)
entryRelationship	0..*	MAY		1198-32190	
@typeCode	1..1	SHALL		1198-32246	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-32247	Encounter Diagnosis (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.80:2015-08-01)
entryRelationship	0..*	MAY		1198-32191	
@typeCode	1..1	SHALL		1198-32248	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
organizer	1..1	SHALL		1198-32249	Family History Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.45:2015-08-01)
entryRelationship	0..*	MAY		1198-32192	
@typeCode	1..1	SHALL		1198-32250	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32251	Functional Status Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.67:2014-06-09)
entryRelationship	0..*	MAY		1198-32193	
@typeCode	1..1	SHALL		1198-32252	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-32253	Hospital Admission Diagnosis (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.34:2015-08-01)
entryRelationship	0..*	MAY		1198-	

				32195	
@typeCode	1..1	SHALL		1198-32256	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32257	Nutrition Assessment (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.138)
entryRelationship	0..*	MAY		1198-32197	
@typeCode	1..1	SHALL		1198-32260	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-32261	Postprocedure Diagnosis (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.51:2015-08-01)
entryRelationship	0..*	MAY		1198-32198	
@typeCode	1..1	SHALL		1198-32262	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32263	Pregnancy Observation (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.8)
entryRelationship	0..*	MAY		1198-32199	
@typeCode	1..1	SHALL		1198-32264	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-32265	Preoperative Diagnosis (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.65:2015-08-01)
entryRelationship	0..*	MAY		1198-32200	
@typeCode	1..1	SHALL		1198-32266	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32267	Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09)
entryRelationship	0..*	MAY		1198-32201	
@typeCode	1..1	SHALL		1198-32268	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32269	Result Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.10:2014-06-09)

					0.22.4.2:2015-08-01
entryRelationship	0..*	MAY		1198-32202	
@typeCode	1..1	SHALL		1198-32270	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32271	Sensory Status (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.127)
entryRelationship	0..*	MAY		1198-32203	
@typeCode	1..1	SHALL		1198-32272	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32273	Social History Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2015-08-01)
entryRelationship	0..*	MAY		1198-32204	
typeId	0..1	MAY		1198-32274	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32275	Substance or Device Allergy - Intolerance Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.90:2014-06-09)
entryRelationship	0..*	MAY		1198-32205	
@typeCode	1..1	SHALL		1198-32276	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32277	Tobacco Use (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09)
entryRelationship	0..*	MAY		1198-32206	
@typeCode	1..1	SHALL		1198-32278	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32279	Vital Sign Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09)
entryRelationship	0..*	MAY		1198-32207	
@typeCode	1..1	SHALL		1198-32280	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR

observation	1..1	SHALL		1198-32281	Longitudinal Care Wound Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.114:2015-08-01)
entryRelationship	0..*	MAY		1198-32208	
@typeCode	1..1	SHALL		1198-32282	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SPRT
observation	1..1	SHALL		1198-32283	Problem Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.2.0.22.4.4:2015-08-01)
entryRelationship	0..*	MAY		1198-32209	
@typeCode	1..1	SHALL		1198-32284	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32285	Caregiver Characteristics (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.72)
entryRelationship	0..*	MAY		1198-32210	
@typeCode	1..1	SHALL		1198-32286	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32287	Cultural and Religious Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.111)
entryRelationship	0..*	MAY		1198-32211	
@typeCode	1..1	SHALL		1198-32288	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32289	Characteristics of Home Environment (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.109)
entryRelationship	0..*	MAY		1198-32212	
@typeCode	1..1	SHALL		1198-32290	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32291	Nutritional Status Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.124)
entryRelationship	0..*	MAY		1198-	

				32213	
@typeCode	1..1	SHALL		1198-32292	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
organizer	1..1	SHALL		1198-32293	Result Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2015-08-01)
entryRelationship	0..*	MAY		1198-32214	
@typeCode	1..1	SHALL		1198-32294	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32295	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143)
entryRelationship	0..*	MAY		1198-32215	
@typeCode	1..1	SHALL		1198-32296	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-32297	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143)
entryRelationship	0..*	MAY		1198-32216	
@typeCode	1..1	SHALL		1198-32298	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-32299	Problem Concern Act (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01)
entryRelationship	0..*	MAY		1198-32217	
@typeCode	1..1	SHALL		1198-32301	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
act	1..1	SHALL		1198-32302	Entry Reference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122)
reference	0..*	MAY		1198-32769	
@typeCode	1..1	SHALL		1198-32908	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
externalDocument	1..1	SHALL		1198-32909	External Document Reference (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09)

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1198-32220).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1198-32221).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-32180) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.136"** (CONF:1198-32222).
 - b. **SHALL** contain exactly one [1..1] **@extension="2015-08-01"** (CONF:1198-32910).
4. **SHALL** contain exactly one [1..1] **id** (CONF:1198-32223).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1198-32305).
 - a. This code **SHALL** contain exactly one [1..1] **@code="281694009"** At risk for (CONF:1198-32306).
 - 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:1198-32307).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-32225).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [ProblemAct statusCode](#) urn:oid:2.16.840.1.113883.11.20.9.19 **STATIC** (CONF:1198-32314).
7. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:1198-32226).
8. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-32300).
9. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32179) 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:1198-32227).
 - b. **SHALL** contain exactly one [1..1] [Problem Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) (CONF:1198-32219).
10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32181) 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:1198-32228).
 - b. **SHALL** contain exactly one [1..1] [Allergy - Intolerance Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.7:2014-06-09) (CONF:1198-32229).

The following entryRelationship represents the relationship between two Health Concern Acts where there is a general relationship between the source and the target (Health Concern RELATES TO Health Concern). The Entry Reference template is used here because the target Health Concern Act will be defined elsewhere in the Health Concerns Section and thus a reference to that template is all that is required.

11. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32182) 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:1198-32230).
- b. **SHALL** contain exactly one [1..1] [Entry Reference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) (CONF:1198-32231).

The following entryRelationship represents the relationship between two Health Concern Acts where the target is a component of the source (Health Concern HAS COMPONENT Health Concern). The Entry Reference template is used here because the target Health Concern Act will be defined elsewhere in the Health Concerns Section and thus a reference to that template is all that is required.

- 12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32183) 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:1198-32232).
 - b. **SHALL** contain exactly one [1..1] [Entry Reference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) (CONF:1198-32233).
- 13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32184) 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:1198-32234).
 - b. **SHALL** contain exactly one [1..1] [Assessment Scale Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.69) (CONF:1198-32235).
- 14. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32185) 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:1198-32236).
 - b. **SHALL** contain exactly one [1..1] [Mental Status Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.74:2015-08-01) (CONF:1198-32237).
- 15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32186) 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:1198-32238).
 - b. **SHALL** contain exactly one [1..1] [Self-Care Activities \(ADL and IADL\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.128) (CONF:1198-32239).
- 16. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32188) 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:1198-32242).
 - b. **SHALL** contain exactly one [1..1] [Mental Status Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.74:2015-08-01) (CONF:1198-32243).
- 17. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32189) 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:1198-32244).
 - b. **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:1198-32245).
18. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32190) 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:1198-32246).
 - b. **SHALL** contain exactly one [1..1] Encounter Diagnosis (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2015-08-01) (CONF:1198-32247).
19. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32191) 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:1198-32248).
 - b. **SHALL** contain exactly one [1..1] Family History Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.45:2015-08-01) (CONF:1198-32249).
20. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32192) 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:1198-32250).
 - b. **SHALL** contain exactly one [1..1] Functional Status Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.67:2014-06-09) (CONF:1198-32251).
21. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32193) 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:1198-32252).
 - b. **SHALL** contain exactly one [1..1] Hospital Admission Diagnosis (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.34:2015-08-01) (CONF:1198-32253).
22. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32195) 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:1198-32256).
 - b. **SHALL** contain exactly one [1..1] Nutrition Assessment (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.138) (CONF:1198-32257).
23. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32197) 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:1198-32260).

- b. **SHALL** contain exactly one [1..1] [Postprocedure Diagnosis \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.51:2015-08-01) (CONF:1198-32261).
24. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32198) 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:1198-32262).
 - b. **SHALL** contain exactly one [1..1] [Pregnancy Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.8) (CONF:1198-32263).
25. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32199) 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:1198-32264).
 - b. **SHALL** contain exactly one [1..1] [Preoperative Diagnosis \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.65:2015-08-01) (CONF:1198-32265).
26. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32200) 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:1198-32266).
 - 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:1198-32267).
27. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32201) 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:1198-32268).
 - b. **SHALL** contain exactly one [1..1] [Result Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2015-08-01) (CONF:1198-32269).
28. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32202) 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:1198-32270).
 - b. **SHALL** contain exactly one [1..1] [Sensory Status](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.127) (CONF:1198-32271).
29. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32203) 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:1198-32272).
 - b. **SHALL** contain exactly one [1..1] [Social History Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2015-08-01) (CONF:1198-32273).
30. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32204) such that it

- a. **MAY** contain zero or one [0..1] **typeId="REFR"** Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-32274).
 - b. **SHALL** contain exactly one [1..1] [Substance or Device Allergy - Intolerance Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.90:2014-06-09) (CONF:1198-32275).
31. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32205) 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:1198-32276).
 - b. **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:1198-32277).
32. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32206) 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:1198-32278).
 - b. **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:1198-32279).
33. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32207) 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:1198-32280).
 - b. **SHALL** contain exactly one [1..1] [Longitudinal Care Wound Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.114:2015-08-01) (CONF:1198-32281).

The following entryRelationship represents the relationship Health Concern HAS SUPPORT Observation.

34. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32208) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="SPRT"** Has support (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-32282).
 - b. **SHALL** contain exactly one [1..1] [Problem Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) (CONF:1198-32283).
35. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32209) 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:1198-32284).
 - b. **SHALL** contain exactly one [1..1] [Caregiver Characteristics](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.72) (CONF:1198-32285).
36. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32210) 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:1198-32286).
 - b. **SHALL** contain exactly one [1..1] [Cultural and Religious Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.111) (CONF:1198-32287).
37. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32211) 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:1198-32288).
 - b. **SHALL** contain exactly one [1..1] [Characteristics of Home Environment](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.109) (CONF:1198-32289).
38. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32212) 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:1198-32290).
 - b. **SHALL** contain exactly one [1..1] [Nutritional Status Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.124) (CONF:1198-32291).
39. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32213) 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:1198-32292).
 - b. **SHALL** contain exactly one [1..1] [Result Organizer \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2015-08-01) (CONF:1198-32293).

The following entryRelationship represents the priority that the patient puts on the health concern.

40. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32214) 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:1198-32294).
 - b. **SHALL** contain exactly one [1..1] [Priority Preference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1198-32295).

The following entryRelationship represents the priority that the provider puts on the health concern.

41. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32215) 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:1198-32296).
 - b. **SHALL** contain exactly one [1..1] [Priority Preference](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1198-32297).
42. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32216) 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:1198-32298).
- b. **SHALL** contain exactly one [1..1] **Problem Concern Act (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01) (CONF:1198-32299).

Where a Health Concern needs to reference another entry already described in the CDA document instance, rather than repeating the full content of the entry, the Entry Reference template may be used to reference this entry.

- 43. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-32217) 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:1198-32301).
 - b. **SHALL** contain exactly one [1..1] **Entry Reference** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.122) (CONF:1198-32302).
- 44. **MAY** contain zero or more [0..*] **reference** (CONF:1198-32769).
 - 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:1198-32908).
 - b. 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:1198-32909).

Figure 214: Risk Concern Act Example

```
<!-- Risk Concern Act -->
<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.136" extension="2015-08-01"/>
  <id root="cbcbf20a-d011-449f-87d1-a23cc3e5f7cf" />
  <code code="X-RISK-CONCERN-ACT" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="At risk for" />
  <!-- This Health Risk has a statusCode of active because it is an active risk -->
  <statusCode code="active" />
  <!-- The effective time is the date that the Health Risk started being followed -
this does not necessarily correlate to the onset date of the contained health issues-->
  <effectiveTime value="20130616" />
  <!-- Health Risk: Malignant neoplastic disease -->
  <entryRelationship typeCode="REFR">
    <!-- Problem Observation -->
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01" />
      <id root="8dfacd73-1682-4cc4-9351-e54ccea83612" />
      <code code="80943009" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Risk factor" />
      <statusCode code="completed" />
      <effectiveTime>
        <low value="20130613" />
      </effectiveTime>
      <value xsi:type="CD" code="409623005" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Malignant neoplastic disease" />
    </observation>
  </entryRelationship>
  ...

  <!-- This entryRelationship represents the relationship
  "Health Risk REFERS TO Health Concern"
  -->
  <entryRelationship typeCode="REFR">
    <!-- Entry Reference Concern Act -->
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.122" />
      <!-- This id points to an already defined Health Concern -->
      <id root="4eab0e52-dd7d-4285-99eb-72d32ddb195c" />
      <code nullFlavor="NP" />
      <statusCode code="completed" />
    </act>
  </entryRelationship>
</act>
```

3.95 Self-Care Activities (ADL and IADL)

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.128 (open)]

Table 460: Self-Care Activities (ADL and IADL) Contexts

Contained By:	Contains:
Functional Status Section (V2) (optional) Functional Status Organizer (V2) (required) Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional)	Author Participation

This template represents a patient's daily self-care ability. These activities are called Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL). ADLs involve caring for and moving of the body (e.g., dressing, bathing, eating). IADLs support an independent life style (e.g., cooking, managing medications, driving, shopping).

Table 461: Self-Care Activities (ADL and IADL) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.128)					
@classCode	1..1	SHALL		1098-31389	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-31390	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-28190	
@root	1..1	SHALL		1098-28457	2.16.840.1.113883.10.20.22.4.128
code	1..1	SHALL		1098-28153	urn:oid:2.16.840.1.113883.11.20.9.47 (ADL Result Type)
statusCode	1..1	SHALL		1098-32490	urn:oid:2.16.840.1.113883.5.14 (ActStatus)
@code	1..1	SHALL		1098-32491	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-32492	
value	1..1	SHALL	CD	1098-28042	urn:oid:2.16.840.1.113883.11.20.9.46 (Ability)
author	0..*	SHOULD		1098-32469	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:1098-31389).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1098-31390).

3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-28190) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.128"** (CONF:1098-28457).

If more detailed ADL and IADL activities need to be recorded select the appropriate code from LOINC.

4. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [ADL Result Type](#) urn:oid:2.16.840.1.113883.11.20.9.47 **DYNAMIC** (CONF:1098-28153).
5. **SHALL** contain exactly one [1..1] **statusCode** (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-32490).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code="completed"** (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-32491).
6. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-32492).
7. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"**, where the code **SHOULD** be selected from ValueSet [Ability](#) urn:oid:2.16.840.1.113883.11.20.9.46 **STATIC** (CONF:1098-28042).
8. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32469).

Table 462: Ability

Value Set: Ability urn:oid:2.16.840.1.113883.11.20.9.46			
A value set containing SNOMED-CT codes for level of dependence.			
Specific URL Pending			
Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
371150009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	able
371153006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	independent
371155004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	able to and does
371152001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	assisted
371154000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	dependent
371151008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	unable
371156003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	does not
371157007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	difficulty
385640009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	does

Table 463: ADL Result Type

Value Set: ADL Result Type urn:oid:2.16.840.1.113883.11.20.9.47			
This value set includes Basic ADL and IADL activities.			
Value Set Source: http://www.hl7.org			
Code	Code System	Code System OID	Print Name
46008-9	LOINC	urn:oid:2.16.840.1.113883.6.1	Bathing
28409-1	LOINC	urn:oid:2.16.840.1.113883.6.1	Dressing
28408-3	LOINC	urn:oid:2.16.840.1.113883.6.1	Toileting
46484-2	LOINC	urn:oid:2.16.840.1.113883.6.1	Feeding or Eating
46482-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Transferring
28413-3	LOINC	urn:oid:2.16.840.1.113883.6.1	Ambulation

Figure 215: Self-Care Activities (ADL and IADL) Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- Self Care Activities (NEW)-->
  <templateId root="2.16.840.1.113883.10.20.22.4.128" />
  <id root="c6b5a04b-2bf4-49d1-8336-636a3813df0a" />
  <code code="46482-6" displayName="Transferring" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" />
  <statusCode code="completed" />
  <effectiveTime value="200130311" />
  <value xsi:type="CD" code="371153006" displayName="Independent"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" />
  <author>
    ...
  </author>
</observation>

```

3.96 Sensory Status

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.127 (open)]

Table 464: Sensory Status Contexts

Contained By:	Contains:
Functional Status Section (V2) (optional) Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional)	Assessment Scale Observation Author Participation

This template represents a patient's sensory or speech ability. It may contain an assessment scale observations related to the sensory or speech ability.

Table 465: Sensory Status Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.127)					
@classCode	1..1	SHALL		1098-31017	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-31018	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-27959	
@root	1..1	SHALL		1098-27960	2.16.840.1.113883.10.20.22.4.127
code	1..1	SHALL		1098-27962	urn:oid:2.16.840.1.113883.11.20.9.50 (Sensory Status Problem Type)
statusCode	1..1	SHALL		1098-31437	
@code	1..1	SHALL		1098-31438	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-31441	
low	1..1	SHALL		1098-32630	
high	0..1	MAY		1098-32631	
value	1..1	SHALL	CD	1098-27974	urn:oid:2.16.840.1.113883.11.20.9.44 (Mental and Functional Status Response)
author	0..1	SHOULD		1098-31439	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
entryRelationship	0..*	MAY		1098-27984	
@typeCode	1..1	SHALL		1098-27985	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1098-27986	Assessment Scale Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.69)

1. **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1098-31017).

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1098-31018).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-27959) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.127" (CONF:1098-27960).
4. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Sensory Status Problem Type](#) urn:oid:2.16.840.1.113883.11.20.9.50 **DYNAMIC** (CONF:1098-27962).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-31437).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-31438).
6. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-31441).

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:1098-32630).

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:1098-32631).

7. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHOULD** be selected from ValueSet [Mental and Functional Status Response](#) urn:oid:2.16.840.1.113883.11.20.9.44 **DYNAMIC** (CONF:1098-27974).
8. **SHOULD** contain zero or one [0..1] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31439).
9. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-27984) 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:1098-27985).
 - b. **SHALL** contain exactly one [1..1] [Assessment Scale Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.69) (CONF:1098-27986).

Table 466: Sensory Status Problem Type

Value Set: Sensory Status Problem Type urn:oid:2.16.840.1.113883.11.20.9.50			
A value set of SNOMED-CT observable codes to identify sensory and speech problems. Specific URL Pending			
Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
47078008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Hearing
405183003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Sensory function status: vision
373713005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Sensory perception
397627001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Taste, function
397686008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Sense of smell, function
397624008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	touch sensation, function
128542002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	speech hearing function
285567008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	ability to perform functions for speech

Table 467: Mental and Functional Status Response

<p>Value Set: Mental and Functional Status Response urn:oid:2.16.840.1.113883.11.20.9.44 A value set containing SNOMED-CT qualifier codes that are common responses to mental and functional ability queries. Value Set Source: http://vts1.vetmed.vt.edu/TerminologyMgt/RF2Browser/ISA.cfm?SCT_ConceptID=272520006</p>			
Code	Code System	Code System OID	Print Name
11163003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Intact
260379002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Impaired
272520006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	degree findings
1250004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	decreased
18043004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	thin
18307000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	altered
20572008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	good
30714006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	resistant
35105006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	increased
41277001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	lacking
...			

Figure 216: Sensory and Speech Status Example

```

<entry>
  <observation classCode="OBS" moodCode="EVN">
    <!-- Sensory and Speech Status (NEW) -->
    <templateId root="2.16.840.1.113883.10.20.22.4.127" />
    <id root="c6b5a04b-2bf4-49d1-8336-636a3813df0a" />
    <code code="47078008" displayName="Hearing" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED-CT" />
    <statusCode code="completed" />
    <effectiveTime value="200130311" />
    <value xsi:type="CD" code="260379002" displayName="Impaired" codeSystemName="SNOMED
CT" />
    <entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <!--Assessment Scale Observation -->
        <templateId root="2.16.840.1.113883.10.20.22.4.69" />
        <id root="c6b5a04b-2bf4-49d1-8336-636a3813df0b" />
        ...
      </observation>
    </entryRelationship>
  </observation>
</entry>

```

3.97 Series Act

[act: identifier urn:oid:2.16.840.1.113883.10.20.22.4.63 (open)]

Table 468: Series Act Contexts

Contained By:	Contains:
Study Act (required)	SOP Instance Observation

A Series Act contains the DICOM series information for referenced DICOM composite objects. The series information defines the attributes that are used to group composite instances into distinct logical sets. Each series is associated with exactly one study. Series Act clinical statements are only instantiated in the DICOM Object Catalog section inside a Study Act, and thus do not require a separate templateId; in other sections, the SOP Instance Observation is included directly.

Table 469: Series Act Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.63)					
@classCode	1..1	SHALL		81-9222	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		81-9223	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		81-10918	
@root	1..1	SHALL		81-10919	2.16.840.1.113883.10.20.22.4.63
id	1..*	SHALL		81-9224	
@root	1..1	SHALL		81-9225	
@extension	0..0	SHALL NOT		81-9226	
code	1..1	SHALL		81-19166	
@code	1..1	SHALL		81-19167	113015
@codeSystem	0..1	MAY		81-26461	urn:oid:1.2.840.10008.2.16.4 (DCM) = 1.2.840.10008.2.16.4
qualifier	1..1	SHALL		81-26462	
name	1..1	SHALL		81-26463	
@code	1..1	SHALL		81-26464	121139
@codeSystem	1..1	SHALL		81-26465	urn:oid:1.2.840.10008.2.16.4 (DCM) = 1.2.840.10008.2.16.4
value	1..1	SHALL		81-26466	
text	0..1	MAY		81-9233	
effectiveTime	0..1	SHOULD		81-9235	
entryRelationship	1..*	SHALL		81-9237	
@typeCode	1..1	SHALL		81-9238	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		81-15927	SOP Instance Observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.8)

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-9222).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-9223).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-10918) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.63"** (CONF:81-10919).
4. **SHALL** contain at least one [1..*] **id** (CONF:81-9224).

The **@root** contains the OID of the study instance UID since DICOM study ids consist only of an OID

- a. Such ids **SHALL** contain exactly one [1..1] **@root** (CONF:81-9225).
- b. Such ids **SHALL NOT** contain [0..0] **@extension** (CONF:81-9226).
5. **SHALL** contain exactly one [1..1] **code** (CONF:81-19166).
 - a. This code **SHALL** contain exactly one [1..1] **@code="113015"** (CONF:81-19167).
 - b. This code **MAY** contain zero or one [0..1] **@codeSystem="1.2.840.10008.2.16.4"** (CodeSystem: DCM urn:oid:1.2.840.10008.2.16.4) (CONF:81-26461).
 - c. This code **SHALL** contain exactly one [1..1] **qualifier** (CONF:81-26462).
 - i. This qualifier **SHALL** contain exactly one [1..1] **name** (CONF:81-26463).
 1. This name **SHALL** contain exactly one [1..1] **@code="121139"** Modality (CONF:81-26464).
 2. This name **SHALL** contain exactly one [1..1] **@codeSystem="1.2.840.10008.2.16.4"** (CodeSystem: DCM urn:oid:1.2.840.10008.2.16.4) (CONF:81-26465).
 - ii. This qualifier **SHALL** contain exactly one [1..1] **value** (CONF:81-26466).

If present, the text element contains the description of the series

6. **MAY** contain zero or one [0..1] **text** (CONF:81-9233).

If present, the effectiveTime contains the time the series was started

7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:81-9235).
8. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:81-9237) 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:81-9238).
 - b. **SHALL** contain exactly one [1..1] **SOP Instance Observation** (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.8) (CONF:81-15927).

Figure 217: Series Act Example

```

<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.63"/>
  <id root="1.2.840.113619.2.62.994044785528.20060823223142485051"/>
  <code code="113015" codeSystem="1.2.840.10008.2.16.4"
    codeSystemName="DCM" displayName="Series">
    <qualifier>
      <name code="121139" codeSystem="1.2.840.10008.2.16.4"
        codeSystemName="DCM" displayName="Modality"/>
      <value code="CR" codeSystem="1.2.840.10008.2.16.4" codeSystemName="DCM"
        displayName="Computed Radiography"/>
    </qualifier>
  </code>
  <!-- **** SOP Instance UID *** -->
  <entryRelationship typeCode="COMP">
    <observation classCode="DGIMG" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.6.2.8"/>
    ...
  </observation>
</entryRelationship>
</act>

```

3.98 Service Delivery Location

[participantRole: identifier urn:oid:2.16.840.1.113883.10.20.22.4.32 (open)]

Table 470: Service Delivery Location Contexts

Contained By:	Contains:
Procedure Activity Act (V2) (optional) Procedure Activity Procedure (V2) (optional) Procedure Activity Observation (V2) (optional) Planned Encounter (V2) (optional) Encounter Activity (V3) (optional)	

This clinical statement represents the location of a service event where an act, observation or procedure took place.

Table 471: 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 472: HealthcareServiceLocation

<p>Value Set: HealthcareServiceLocation urn:oid:2.16.840.1.113883.1.11.20275</p> <p>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.</p> <p>Value Set Source: http://phinvads.cdc.gov/vads/SearchAllVocab_search.action?searchOptions.searchText=Healthcare+Service+Location+%28NHSN%29</p>			
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 218: 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>

```

3.99 Severity Observation (V2)

[observation: identifier urn:h17ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09
(open)]

Table 473: Severity Observation (V2) Contexts

Contained By:	Contains:
Reaction Observation (V2) (optional) Allergy - Intolerance Observation (V2) (optional) Substance or Device Allergy - Intolerance 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 474: 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 475: 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:2.16.840.1.113883.3.6.96	Mild (qualifier value)
371923003	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	Mild to moderate (qualifier value)
6736007	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	Moderate (severity modifier) (qualifier value)
371924009	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	Moderate to severe (qualifier value)
24484000	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	Severe (severity modifier) (qualifier value)
399166001	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	Fatal (qualifier value)

Figure 219: 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>

```

3.100 Smoking Status - Meaningful Use (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09 (open)]

Table 476: Smoking Status - Meaningful Use (V2) Contexts

Contained By:	Contains:
Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional) Social History 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 477: 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 478: 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:2.16.840.1.113883.3.6.96	Current every day smoker
428041000124106	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	Current some day smoker
8517006	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	Former smoker
266919005	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	Never smoker (Never Smoked)
77176002	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	Smoker, current status unknown
266927001	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	Unknown if ever smoked
428071000124103	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	Heavy tobacco smoker
428061000124105	SNOMED CT	urn:oid:2.16.840.1.113883.3.6.96	Light tobacco smoker

Figure 220: Smoking Status - Meaningful Use (V2) Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.78" extension="2014-06-09" />
  <id extension="123456789" root="2.16.840.1.113883.19" />
  <code code="72166-2" codeSystem="2.16.840.1.113883.6.1" displayName="Tobacco smoking
status NHIS" />
  <statusCode code="completed" />
  <!-- The effectiveTime reflects when the current smoking status was observed. -->
  <effectiveTime value="20120910" />
  <!-- The value represents the patient's smoking status currently observed. -->
  <value xsi:type="CD" code="8517006" displayName="Former smoker"
codeSystem="2.16.840.1.113883.6.96" />
  <author typeCode="AUT">
    <time value="199803161030-0800" />
    <assignedAuthor>
      <id extension="555555555" root="1.1.1.1.1.1.2" />
    </assignedAuthor>
  </author>
</observation>

```

3.101 Social History Observation (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2015-08-01
(open)]

Table 479: Social History Observation (V3) Contexts

Contained By:	Contains:
Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional) Social History Section (V3) (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 480: Social History Observation (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2015-08-01)					
@classCode	1..1	SHALL		1198-8548	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1198-8549	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-8550	
@root	1..1	SHALL		1198-10526	2.16.840.1.113883.10.20.22.4.38
@extension	1..1	SHALL		1198-32495	2015-08-01
id	1..*	SHALL		1198-8551	
code	1..1	SHALL		1198-8558	urn:oid:2.16.840.1.113883.3.88.12.80.60 (Social History Type)
translation	1..*	SHALL		1198-32853	urn:oid:2.16.840.1.113883.6.1 (LOINC)
statusCode	1..1	SHALL		1198-8553	
@code	1..1	SHALL		1198-19117	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1198-31868	
value	0..1	SHOULD		1198-8559	
author	0..*	SHOULD		1198-31869	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:1198-8548).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-8549).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1198-8550) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.38" (CONF:1198-10526).
 - b. **SHALL** contain exactly one [1..1] @extension="2015-08-01" (CONF:1198-32495).
4. **SHALL** contain at least one [1..*] id (CONF:1198-8551).
5. **SHALL** contain exactly one [1..1] code, which **SHOULD** be selected from ValueSet [Social History Type](#) urn:oid:2.16.840.1.113883.3.88.12.80.60 **STATIC** 2008-12-18 (CONF:1198-8558).

- a. This code **SHALL** contain at least one [1..*] **translation**, which **SHOULD** be selected from CodeSystem LOINC (urn:oid:2.16.840.1.113883.6.1) (CONF:1198-32853).
- 6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-8553).
 - 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:1198-19117).
- 7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-31868).
- 8. **SHOULD** contain zero or one [0..1] **value** (CONF:1198-8559).
 - 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:1198-8555).
- 9. **SHOULD** contain zero or more [0..*] **Author Participation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) ([CONF:1198-31869](#)).

Table 481: Social History Type Set Definition Value Set

Value Set: Social History Type Set Definition 2.16.840.1.113883.3.88.12.80.60 STATIC 2008-12-18		
Code System(s): SNOMED CT 2.16.840.1.113883.6.96		
Code	Code System	Print Name
229819007	SNOMED CT	Tobacco use and exposure
256235009	SNOMED CT	Exercise
160573003	SNOMED CT	Alcohol intake
364393001	SNOMED CT	Nutritional observable
364703007	SNOMED CT	Employment detail
425400000	SNOMED CT	Toxic exposure status
363908000	SNOMED CT	Details of drug misuse behavior
228272008	SNOMED CT	Health-related behavior
105421008	SNOMED CT	Educational Achievement

Figure 221: Social History Observation (V3) Example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.38"
    extension="2015-08-01" />
  <id root="37f76c51-6411-4e1d-8a37-957fd49d2cef" />
  <code code="160573003" displayName="Alcohol intake"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT">
    <translation code="74013-4"
      codeSystem="2.16.840.1.113883.6.1"
      codeSystemName="LOINC"
      displayName="Alcoholic drinks per day"></translation>
    <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>

```

3.102 SOP Instance Observation -

[observation: identifier urn:oid:2.16.840.1.113883.10.20.6.2.8 (open)]

Table 482: SOP Instance Observation Contexts

Contained By:	Contains:
Series Act (required) Text Observation (optional) Code Observations (optional) Quantity Measurement Observation (optional) Diagnostic Imaging Report (V3) (optional)	Purpose of Reference Observation Referenced Frames Observation

A SOP Instance Observation contains the DICOM Service Object Pair (SOP) Instance information for referenced DICOM composite objects. The SOP Instance act class is used to reference both image and non-image DICOM instances. The text attribute contains the DICOM WADO reference.

Table 483: SOP Instance Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.8)					
@classCode	1..1	SHALL		81-9240	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = DGIMG
@moodCode	1..1	SHALL		81-9241	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
id	1..*	SHALL		81-9242	
code	1..1	SHALL		81-9244	
@code	1..1	SHALL		81-19225	
@codeSystem	1..1	SHALL		81-19227	1.2.840.10008.2.6.1
text	0..1	SHOULD		81-9246	
@mediaType	1..1	SHALL		81-9247	application/dicom
reference	1..1	SHALL		81-9248	
effectiveTime	0..1	SHOULD		81-9250	
@value	1..1	SHALL		81-9251	
low	0..0	SHALL NOT		81-9252	
high	0..0	SHALL NOT		81-9253	
entryRelationship	0..*	MAY		81-9254	
@typeCode	1..1	SHALL		81-9255	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
entryRelationship	0..*	MAY		81-9257	
@typeCode	1..1	SHALL		81-9258	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		81-15935	Purpose of Reference Observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.9)
entryRelationship	0..*	MAY		81-9260	
@typeCode	1..1	SHALL		81-	urn:oid:2.16.840.1.113883.5.100

				9261	2 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		81-15936	Referenced Frames Observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.10)

1. **SHALL** contain exactly one [1..1] **@classCode**="DGIMG" Diagnostic Image (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-9240).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-9241).

The **@root** contains an OID representing the DICOM SOP Instance UID

3. **SHALL** contain at least one [1..*] **id** (CONF:81-9242).
4. **SHALL** contain exactly one [1..1] **code** (CONF:81-9244).
 - a. This code **SHALL** contain exactly one [1..1] **@code** (CONF:81-19225).
 - i. **@code** is an OID for a valid SOP class name UID (CONF:81-19226).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="1.2.840.10008.2.6.1" DCMUID (CONF:81-19227).
5. **SHOULD** contain zero or one [0..1] **text** (CONF:81-9246).
 - a. The text, if present, **SHALL** contain exactly one [1..1] **@mediaType**="application/dicom" (CONF:81-9247).
 - b. The text, if present, **SHALL** contain exactly one [1..1] **reference** (CONF:81-9248).
 - i. **SHALL** contain a **@value** that contains a WADO reference as a URI (CONF:81-9249).
6. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:81-9250).
 - a. The **effectiveTime**, if present, **SHALL** contain exactly one [1..1] **@value** (CONF:81-9251).
 - b. The **effectiveTime**, if present, **SHALL NOT** contain [0..0] **low** (CONF:81-9252).
 - c. The **effectiveTime**, if present, **SHALL NOT** contain [0..0] **high** (CONF:81-9253).
7. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:81-9254) 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:81-9255).
8. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:81-9257) 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:81-9258).
 - b. **SHALL** contain exactly one [1..1] [Purpose of Reference Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.9) (CONF:81-15935).
9. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:81-9260) 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:81-9261).

- b. **SHALL** contain exactly one [1..1] [Referenced Frames Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.10) (CONF:81-15936).
- c. This entryRelationship **SHALL** be present if the referenced DICOM object is a multiframe object and the reference does not apply to all frames (CONF:81-9263).

Figure 222: SOP Instance Observation Example

```

<observation classCode="DGIMG" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.6.2.8"/>
  <id root="1.2.840.113619.2.62.994044785528.20060823.200608232232322.3"/>
  <code code="1.2.840.10008.5.1.4.1.1.1"
codeSystem="1.2.840.10008.2.6.1" codeSystemName="DCMUID"
displayName="Computed Radiography Image Storage"></code>
  <text mediaType="application/dicom">
    <reference
value="http://www.example.org/wado?requestType=WADO&studyUID=1.2.840.113619.2.62.994044
785528.114289542805&seriesUID=1.2.840.113619.2.62.994044785528.20060823223142485051&
;objectUID=1.2.840.113619.2.62.994044785528.20060823.200608232232322.3&contentType=appl
ication/dicom"/>
    <!--reference to image 1 (PA) -->
  </text>
  <effectiveTime value="200608231235-0800"/>
</observation>

```

3.103 Study Act

[act: identifier urn:oid:2.16.840.1.113883.10.20.6.2.6 (open)]

Table 484: Study Act Contexts

Contained By:	Contains:
DICOM Object Catalog Section - DCM 121181 (required)	Series Act

A Study Act contains the DICOM study information that defines the characteristics of a referenced medical study performed on a patient. A study is a collection of one or more series of medical images, presentation states, SR documents, overlays, and/or curves that are logically related for the purpose of diagnosing a patient. Each study is associated with exactly one patient. A study may include composite instances that are created by a single modality, multiple modalities, or by multiple devices of the same modality. The study information is modality-independent. Study Act clinical statements are only instantiated in the DICOM Object Catalog section; in other sections, the SOP Instance Observation is included directly.

Table 485: Study Act Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.6)					
@classCode	1..1	SHALL		81-9207	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		81-9208	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		81-9209	
@root	1..1	SHALL		81-10533	2.16.840.1.113883.10.20.6.2.6
id	1..*	SHALL		81-9210	
@root	1..1	SHALL		81-9213	
@extension	0..0	SHALL NOT		81-9211	
code	1..1	SHALL		81-19172	
@code	1..1	SHALL		81-19173	113014
@codeSystem	1..1	SHALL		81-26506	urn:oid:1.2.840.10008.2.16.4 (DCM) = 1.2.840.10008.2.16.4
text	0..1	MAY		81-9215	
reference	0..1	SHOULD		81-15995	
@value	0..1	SHOULD		81-15996	
effectiveTime	0..1	SHOULD		81-9216	
entryRelationship	1..*	SHALL		81-9219	
@typeCode	1..1	SHALL		81-9220	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
act	1..1	SHALL		81-15937	Series Act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.63)

1. **SHALL** contain exactly one [1..1] **@classCode="ACT"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-9207).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-9208).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-9209) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.6.2.6" (CONF:81-10533).
- 4. **SHALL** contain at least one [1..*] **id** (CONF:81-9210).

The **@root** contains the OID of the study instance UID since DICOM study ids consist only of an OID

- a. Such ids **SHALL** contain exactly one [1..1] **@root** (CONF:81-9213).
- b. Such ids **SHALL NOT** contain [0..0] **@extension** (CONF:81-9211).
- 5. **SHALL** contain exactly one [1..1] **code** (CONF:81-19172).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="113014" (CONF:81-19173).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="1.2.840.10008.2.16.4" (CodeSystem: DCM urn:oid:1.2.840.10008.2.16.4) (CONF:81-26506).

If present, the text element contains the description of the study.

- 6. **MAY** contain zero or one [0..1] **text** (CONF:81-9215).
 - a. The text, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:81-15995).
 - i. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:81-15996).
 - 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:81-15997).

If present, the **effectiveTime** contains the time the study was started

- 7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:81-9216).
- 8. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:81-9219) 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:81-9220).
 - b. **SHALL** contain exactly one [1..1] Series Act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.63) (CONF:81-15937).

Figure 223: Study Act Example

```

<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.6.2.6"/>
  <id root="1.2.840.113619.2.62.994044785528.114289542805"/>
  <code code="113014" codeSystem="1.2.840.10008.2.16.4" codeSystemName="DCM"
  displayName="Study"/>
  <!-- **** Series ****-->
  <entryRelationship typeCode="COMP">
    <act classCode="ACT" moodCode="EVN">
      .
      .
      .
    </act>
  </entryRelationship>
</act>

```

3.104 Substance Administered Act

[act: identifier urn:oid:2.16.840.1.113883.10.20.22.4.118 (open)]

Table 486: Substance Administered Act Contexts

Contained By:	Contains:
Medication Activity (V2) (optional) Immunization Activity (V3) (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 487: 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 224: Substance Administered Act Example

```

<substanceAdministration classCode="SBADM" moodCode="EVN">
  ...
  <consumable>
    ...
    <code code="43" codeSystem="2.16.840.1.113883.6.59" displayName="Hepatitis B
Vaccine" codeSystemName="CVX" />
  </consumable>
  <entryRelationship typeCode="COMP">
    <!-- This entryRelationship sequenceNumber indicates this is #2 in the series -->
    <sequenceNumber value="2" />
    <act classCode="ACT" moodCode="EVN">
      <!-- Substance Administered Act Template -->
      <templateId root="2.16.840.1.113883.10.20.22.4.118" />
      <id root="df8908d0-40f2-11e3-aa6e-0800200c9a66" />
      <code code="416118004" displayName="administration"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED-CT" />
      <statusCode code="completed" />
      <effectiveTime value="19991101" />
    </act>
  </entryRelationship>
  ...
</substanceAdministration>

```

3.105 Substance or Device Allergy - Intolerance Observation (V2) **[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.24.3.90:2014-06-09 (open)]**

Table 488: Substance or Device Allergy - Intolerance Observation (V2) Contexts

Contained By:	Contains:
Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional)	Allergy Status Observation (DEPRECATED) Author Participation Reaction Observation (V2) Severity Observation (V2)

This template reflects a discrete observation about a patient's allergy or intolerance to a substance or device. 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 penicillin allergy that developed five years ago, the effectiveTime is five years ago.

The effectiveTime of the Substance or Device Allergy - Intolerance Observation is the definitive indication of whether or not the underlying allergy/intolerance is resolved. If 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 489: Substance or Device Allergy - Intolerance Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.90:2014-06-09)					
@classCode	1..1	SHALL		1098-16303	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-16304	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-16305	
@root	1..1	SHALL		1098-16306	2.16.840.1.113883.10.20.24.3.90
@extension	1..1	SHALL		1098-32527	2014-06-09
id	1..*	SHALL		1098-16307	
code	1..1	SHALL		1098-16345	
@code	1..1	SHALL		1098-16346	ASSERTION
@codeSystem	1..1	SHALL		1098-32171	urn:oid:2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		1098-16308	
@code	1..1	SHALL		1098-26354	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-16309	
low	1..1	SHALL		1098-31536	
high	0..1	MAY		1098-31537	
value	1..1	SHALL	CD	1098-16312	
@code	1..1	SHALL	CS	1098-16317	urn:oid:2.16.840.1.113883.3.88.12.3221.6.2 (Allergy and Intolerance Type)
author	0..*	SHOULD		1098-31144	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
participant	0..*	SHOULD		1098-16318	
@typeCode	1..1	SHALL		1098-16319	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM
participantRole	1..1	SHALL		1098-16320	

@classCode	1..1	SHALL		1098-16321	urn:oid:2.16.840.1.113883.5.110 (RoleClass) = MANU
playingEntity	1..1	SHALL		1098-16322	
@classCode	1..1	SHALL		1098-16323	urn:oid:2.16.840.1.113883.5.41 (EntityClass) = MMAT
code	1..1	SHALL		1098-16324	urn:oid:2.16.840.1.113762.1.4.1010.1 (Substance-Reactant for Intolerance)
entryRelationship	0..1	MAY		1098-16333	
@typeCode	1..1	SHALL		1098-16335	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1098-16334	true
observation	1..1	SHALL		1098-16336	Allergy Status Observation (DEPRECATED) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.28:2014-06-09)
entryRelationship	0..*	SHOULD		1098-16337	
@typeCode	1..1	SHALL		1098-16339	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = MFST
@inversionInd	1..1	SHALL		1098-16338	true
observation	1..1	SHALL		1098-16340	Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09)
entryRelationship	0..1	MAY		1098-16341	
@typeCode	1..1	SHALL		1098-16342	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1098-16343	true
observation	1..1	SHALL		1098-16344	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:1098-16303).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-16304).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1098-16305) such that it

- a. **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.10.20.24.3.90"` (CONF:1098-16306).
- b. **SHALL** contain exactly one [1..1] `@extension="2014-06-09"` (CONF:1098-32527).
- 4. **SHALL** contain at least one [1..*] `id` (CONF:1098-16307).
- 5. **SHALL** contain exactly one [1..1] `code` (CONF:1098-16345).
 - a. This code **SHALL** contain exactly one [1..1] `@code="ASSERTION"` Assertion (CONF:1098-16346).
 - 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:1098-32171).
- 6. **SHALL** contain exactly one [1..1] `statusCode` (CONF:1098-16308).
 - a. This statusCode **SHALL** contain exactly one [1..1] `@code="completed"` Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-26354).
- 7. **SHALL** contain exactly one [1..1] `effectiveTime` (CONF:1098-16309).
 Note: The effectiveTime/low (a.k.a. "onset date") asserts when the allergy/intolerance became biologically active. The effectiveTime/high (a.k.a. "resolution date") asserts when the allergy/intolerance became biologically resolved.

If the allergy/intolerance 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'.

- a. This effectiveTime **SHALL** contain exactly one [1..1] `low` (CONF:1098-31536).
- b. This effectiveTime **MAY** contain zero or one [0..1] `high` (CONF:1098-31537).
- 8. **SHALL** contain exactly one [1..1] `value` with `@xsi:type="CD"` (CONF:1098-16312).
 - a. This value **SHALL** contain exactly one [1..1] `@code`, which **SHALL** be selected from ValueSet [Allergy and Intolerance Type](#) urn:oid:2.16.840.1.113883.3.88.12.3221.6.2 **DYNAMIC** (CONF:1098-16317).
 Note: Many systems will simply assign a fixed value here (e.g., "allergy to substance").
- 9. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31144).
- 10. **SHOULD** contain zero or more [0..*] `participant` (CONF:1098-16318) such that it
 - a. **SHALL** contain exactly one [1..1] `@typeCode="CSM"` Consumable (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-16319).
 - b. **SHALL** contain exactly one [1..1] `participantRole` (CONF:1098-16320).
 - i. This participantRole **SHALL** contain exactly one [1..1] `@classCode="MANU"` Manufactured Product (CodeSystem: RoleClass urn:oid:2.16.840.1.113883.5.110 **STATIC**) (CONF:1098-16321).
 - ii. This participantRole **SHALL** contain exactly one [1..1] `playingEntity` (CONF:1098-16322).
 - 1. This playingEntity **SHALL** contain exactly one [1..1] `@classCode="MMAT"` Manufactured Material (CodeSystem:

EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**
(CONF:1098-16323).

2. This playingEntity **SHALL** contain exactly one [1..1] **code**, which **MAY** be selected from ValueSet Substance-Reactant for Intolerance urn:oid:2.16.840.1.113762.1.4.1010.1 **DYNAMIC** (CONF:1098-16324).
11. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-16333) 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:1098-16335).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1098-16334).
 - c. **SHALL** contain exactly one [1..1] Allergy Status Observation (DEPRECATED) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.28:2014-06-09) (CONF:1098-16336).
12. **SHOULD** contain zero or more [0..*] **entryRelationship** (CONF:1098-16337) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="MFST"** Is Manifestation of (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-16339).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1098-16338).
 - c. **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:1098-16340).
13. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-16341) 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:1098-16342).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1098-16343).
 - 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:1098-16344).

Table 490: Allergy and Intolerance Type

Value Set: Allergy and Intolerance Type urn:oid:2.16.840.1.113883.3.88.12.3221.6.2			
This value set includes concepts that represent a type of adverse sensitivity, allergy or intolerance.			
Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
419199007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Allergy to substance (disorder)
416098002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Drug allergy (disorder)
59037007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Drug intolerance (disorder)
414285001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Food allergy (disorder)
235719002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Food intolerance (disorder)
420134006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Propensity to adverse reactions (disorder)
419511003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Propensity to adverse reactions to drug (disorder)
418471000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Propensity to adverse reactions to food (disorder)
418038007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Propensity to adverse reactions to substance (disorder)
232347008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Dander (animal) allergy
...			

Table 491: Substance-Reactant for Intolerance

Value Set: Substance-Reactant for Intolerance urn:oid:2.16.840.1.113762.1.4.1010.1
 A substance or other type of agent (e.g., sunshine) that may be associated with an intolerance reaction event or a propensity to such an event. These concepts are expected to be at a more general level of abstraction (ingredients versus more specific formulations). This value set is quite general and includes concepts that may never cause an adverse 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 available code systems in the following priority order: NDFRT, then RXNORM, then UNII, then SNOMED CT. This overarching grouping value set is intended to support identification of drug classes, individual medication ingredients, foods, general substances and environmental entities.
 Value set intensionally defined as a GROUPING made up of:
 Value Set: Medication Drug Class (2.16.840.1.113883.3.88.12.80.18) (NDFRT drug class codes); Value Set: Clinical Drug Ingredient (2.16.840.1.113762.1.4.1010.7) (RxNORM ingredient codes); Value Set: Unique Ingredient Identifier - Complete Set (2.16.840.1.113883.3.88.12.80.20) (UNII ingredient codes); Value Set: Substance Other Than Clinical Drug (2.16.840.1.113762.1.4.1010.9) (SNOMED CT substance codes).
 Value Set Source: <http://www.hl7.org>

Code	Code System	Code System OID	Print Name
18867	RxNorm	urn:oid:2.16.840.1.113883.6.88	benazepril
196500	RxNorm	urn:oid:2.16.840.1.113883.6.88	Coversyl
83515	RxNorm	urn:oid:2.16.840.1.113883.6.88	eprosartan
237057	RxNorm	urn:oid:2.16.840.1.113883.6.88	lepirudin
C24814	NDFRT	urn:oid:2.16.840.1.113883.3.3.26.1.5	Acyclovir
N0000168624	NDFRT	urn:oid:2.16.840.1.113883.3.3.26.1.5	Azacosterol
N0000006690	NDFRT	urn:oid:2.16.840.1.113883.3.3.26.1.5	Soybean Oil
QE1QX6B99R	Unique Ingredient Identifier (UNII)	urn:oid:2.16.840.1.113883.4.9	PEANUT
...			

3.105.1 Allergy - Intolerance Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.7:2014-06-09
(open)]

Table 492: Allergy - Intolerance Observation (V2) Contexts

Contained By:	Contains:
Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional) Allergy Concern Act (V3) (required)	Author Participation Criticality Observation Reaction Observation (V2) Severity Observation (V2)

This template reflects a discrete observation about a patient's allergy or intolerance. 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 penicillin allergy that developed five years ago, the effectiveTime is five years ago.

The effectiveTime of the Allergy - Intolerance Observation is the definitive indication of whether or not the underlying allergy/intolerance is resolved. If 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".

The agent responsible for an allergy or adverse reaction is not always a manufactured material (for example, food allergies), nor is it necessarily consumed. The following constraints reflect limitations in the base CDA R2 specification, and should be used to represent any type of responsible agent, i.e., use playingEntity classCode = "MMAT" for all agents, manufactured or not.

Table 493: Allergy - Intolerance Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.7:2014-06-09)					
@classCode	1..1	SHALL		1098-7379	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-7380	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
@negationInd	0..1	MAY		1098-31526	
templateId	1..1	SHALL		1098-7381	
@root	1..1	SHALL		1098-10488	2.16.840.1.113883.10.20.22.4.7
@extension	1..1	SHALL		1098-32526	2014-06-09
id	1..*	SHALL		1098-7382	
code	1..1	SHALL		1098-15947	
@code	1..1	SHALL		1098-15948	ASSERTION
@codeSystem	1..1	SHALL		1098-32153	urn:oid:2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		1098-19084	
@code	1..1	SHALL		1098-19085	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-7387	
low	1..1	SHALL		1098-31538	
high	0..1	MAY		1098-31539	
value	1..1	SHALL	CD	1098-7390	urn:oid:2.16.840.1.113883.3.88.12.3221.6.2 (Allergy and Intolerance Type)
author	0..*	SHOULD		1098-31143	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
participant	1..1	SHALL		1098-7402	
@typeCode	1..1	SHALL		1098-7403	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM
participantRole	1..1	SHALL		1098-7404	

@classCode	1..1	SHALL		1098-7405	urn:oid:2.16.840.1.113883.5.110 (RoleClass) = MANU
playingEntity	1..1	SHALL		1098-7406	
@classCode	1..1	SHALL		1098-7407	urn:oid:2.16.840.1.113883.5.41 (EntityClass) = MMAT
code	1..1	SHALL		1098-7419	urn:oid:2.16.840.1.113762.1.4.1010.1 (Substance-Reactant for Intolerance)
entryRelationship	0..*	SHOULD		1098-7447	
@typeCode	1..1	SHALL		1098-7907	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = MFST
@inversionInd	1..1	SHALL		1098-7449	true
observation	1..1	SHALL		1098-15955	Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09)
entryRelationship	0..1	SHOULD NOT		1098-9961	
@typeCode	1..1	SHALL		1098-9962	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1098-9964	true
observation	1..1	SHALL		1098-15956	Severity Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09)
entryRelationship	0..1	SHOULD		1098-32910	
@typeCode	1..1	SHALL		1098-32911	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	0..1	SHALL		1098-32912	true
observation	1..1	SHALL		1098-32913	Criticality Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.145)

1. Conforms to [Substance or Device Allergy - Intolerance Observation \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.24.3.90:2014-06-09).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7379).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-7380).

4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:1098-31526).
Note: Use negationInd="true" to indicate that the allergy was not observed.
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7381) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.7"** (CONF:1098-10488).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32526).
6. **SHALL** contain at least one [1..*] **id** (CONF:1098-7382).
7. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15947).
 - a. This code **SHALL** contain exactly one [1..1] **@code="ASSERTION"** Assertion (CONF:1098-15948).
 - 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:1098-32153).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-19084).
 - 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:1098-19085).
9. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-7387).
Note: If the allergy/intolerance 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'.
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1098-31538).
Note: The effectiveTime/low (a.k.a. "onset date") asserts when the allergy/intolerance became biologically active.
 - b. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:1098-31539).
Note: The effectiveTime/high (a.k.a. "resolution date") asserts when the allergy/intolerance became biologically resolved.
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"**, where the code **SHALL** be selected from ValueSet [Allergy and Intolerance Type](#) urn:oid:2.16.840.1.113883.3.88.12.3221.6.2 **DYNAMIC** (CONF:1098-7390).
Note: The consumable participant points to the precise allergen or substance of intolerance. Because the consumable and the reaction are more clinically relevant than a categorization of the allergy/adverse event type, many systems will simply assign a fixed value here (e.g., "allergy to substance").
11. **SHOULD** contain zero or more [0..*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31143).
12. **SHALL** contain exactly one [1..1] **participant** (CONF:1098-7402) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="CSM"** Consumable (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-7403).
 - b. **SHALL** contain exactly one [1..1] **participantRole** (CONF:1098-7404).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode="MANU"** Manufactured Product (CodeSystem: RoleClass urn:oid:2.16.840.1.113883.5.110 **STATIC**) (CONF:1098-7405).

- ii. This participantRole **SHALL** contain exactly one [1..1] **playingEntity** (CONF:1098-7406).
 - 1. This playingEntity **SHALL** contain exactly one [1..1] **@classCode="MMAT" Manufactured Material (CodeSystem: EntityClass urn:oid:2.16.840.1.113883.5.41 STATIC)** (CONF:1098-7407).
 - 2. This playingEntity **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet **Substance-Reactant for Intolerance** urn:oid:2.16.840.1.113762.1.4.1010.1 **DYNAMIC** (CONF:1098-7419).
- 13. **SHOULD** contain zero or more [0..*] **entryRelationship** (CONF:1098-7447) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="MFST" Is Manifestation of (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC)** (CONF:1098-7907).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true" True** (CONF:1098-7449).
 - c. **SHALL** contain exactly one [1..1] **Reaction Observation (V2)** (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09) (CONF:1098-15955).
- 14. **SHOULD NOT** contain zero or one [0..1] **entryRelationship** (CONF:1098-9961) 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:1098-9962).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true" True** (CONF:1098-9964).
 - c. **SHALL** contain exactly one [1..1] **Severity Observation (V2)** (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.8:2014-06-09) (CONF:1098-15956).
- 15. **SHOULD** contain zero or one [0..1] **entryRelationship** (CONF:1098-32910) 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:1098-32911)**.
 - b. **SHALL** contain zero or one [0..1] **@inversionInd="true" True** (CONF:1098-32912).
 - c. **SHALL** contain exactly one [1..1] **Criticality Observation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.145) (CONF:1098-32913).

Figure 225: Allergy - Intolerance Observation (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- ** Allergy observation ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.7" extension="2014-06-09" />
  <id root="901db0f8-9355-4794-81cd-fd951ef07917" />
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
  <!-- Observation statusCode represents the status of the act of observing -->
  <statusCode code="completed" />
  <effectiveTime>
    <!-- The low value reflects the date of onset of the allergy -->
    <low nullFlavor="UNK" />
    <!-- The high value reflects when the allergy was known to be resolved
        (and will generally be absent) -->
  </effectiveTime>
  <value xsi:type="CD" code="419199007" displayName="Allergy to substance"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" />
  <author>
    <time value="201010110915-0800" />
    <assignedAuthor>
      <id extension="222223333" root="1.1.1.1.1.1.1.3" />
    </assignedAuthor>
  </author>
  <participant typeCode="CSM">
    <participantRole classCode="MANU">
      <playingEntity classCode="MMAT">
        <code code="2670" displayName="Codeine" codeSystem="2.16.840.1.113883.6.88"
codeSystemName="RxNorm" />
      </playingEntity>
    </participantRole>
  </participant>
  <entryRelationship typeCode="MFST" inversionInd="true">
    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Reaction observation ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.9" extension="2014-06-09" />
      <id root="38c63dea-1a43-4f84-ab71-1ffd04f6aldd" />
      <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
      <text>
        <reference value="#reaction2" />
      </text>
      <statusCode code="completed" />
      <effectiveTime>
        <low nullFlavor="UNK" />
      </effectiveTime>
      <value xsi:type="CD" code="56018004" displayName="Wheezing"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" />
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Severity observation ** -->
      <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="#allergyseverity2" />
      </text>
    </observation>
  </entryRelationship>
</observation>
```

```

        <statusCode code="completed" />
        <value xsi:type="CD" code="255604002" displayName="Mild"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" />
    </observation>
</entryRelationship>
</observation>

```

3.106 Text Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.6.2.12 (open)]

Table 494: Text Observation Contexts

Contained By:	Contains:
Diagnostic Imaging Report (V3) (optional)	Quantity Measurement Observation SOP Instance Observation

DICOM Template 2000 specifies that Imaging Report Elements of Value Type Text are contained in sections. The Imaging Report Elements are inferred from Basic Diagnostic Imaging Report Observations that consist of image references and measurements (linear, area, volume, and numeric). Text DICOM Imaging Report Elements in this context are mapped to CDA text observations that are section components and are related to the SOP Instance Observations (templateId 2.16.840.1.113883.10.20.6.2.8) or Quantity Measurement Observations (templateId 2.16.840.1.113883.10.20.6.2.14) by the SPRT (Support) act relationship.

A Text Observation is required if the findings in the section text are represented as inferred from SOP Instance Observations.

Table 495: Text Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.12)					
@classCode	1..1	SHALL		81-9288	urn:oid:2.16.840.1.113883.5.4 (ActCode) = OBS
@moodCode	1..1	SHALL		81-9289	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		81-9290	
@root	1..1	SHALL		81-10534	2.16.840.1.113883.10.20.6.2.12
code	1..1	SHALL		81-9291	
text	0..1	MAY		81-9295	
reference	0..1	SHOULD		81-15938	
@value	0..1	SHOULD		81-15939	
effectiveTime	0..1	SHOULD		81-9294	
value	1..1	SHALL	ED	81-9292	
entryRelationship	0..*	MAY		81-9298	
@typeCode	1..1	SHALL		81-9299	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SPRT
observation	1..1	SHALL		81-15941	SOP Instance Observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.8)
entryRelationship	0..*	MAY		81-9301	
@typeCode	1..1	SHALL		81-9302	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SPRT
observation	1..1	SHALL		81-15942	Quantity Measurement Observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.14)

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: ActCode urn:oid:2.16.840.1.113883.5.4 **STATIC**) (CONF:81-9288).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-9289).

3. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-9290) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.6.2.12"** (CONF:81-10534).
4. **SHALL** contain exactly one [1..1] **code** (CONF:81-9291).
5. **MAY** contain zero or one [0..1] **text** (CONF:81-9295).
 - a. The text, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:81-15938).
 - i. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:81-15939).
 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:81-15940).
6. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:81-9294).
7. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="ED"** (CONF:81-9292).
8. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:81-9298) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SPRT"** Has Support (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:81-9299).
 - b. **SHALL** contain exactly one [1..1] [SOP Instance Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.8) (CONF:81-15941).
9. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:81-9301) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SPRT"** Has Support (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:81-9302).
 - b. **SHALL** contain exactly one [1..1] [Quantity Measurement Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.14) (CONF:81-15942).

Figure 226: Text Observation Example

```

<text>
  <paragraph>
    <caption>Finding</caption>
    <content ID="Fndng2">The cardiomediastinum is within normal limits. The trachea is
midline. The previously described opacity at the medial right lung base has cleared. There
are no new infiltrates. There is a new round density at the left hilus, superiorly
(diameter about 45mm). A CT scan is recommended for further evaluation. The pleural spaces
are clear. The visualized musculoskeletal structures and the upper abdomen are stable and
unremarkable.</content>
  </paragraph>
  ...
</text>
<entry>
  <observation classCode="OBS" moodCode="EVN">
    <!-- Text Observation -->
    <templateId root="2.16.840.1.113883.10.20.6.2.12"/>
    <code code="121071" codeSystem="1.2.840.10008.2.16.4"
      codeSystemName="DCM" displayName="Finding"/>
    <value xsi:type="ED">
      <reference value="#Fndng2"/>
    </value>
    ...

    <!-- entryRelationships to SOP Instance Observations and Quantity
      Measurement Observations may go here -->
  </observation>
</entry>

```

3.107 Tobacco Use (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09 (open)]

Table 496: Tobacco Use (V2) Contexts

Contained By:	Contains:
Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional) Social History 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 497: 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 498: 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: http://vts1.vetmed.vt.edu/TerminologyMgt/RF2Browser/ISA.cfm?SCT_ConceptID=365980008			
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 227: 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>

```

3.108 Vital Sign Observation (V2)

[observation: identifier urn:h17ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09 (open)]

Table 499: Vital Sign Observation (V2) Contexts

Contained By:	Contains:
Vital Signs Organizer (V3) (required) Health Concern Act (V2) (optional) Risk Concern Act (V2) (optional)	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

Name	Unit
BMI	kg/m2
BSA	m2

Table 500: 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 501: 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. Specific URL Pending			
Value Set Source: http://www.loinc.org/			
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 228: 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>

```

3.109 Vital Signs Organizer (V3)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2015-08-01
(open)]

Table 502: Vital Signs Organizer (V3) Contexts

Contained By:	Contains:
Vital Signs Section (entries optional) (V3) (optional)	Author Participation
Vital Signs Section (entries required) (V3) (required)	Vital Sign Observation (V2)

This template provides a mechanism for grouping vital signs (e.g., grouping systolic blood pressure and diastolic blood pressure).

Table 503: Vital Signs Organizer (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.26:2015-08-01)					
@classCode	1..1	SHALL		1198-7279	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		1198-7280	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1198-7281	
@root	1..1	SHALL		1198-10528	2.16.840.1.113883.10.20.22.4.26
@extension	1..1	SHALL		1198-32582	2015-08-01
id	1..*	SHALL		1198-7282	
code	1..1	SHALL		1198-32740	
@code	1..1	SHALL		1198-32741	46680005
@codeSystem	1..1	SHALL		1198-32742	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
translation	1..1	SHALL		1198-32743	
@code	1..1	SHALL		1198-32744	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 74728-7
@codeSystem	1..1	SHALL		1198-32746	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1198-7284	
@code	1..1	SHALL		1198-19120	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1198-7288	
author	0..*	SHOULD		1198-31153	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)
component	1..*	SHALL		1198-7285	
observation	1..1	SHALL		1198-15946	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:1198-7279).

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-7280).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7281) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.26" (CONF:1198-10528).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32582).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-7282).

Compatibility support for C-CDA R1.1 and C-CDA 2.1: A vitals organizer conformant to both C-CDA 1.1 and C-CDA 2.1 would contain the SNOMED code (46680005) from R1.1 in the root code and a LOINC code in the translation. A vitals organizer conformant to only C-CDA 2.1 would only contain the LOINC code in the root code.

5. **SHALL** contain exactly one [1..1] **code** (CONF:1198-32740).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="46680005" Vital Signs (CONF:1198-32741).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" SNOMED CT (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:1198-32742).
 - c. This code **SHALL** contain exactly one [1..1] **translation** (CONF:1198-32743) such that it
 - i. **SHALL** contain exactly one [1..1] **@code**="74728-7" Vital signs, weight, height, head circumference, oximetry, BMI, and BSA panel - HL7.CCDAr1.1 (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1198-32744).
 - ii. **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:1198-32746).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-7284).
 - 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:1198-19120).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-7288).
 Note: The effectiveTime is an interval that spans the effectiveTimes of the contained vital signs observations.
8. **SHOULD** contain zero or more [0..*] **Author Participation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-31153).
9. **SHALL** contain at least one [1..*] **component** (CONF:1198-7285) such that it
 - a. **SHALL** contain exactly one [1..1] **Vital Sign Observation (V2)** (identifier: urn:h17ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09) (CONF:1198-15946).

Figure 229: Vital Signs Organizer (V3) Example

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <!-- ** Vital signs organizer ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.26" extension="2015-08-01" />
  <id root="24f6ad18-c512-40fc-82bd-1e131aa9e52b" />
  <code code="46680005" displayName="Vital Signs"
        codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED
CT">
    <translation code="74728-7"
      displayName="Vital signs, weight, height, head
circumference, oximetry, BMI, and BSA panel "
      codeSystem="2.16.840.1.113883.6.1"
      codeSystemName="LOINC"></translation>
    </code>
  <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>
```


3.110 Wound Characteristic

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.134 (open)]

Table 504: Wound Characteristic Contexts

Contained By:	Contains:
Longitudinal Care Wound Observation (V2) (optional)	

This template represents characteristics of a wound (e.g., integrity of suture line, odor, erythema).

Table 505: Wound Characteristic Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.134)					
@classCode	1..1	SHALL		1098-29938	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-29939	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-29940	
@root	1..1	SHALL		1098-29941	2.16.840.1.113883.10.20.22.4.134
id	1..*	SHALL		1098-29942	
code	1..1	SHALL		1098-29943	
@code	1..1	SHALL		1098-31540	ASSERTION
@codeSystem	1..1	SHALL		1098-31541	urn:oid:2.16.840.1.113883.5.4 (ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		1098-29944	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-29946	
value	1..1	SHALL	CD	1098-29947	urn:oid:2.16.840.1.113883.11.20.9.58 (Wound Characteristic)

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-29938).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-29939).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-29940) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.134"** (CONF:1098-29941).

4. **SHALL** contain at least one [1..*] **id** (CONF:1098-29942).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1098-29943).
 - a. This code **SHALL** contain exactly one [1..1] **@code="ASSERTION"** assertion (CONF:1098-31540).
 - 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:1098-31541).
6. **SHALL** contain exactly one [1..1] **statusCode="completed"** (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1098-29944).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-29946).
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"**, where the code **SHALL** be selected from ValueSet Wound Characteristic urn:oid:2.16.840.1.113883.11.20.9.58 **DYNAMIC** (CONF:1098-29947).

Table 506: Wound Characteristic

Value Set: Wound Characteristic urn:oid:2.16.840.1.113883.11.20.9.58			
A value set of SNOMED-CT codes primarily selected from codes descending from 225552003 "Wound finding".			
Specific URL Pending			
Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
239165001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Wound granuloma
239163008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Wound erythema
409590008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Skin eschar
449746002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Wound slough
445916002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Wound odor
239164002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Wound discharge
447547000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Offensive wound odor
271618001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Impaired wound healing
449744004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Induration of wound
298008006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Wound moist
...			

Figure 230: Wound Characteristic Example

```

<entryRelationship typeCode="COMP">
  <observation classCode="OBS" moodCode="EVN">
    <!-- Wound Characteristic -->
    <templateId root="2.16.840.1.113883.10.20.22.4.134" />
    <id root="763428a0-eb35-11e2-91e2-0700200c9a66" />
    <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
    <statusCode code="completed" />
    <effectiveTime value="20013103" />
    <value xsi:type="CD" code="447547000" displayName="Offensive wound odor"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED-CT" />
  </observation>
</entryRelationship>

```

3.111 Wound Measurement Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.22.4.133 (open)]

Table 507: Wound Measurement Observation Contexts

Contained By:	Contains:
Longitudinal Care Wound Observation (V2) (optional)	

This template represents the Wound Measurement Observations of wound width, depth and length.

Table 508: Wound Measurement Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.133)					
@classCode	1..1	SHALL		1098-29926	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-29927	urn:oid:2.16.840.1.113883.5.1001 (ActMood) = EVN
templateId	1..1	SHALL		1098-29928	
@root	1..1	SHALL		1098-29929	2.16.840.1.113883.10.20.22.4.133
id	1..*	SHALL		1098-29930	
code	1..1	SHALL		1098-29931	urn:oid:2.16.840.1.113883.1.11.20.2.5 (Wound Measurements)
statusCode	1..1	SHALL		1098-29933	
@code	1..1	SHALL		1098-29934	urn:oid:2.16.840.1.113883.5.14 (ActStatus) = completed
effectiveTime	1..1	SHALL		1098-29935	
value	1..1	SHALL	PQ	1098-29936	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-29926).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1098-29927).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-29928) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.133"** (CONF:1098-29929).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-29930).
5. **SHALL** contain exactly one [1..1] **code** (ValueSet: [Wound Measurements](#) urn:oid:2.16.840.1.113883.1.11.20.2.5 **DYNAMIC**) (CONF:1098-29931).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-29933).
 - 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:1098-29934).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-29935).
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="PQ"** (CONF:1098-29936).

Table 509: Wound Measurements

Value Set: Wound Measurements urn:oid:2.16.840.1.113883.1.11.20.2.5 A value set of SNOMED-CT codes to capture the dimensions of a wound.			
Specific URL Pending			
Value Set Source: https://vsac.nlm.nih.gov			
Code	Code System	Code System OID	Print Name
39125-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Width of Wound
39127-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Depth of Wound
39126-8	LOINC	urn:oid:2.16.840.1.113883.6.1	Length of Wound

Figure 231: Wound Measurement Observation Example

```
<entryRelationship typeCode="COMP">
  <observation classCode="OBS" moodCode="EVN">
    <!-- Wound Measurements Observation . -->
    <templateId root="2.16.840.1.113883.10.20.22.4.133" />
    <id root="d2b46280-eb34-11e2-91e2-0800200c9a66" />
    <code code="401238003" codeSystem="2.16.840.1.113883.6.96" displayName="Length of Wound" />
    <statusCode code="completed" />
    <effectiveTime value="20013103" />
    <value xsi:type="PQ" value="2" unit="[in_i]" />
  </observation>
</entryRelationship>
```

4 PARTICIPATION AND OTHER TEMPLATES

The participation and other templates chapter contains templates for CDA participations (e.g., author, performer), and other fielded items (e.g., address, name) that cannot stand on their own without being nested in another template .

4.1 Author Participation

[author: identifier urn:oid:2.16.840.1.113883.10.20.22.4.119 (open)]

Table 510: Author Participation Contexts

Contained By:	Contains:
<p>Sensory Status (optional) Self-Care Activities (ADL and IADL) (optional) Medication Activity (V2) (optional) Procedure Activity Act (V2) (optional) Procedure Activity Procedure (V2) (optional) Procedure Activity Observation (V2) (optional) Goal Observation (required) Allergy - Intolerance Observation (V2) (optional) Substance or Device Allergy - Intolerance Observation (V2) (optional) Nutrition Assessment (optional) Planned Act (V2) (optional) Planned Encounter (V2) (optional) Planned Procedure (V2) (optional) Planned Observation (V2) (optional) Planned Supply (V2) (optional) Planned Medication Activity (V2) (optional) Functional Status Observation (V2) (optional) Functional Status Organizer (V2) (optional) Handoff Communication Participants (required) Patient Referral Act (optional) Smoking Status - Meaningful Use (V2) (optional) Vital Sign Observation (V2) (optional) Priority Preference (optional) Tobacco Use (V2) (optional) Outcome Observation (optional) Planned Coverage (optional) Planned Immunization Activity (optional) Vital Signs Organizer (V3) (optional) Immunization Activity (V3) (optional) Result Observation (V3) (optional) Mental Status Observation (V3) (optional) Advance Directive Observation (V3) (optional) Problem Observation (V3) (optional) Social History Observation (V3) (optional) Health Concern Act (V2) (optional) Result Organizer (V3) (optional) Advance Directive Organizer (V2) (optional) Risk Concern Act (V2) (optional) Problem Concern Act (V3) (optional) Planned Intervention Act (V2) (optional) Longitudinal Care Wound Observation (V2) (optional)</p>	

Contained By:	Contains:
Intervention Act (V2) (optional) Allergy Concern Act (V3) (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 511: 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 232: 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 233: 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 Physician of Record Participant (V2)

[encounterParticipant: identifier
urn:hl7ii:2.16.840.1.113883.10.20.6.2.2:2014-06-09 (open)]

Table 512: Physician of Record Participant (V2) Contexts

Contained By:	Contains:
Diagnostic Imaging Report (V3) (optional)	US Realm Person Name (PN.US.FIELDDED)

This encounterParticipant is the attending physician and is usually different from the Physician Reading Study Performer defined in documentationOf/serviceEvent.

Table 513: Physician of Record Participant (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounterParticipant (identifier: urn:hl7ii:2.16.840.1.113883.10.20.6.2.2:2014-06-09)					
@typeCode	1..1	SHALL		1098-8881	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = ATND
templateId	1..1	SHALL		1098-16072	
@root	1..1	SHALL		1098-16073	2.16.840.1.113883.10.20.6.2.2
@extension	1..1	SHALL		1098-32586	2014-06-09
assignedEntity	1..1	SHALL		1098-8886	
id	1..*	SHALL		1098-8887	
code	1..1	SHALL		1098-8888	
assignedPerson	0..1	SHOULD		1098-30928	
name	1..1	SHALL		1098-30929	US Realm Person Name (PN.US.FIELDDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)
representedOrganization	0..1	MAY		1098-16074	
name	0..1	SHOULD		1098-16075	

1. **SHALL** contain exactly one [1..1] **@typeCode**="ATND" Attender (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-8881).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-16072) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.6.2.2" (CONF:1098-16073).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32586).
3. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-8886).
 - a. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1098-8887).
 - i. **SHOULD** contain zero or one [0..1] **id** such that **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1098-31203).
 - b. This assignedEntity **SHALL** contain exactly one [1..1] **code** (CONF:1098-8888).
 - i. **SHALL** contain a valid DICOM Organizational Role from DICOM CID 7452 (Value Set 1.2.840.10008.6.1.516) (**@codeSystem** is 1.2.840.10008.2.16.4) or an appropriate national health care provider coding system (e.g., NUCC in the U.S., where **@codeSystem** is

2.16.840.1.113883.6.101). Footnote: DICOM Part 16 (NEMA PS3.16), page 631 in the 2011 edition. See **Error! Hyperlink reference not valid.** (CONF:1098-8889).

- c. This assignedEntity **SHOULD** contain zero or one [0..1] **assignedPerson** (CONF:1098-30928).
 - i. The assignedPerson, if present, **SHALL** contain exactly one [1..1] **US Realm Person Name (PN.US.FIELDDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1098-30929).
- d. This assignedEntity **MAY** contain zero or one [0..1] **representedOrganization** (CONF:1098-16074).
 - i. The representedOrganization, if present, **SHOULD** contain zero or one [0..1] **name** (CONF:1098-16075).

Figure 234: Physician of Record Participant (V2) Example

```

<encounterParticipant typeCode="ATND">
  <templateId root="2.16.840.1.113883.10.20.6.2.2" extension="2014-06-09" />
  <assignedEntity>
    <id extension="44444444" root="2.16.840.1.113883.4.6" />
    <code code="208D00000X" codeSystem="2.16.840.1.113883.6.101" codeSystemName="NUCC"
    displayName="General Practice" />
    <addr nullFlavor="NI" />
    <telecom nullFlavor="NI" />
    <assignedPerson>
      <name>
        <prefix>Dr.</prefix>
        <given>Fay</given>
        <family>Family</family>
      </name>
    </assignedPerson>
  </assignedEntity>
</encounterParticipant>
  
```

4.3 Physician Reading Study Performer (V2)

[performer: identifier urn:hl7ii:2.16.840.1.113883.10.20.6.2.1:2014-06-09 (open)]

Table 514: Physician Reading Study Performer (V2) Contexts

Contained By:	Contains:
Diagnostic Imaging Report (V3) (optional)	US Realm Date and Time (DT.US.FIELDDED)

This participant is the Physician Reading Study Performer defined in documentationOf/serviceEvent. It is usually different from the attending physician. The reading physician interprets the images and evidence of the study (DICOM Definition).

Table 515: Physician Reading Study Performer (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
performer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.6.2.1:2014-06-09)					
@typeCode	1..1	SHALL		1098-8424	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PRF
templateId	1..1	SHALL		1098-30773	
@root	1..1	SHALL		1098-30774	2.16.840.1.113883.10.20.6.2.1
@extension	1..1	SHALL		1098-32564	2014-06-09
time	0..1	MAY		1098-8425	US Realm Date and Time (DT.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.3)
assignedEntity	1..1	SHALL		1098-8426	
id	1..*	SHALL		1098-10033	
code	1..1	SHALL		1098-8427	

1. **SHALL** contain exactly one [1..1] **@typeCode="PRF"** Performer (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8424).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-30773).
 - a. This templateId **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.6.2.1"** (CONF:1098-30774).
 - b. This templateId **SHALL** contain exactly one [1..1] **@extension="2014-06-09"** (CONF:1098-32564).
3. **MAY** contain zero or one [0..1] [US Realm Date and Time \(DT.US.FIELDED\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.3) (CONF:1098-8425).
4. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1098-8426).
 - a. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1098-10033).
 - b. This assignedEntity **SHALL** contain exactly one [1..1] **code** (CONF:1098-8427).
 - i. **SHALL** contain a valid DICOM personal identification code sequence (@codeSystem is 1.2.840.10008.2.16.4) or an appropriate national health care provider coding system (e.g., NUCC in the U.S., where @codeSystem is 2.16.840.1.113883.6.101) (CONF:1098-8428).
 - c. Every assignedEntity element **SHALL** contain at least one [1..*] assignedPerson or representedOrganization (CONF:1098-8429).
 - d. The id **SHOULD** include zero or one [0..1] **id** where id/@root="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1098-32135).

Figure 235: Physician Reading Study Performer (V2) Example

```

<performer typeCode="PRF">
  <templateId root="2.16.840.1.113883.10.20.6.2.1" extension="2014-06-09" />
  <assignedEntity>
    <id extension="111111111" root="2.16.840.1.113883.4.6" />
    <code code="2085R0202X" codeSystem="2.16.840.1.113883.6.101" codeSystemName="NUCC"
displayName="Diagnostic Radiology" />
    <addr nullFlavor="NI" />
    <telecom nullFlavor="NI" />
    <assignedPerson>
      <name>
        <given>Christine</given>
        <family>Cure</family>
        <suffix>MD</suffix>
      </name>
    </assignedPerson>
  </assignedEntity>
</performer>

```

4.4 US Realm Address (AD.US.FIELDED)

[addr: identifier urn:oid:2.16.840.1.113883.10.20.22.5.2 (open)]

Table 516: US Realm Address (AD.US.FIELDED) Contexts

Contained By:	Contains:
Medication Dispense (V2) (optional) Advance Directive Observation (V3) (optional) Policy Activity (V3) (optional) US Realm Header (V3) (required)	

Reusable address template, for use in US Realm CDA Header.

Table 517: US Realm Address (AD.US.FIELDDED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
addr (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)					
@use	0..1	SHOULD		81-7290	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 518: 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:			
http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
BAD	AddressUse	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 519: 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 236: 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>

```

4.5 US Realm Date and Time (DT.US.FIELDED)

[effectiveTime: identifier urn:oid:2.16.840.1.113883.10.20.22.5.3 (open)]

Table 520: US Realm Date and Time (DT.US.FIELDED) Contexts

Contained By:	Contains:
Physician Reading Study Performer (V2) (optional) Consultation Note (V3) (required) History and Physical (V3) (required) Progress Note (V3) (required) Procedure Note (V3) (required) Operative Note (V3) (required) Diagnostic Imaging Report (V3) (optional)	

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 (DTM.US.FIELDED), but is used with elements having a datatype of IVL_TS.

Table 521: US Realm Date and Time (DT.US.FIELDED) Constraints Overview

X P a t h	Card.	Verb	Data Type	CONF#	Value
effectiveTime	(identifier: urn:oid:2.16.840.1.113883.10.20.22.5.3)				

1. **SHALL** be precise to the day (CONF:81-10078).
2. **SHOULD** be precise to the minute (CONF:81-10079).
3. **MAY** be precise to the second (CONF:81-10080).
4. If more precise than day, **SHOULD** include time-zone offset (CONF:81-10081).

4.6 US Realm Date and Time (DTM.US.FIELDED)

[effectiveTime: identifier urn:oid:2.16.840.1.113883.10.20.22.5.4 (open)]

Table 522: US Realm Date and Time (DTM.US.FIELDED) Contexts

Contained By:	Contains:
US Realm Header (V3) (required)	

The US Realm Clinical Document Date and Time datatype flavor records date and time information. If no time zone offset is provided, you can make no assumption about time, unless you have made a local exchange agreement.

This data type uses the same rules as US Realm Date and Time (DT.US.FIELDDED), but is used with elements having a datatype of TS.

Table 523: US Realm Date and Time (DTM.US.FIELDDED) Constraints Overview

X P a t h	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 237: 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>

```

4.7 US Realm Patient Name (PTN.US.FIELDDED)

[name: identifier urn:oid:2.16.840.1.113883.10.20.22.5.1 (open)]

Table 524: US Realm Patient Name (PTN.US.FIELDDED) Contexts

Contained By:	Contains:
Drug Monitoring Act (required) Referral Note (V2) (optional)	

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 525: US Realm Patient Name (PTN.US.FIELDDED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
name (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1)					
@use	0..1	MAY		81-7154	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 526: EntityNameUse

Value Set: EntityNameUse urn:oid:2.16.840.1.113883.1.11.15913			
Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.htm			
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 527: EntityPersonNamePartQualifier

Value Set: EntityPersonNamePartQualifier urn:oid:2.16.840.1.113883.11.20.9.26			
Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/in_frastructure/vocabulary/vocabulary.html			
Code	Code System	Code System OID	Print Name
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 238: 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>

```

4.8 US Realm Person Name (PN.US.FIELDED)

[name: identifier urn:oid:2.16.840.1.113883.10.20.22.5.1.1 (open)]

Table 528: US Realm Person Name (PN.US.FIELDED) Contexts

Contained By:	Contains:
Physician of Record Participant (V2) (optional) Advance Directive Observation (V3) (optional) Care Plan (V2) (required) Referral Note (V2) (required) US Realm Header (V3) (required) Diagnostic Imaging Report (V3) (optional)	

The US Realm Clinical Document Person Name datatype flavor is a set of reusable constraints that can be used for Persons.

Table 529: 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 530: Template List

Template Title	Template Type	templateId
Care Plan (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.22.1.15:2015-08-01
Consultation Note (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.22.1.4:2015-08-01
Continuity of Care Document (CCD) (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.22.1.2:2015-08-01
Diagnostic Imaging Report (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.22.1.5:2015-08-01
Discharge Summary (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.22.1.8:2015-08-01
History and Physical (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.22.1.3:2015-08-01
Operative Note (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.22.1.7:2015-08-01
Procedure Note (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.22.1.6:2015-08-01
Progress Note (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.22.1.9:2015-08-01
Referral Note (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.22.1.14:2015-08-01
Transfer Summary (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.22.1.13:2015-08-01
Unstructured Document (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.22.1.10:2015-08-01
US Realm Header (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01
US Realm Header for Patient Generated Document (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.29.1:2015-08-01
Admission Diagnosis Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.43:2015-08-01
Admission Medications Section (entries optional) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.44:2015-08-01
Advance Directives Section (entries optional) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.21:2015-08-01
Advance Directives Section (entries required) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.21.1:2015-08-01
Allergies and Intolerances Section (entries optional) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.6:2015-08-01
Allergies and Intolerances Section (entries required) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.6.1:2015-08-01
Anesthesia Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.

Template Title	Template Type	templateId
		22.2.25:2014-06-09
Assessment and Plan Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.9:2014-06-09
Assessment Section	section	urn:oid:2.16.840.1.113883.10.20.22.2.8
Chief Complaint and Reason for Visit Section	section	urn:oid:2.16.840.1.113883.10.20.22.2.13
Chief Complaint Section	section	urn:oid:1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1
Complications Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.37:2015-08-01
Course of Care Section	section	urn:oid:2.16.840.1.113883.10.20.22.2.64
DICOM Object Catalog Section - DCM 121181	section	urn:oid:2.16.840.1.113883.10.20.6.1.1
Discharge Diagnosis Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.24:2015-08-01
Discharge Diet Section (DEPRECATED)	section	urn:hl7ii:1.3.6.1.4.1.19376.1.5.3.1.3.33:2014-06-09
Discharge Medications Section (entries optional) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.11:2015-08-01
Discharge Medications Section (entries required) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.11.1:2015-08-01
Encounters Section (entries optional) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.22:2015-08-01
Encounters Section (entries required) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.22.1:2015-08-01
Family History Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2015-08-01
Fetus Subject Context	section	urn:oid:2.16.840.1.113883.10.20.6.2.3
Findings Section (DIR)	section	urn:oid:2.16.840.1.113883.10.20.6.1.2
Functional Status Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.14:2014-06-09
General Status Section	section	urn:oid:2.16.840.1.113883.10.20.2.5
Goals Section	section	urn:oid:2.16.840.1.113883.10.20.22.2.60
Health Concerns Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.58:2015-08-01
Health Status Evaluations and Outcomes Section	section	urn:oid:2.16.840.1.113883.10.20.22.2.61
History of Past Illness Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.20:2015-08-01
History of Present Illness Section	section	urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3

Template Title	Template Type	templateId
		.4
Hospital Consultations Section	section	urn:oid:2.16.840.1.113883.10.20.2.2.42
Hospital Course Section	section	urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.5
Hospital Discharge Instructions Section	section	urn:oid:2.16.840.1.113883.10.20.2.2.41
Hospital Discharge Physical Section	section	urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.26
Hospital Discharge Studies Summary Section	section	urn:oid:2.16.840.1.113883.10.20.2.2.16
Immunizations Section (entries optional) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.2:2015-08-01
Immunizations Section (entries required) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.2.1:2015-08-01
Implants Section (DEPRECATED)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.33:2014-06-09
Instructions Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.45:2014-06-09
Interventions Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.21.2.3:2015-08-01
Medical (General) History Section	section	urn:oid:2.16.840.1.113883.10.20.2.2.39
Medical Equipment Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.23:2014-06-09
Medications Administered Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.38:2014-06-09
Medications Section (entries optional) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.1:2014-06-09
Medications Section (entries required) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.1.1:2014-06-09
Mental Status Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.56:2015-08-01
Nutrition Section	section	urn:oid:2.16.840.1.113883.10.20.2.2.57
Objective Section	section	urn:oid:2.16.840.1.113883.10.20.2.1.2.1
Observer Context	section	urn:oid:2.16.840.1.113883.10.20.6.2.4
Operative Note Fluids Section	section	urn:oid:2.16.840.1.113883.10.20.7.12
Operative Note Surgical Procedure Section	section	urn:oid:2.16.840.1.113883.10.20.7.14
Payers Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2015-08-01
Physical Exam Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.

Template Title	Template Type	templateId
		2.10:2015-08-01
Plan of Treatment Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09
Planned Procedure Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.30:2014-06-09
Postoperative Diagnosis Section	section	urn:oid:2.16.840.1.113883.10.20.22.2.35
Postprocedure Diagnosis Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.36:2015-08-01
Preoperative Diagnosis Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.34:2015-08-01
Problem Section (entries optional) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.5:2015-08-01
Problem Section (entries required) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.5.1:2015-08-01
Procedure Description Section	section	urn:oid:2.16.840.1.113883.10.20.22.2.27
Procedure Disposition Section	section	urn:oid:2.16.840.1.113883.10.20.18.2.12
Procedure Estimated Blood Loss Section	section	urn:oid:2.16.840.1.113883.10.20.18.2.9
Procedure Findings Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.28:2015-08-01
Procedure Implants Section	section	urn:oid:2.16.840.1.113883.10.20.22.2.40
Procedure Indications Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.29:2014-06-09
Procedure Specimens Taken Section	section	urn:oid:2.16.840.1.113883.10.20.22.2.31
Procedures Section (entries optional) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.7:2014-06-09
Procedures Section (entries required) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.7.1:2014-06-09
Reason for Referral Section (V2)	section	urn:hl7ii:1.3.6.1.4.1.19376.1.5.3.1.3.1:2014-06-09
Reason for Visit Section	section	urn:oid:2.16.840.1.113883.10.20.22.2.12
Results Section (entries optional) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2015-08-01
Results Section (entries required) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2015-08-01
Review of Systems Section	section	urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.18
Social History Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01
Subjective Section	section	urn:oid:2.16.840.1.113883.10.20.2

Template Title	Template Type	templateId
		1.2.2
Surgery Description Section (DEPRECATED)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.26:2014-06-09
Surgical Drains Section	section	urn:oid:2.16.840.1.113883.10.20.7.13
Vital Signs Section (entries optional) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.4:2015-08-01
Vital Signs Section (entries required) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2015-08-01
Admission Medication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.36:2014-06-09
Advance Directive Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.48:2015-08-01
Advance Directive Organizer (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.108:2015-08-01
Age Observation	entry	urn:oid:2.16.840.1.113883.10.20.2.4.31
Allergy - Intolerance Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.7:2014-06-09
Allergy Concern Act (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.30:2015-08-01
Allergy Status Observation (DEPRECATED)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.28:2014-06-09
Assessment Scale Observation	entry	urn:oid:2.16.840.1.113883.10.20.2.4.69
Assessment Scale Supporting Observation	entry	urn:oid:2.16.840.1.113883.10.20.2.4.86
Authorization Activity	entry	urn:oid:2.16.840.1.113883.10.20.1.19
Boundary Observation	entry	urn:oid:2.16.840.1.113883.10.20.6.2.11
Caregiver Characteristics	entry	urn:oid:2.16.840.1.113883.10.20.2.4.72
Characteristics of Home Environment	entry	urn:oid:2.16.840.1.113883.10.20.2.4.109
Code Observations	entry	urn:oid:2.16.840.1.113883.10.20.6.2.13
Cognitive Status Problem Observation (DEPRECATED)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.73:2014-06-09
Comment Activity	entry	urn:oid:2.16.840.1.113883.10.20.2.4.64
Coverage Activity (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.60:2015-08-01
Criticality Observation	entry	urn:oid:2.16.840.1.113883.10.20.2.4.145
Cultural and Religious Observation	entry	urn:oid:2.16.840.1.113883.10.20.2

Template Title	Template Type	templateId
		2.4.111
Deceased Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.79:2015-08-01
Discharge Medication (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.35:2014-06-09
Drug Monitoring Act	entry	urn:oid:2.16.840.1.113883.10.20.2.4.123
Drug Vehicle	entry	urn:oid:2.16.840.1.113883.10.20.2.4.24
Encounter Activity (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2015-08-01
Encounter Diagnosis (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2015-08-01
Entry Reference	entry	urn:oid:2.16.840.1.113883.10.20.2.4.122
Estimated Date of Delivery	entry	urn:oid:2.16.840.1.113883.10.20.1.5.3.1
External Document Reference	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.115:2014-06-09
Family History Death Observation	entry	urn:oid:2.16.840.1.113883.10.20.2.4.47
Family History Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.46:2015-08-01
Family History Organizer (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.45:2015-08-01
Functional Status Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.67:2014-06-09
Functional Status Organizer (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.66:2014-06-09
Functional Status Problem Observation (DEPRECATED)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.68:2014-06-09
Goal Observation	entry	urn:oid:2.16.840.1.113883.10.20.2.4.121
Handoff Communication Participants	entry	urn:oid:2.16.840.1.113883.10.20.2.4.141
Health Concern Act (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.132:2015-08-01
Health Status Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09
Highest Pressure Ulcer Stage	entry	urn:oid:2.16.840.1.113883.10.20.2.4.77
Hospital Admission Diagnosis (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.34:2015-08-01
Hospital Discharge Diagnosis (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.33:2015-08-01
Immunization Activity (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.

Template Title	Template Type	templateId
		22.4.52:2015-08-01
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
Intervention Act (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.131:2015-08-01
Longitudinal Care Wound Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.114:2015-08-01
Medical Equipment Organizer	entry	urn:oid:2.16.840.1.113883.10.20.22.4.135
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
Mental Status Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.74:2015-08-01
Mental Status Organizer (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.75:2015-08-01
Non-Medicinal Supply Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.50:2014-06-09
Number of Pressure Ulcers Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.76:2015-08-01
Nutrition Assessment	entry	urn:oid:2.16.840.1.113883.10.20.22.4.138
Nutrition Recommendation	entry	urn:oid:2.16.840.1.113883.10.20.22.4.130
Nutritional Status Observation	entry	urn:oid:2.16.840.1.113883.10.20.22.4.124
Outcome Observation	entry	urn:oid:2.16.840.1.113883.10.20.22.4.144
Patient Referral Act	entry	urn:oid:2.16.840.1.113883.10.20.22.4.140
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

Template Title	Template Type	templateId
		2.4.129
Planned Encounter (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09
Planned Immunization Activity	entry	urn:oid:2.16.840.1.113883.10.20.22.4.120
Planned Intervention Act (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.146:2015-08-01
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
Planned Supply (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09
Policy Activity (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.61:2015-08-01
Postprocedure Diagnosis (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.51:2015-08-01
Precondition for Substance Administration (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09
Pregnancy Observation	entry	urn:oid:2.16.840.1.113883.10.20.15.3.8
Preoperative Diagnosis (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.65:2015-08-01
Pressure Ulcer Observation (DEPRECATED)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.70:2014-06-09
Priority Preference	entry	urn:oid:2.16.840.1.113883.10.20.22.4.143
Problem Concern Act (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01
Problem Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01
Problem Status (DEPRECATED)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2014-06-09
Procedure Activity Act (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.12:2014-06-09
Procedure Activity Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.13:2014-06-09
Procedure Activity Procedure (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.14:2014-06-09
Procedure Context	entry	urn:oid:2.16.840.1.113883.10.20.6.2.5
Product Instance	entry	urn:oid:2.16.840.1.113883.10.20.22.4.37
Prognosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.2

Template Title	Template Type	templateId
		2.4.113
Progress Toward Goal Observation	entry	urn:oid:2.16.840.1.113883.10.20.2.4.110
Purpose of Reference Observation	entry	urn:oid:2.16.840.1.113883.10.20.6.2.9
Quantity Measurement Observation	entry	urn:oid:2.16.840.1.113883.10.20.6.2.14
Reaction Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09
Referenced Frames Observation	entry	urn:oid:2.16.840.1.113883.10.20.6.2.10
Result Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2015-08-01
Result Organizer (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2015-08-01
Risk Concern Act (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.136:2015-08-01
Self-Care Activities (ADL and IADL)	entry	urn:oid:2.16.840.1.113883.10.20.2.4.128
Sensory Status	entry	urn:oid:2.16.840.1.113883.10.20.2.4.127
Series Act	entry	urn:oid:2.16.840.1.113883.10.20.2.4.63
Service Delivery Location	entry	urn:oid:2.16.840.1.113883.10.20.2.4.32
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 (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2015-08-01
SOP Instance Observation	entry	urn:oid:2.16.840.1.113883.10.20.6.2.8
Study Act	entry	urn:oid:2.16.840.1.113883.10.20.6.2.6
Substance Administered Act	entry	urn:oid:2.16.840.1.113883.10.20.2.4.118
Substance or Device Allergy - Intolerance Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.24.3.90:2014-06-09
Text Observation	entry	urn:oid:2.16.840.1.113883.10.20.6.2.12
Tobacco Use (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09
Vital Sign Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.27:2014-06-09
Vital Signs Organizer (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.

Template Title	Template Type	templateId
		22.4.26:2015-08-01
Wound Characteristic	entry	urn:oid:2.16.840.1.113883.10.20.2.4.134
Wound Measurement Observation	entry	urn:oid:2.16.840.1.113883.10.20.2.4.133
Author Participation	unspecified	urn:oid:2.16.840.1.113883.10.20.2.4.119
Physician of Record Participant (V2)	unspecified	urn:hl7ii:2.16.840.1.113883.10.20.6.2.2:2014-06-09
Physician Reading Study Performer (V2)	unspecified	urn:hl7ii:2.16.840.1.113883.10.20.6.2.1:2014-06-09
US Realm Address (AD.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.2.5.2
US Realm Date and Time (DT.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.2.5.3
US Realm Date and Time (DTM.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.2.5.4
US Realm Patient Name (PTN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.2.5.1
US Realm Person Name (PN.US.FIELDDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.2.5.1.1

6 VALUE SETS IN THIS GUIDE

Table 531: Value Sets

Name	OID	URL
Ability	urn:oid:2.16.840.1.113883.11.20.9.46	https://vsac.nlm.nih.gov
Act Priority	urn:oid:2.16.840.1.113883.1.11.16.866	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.htm
ActStatus	urn:oid:2.16.840.1.113883.1.11.15.9331	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
ADL Result Type	urn:oid:2.16.840.1.113883.11.20.9.47	http://www.hl7.org
AdministrationUnitDoseForm	urn:oid:2.16.840.1.113762.1.4.102.1.30	https://vsac.nlm.nih.gov
Administrative Gender (HL7 V3)	urn:oid:2.16.840.1.113883.1.11.1	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
AdvanceDirectiveTypeCode	urn:oid:2.16.840.1.113883.1.11.20.2	https://vsac.nlm.nih.gov
AgePQ UCUM	urn:oid:2.16.840.1.113883.11.20.9.21	http://unitsofmeasure.org/ucum.html
Allergy and Intolerance Type	urn:oid:2.16.840.1.113883.3.88.12.3221.6.2	https://vsac.nlm.nih.gov
Body Site	urn:oid:2.16.840.1.113883.3.88.12.3221.8.9	http://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.3221.8.9
Care Model	urn:oid:2.16.840.1.113883.11.20.9.61	http://vtsl.vetmed.vt.edu/TerminologyMgt/RF2Browser/ISA.cfm?SCT_ConceptID=170932006
Clinical Substance	urn:oid:2.16.840.1.113762.1.4.101.0.2	https://vsac.nlm.nih.gov/
ConsultDocumentType	urn:oid:2.16.840.1.113883.11.20.9.31	http://www.loinc.org/
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:2.16.840.1.113883.1.11.18.877	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
Criticality Observation	urn:oid:2.16.840.1.113883.1.11.20.549	N/A
Current Smoking Status	urn:oid:2.16.840.1.113883.11.20.9	https://vsac.nlm.nih.gov

Name	OID	URL
	.38	
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?pid=34D34BBC-617F-DD11-B38D-00188B398520#
DICOMPurposeOfReference	urn:oid:2.16.840.1.113883.11.20.9.28	http://www.hl7.org
DIRQuantityMeasurementTypeCodes	urn:oid:2.16.840.1.113883.11.20.9.29	http://www.nlm.nih.gov/research/umls/Snomed/snomed_main.html
DIRSectionTypeCodes	urn:oid:2.16.840.1.113883.11.20.9.59	http://www.loinc.org/
DischargeSummaryDocumentTypeCode	urn:oid:2.16.840.1.113883.11.20.4.1	http://www.loinc.org/
Encounter Planned	urn:oid:2.16.840.1.113883.11.20.9.52	http://vtsl.vetmed.vt.edu/TerminologyMgt/RF2Browser/ISA.cfm?SCT_ConceptID=308335008
EncounterTypeCode	urn:oid:2.16.840.1.113883.3.88.12.80.32	http://www.amacodingonline.com/
EntityNameUse	urn:oid:2.16.840.1.113883.1.11.15.913	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.htm
EntityPersonNamePartQualifier	urn:oid:2.16.840.1.113883.11.20.9.26	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
Ethnicity	urn:oid:2.16.840.1.114222.4.11.837	https://vsac.nlm.nih.gov/
Family Member Value Set	urn:oid:2.16.840.1.113883.1.11.19.579	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.htm
Goal Achievement	urn:oid:2.16.840.1.113883.11.20.9.55	https://vsac.nlm.nih.gov
Health Insurance Type	urn:oid:2.16.840.1.113883.3.88.12.3221.5.2	N/A
Healthcare Agent Qualifier	urn:oid:2.16.840.1.113883.11.20.9.51	https://vsac.nlm.nih.gov
Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.114222.4.11.10.66	http://www.nucc.org/index.php?option=com_content&view=article&id=14&Itemid=125
HealthcareServiceLocation	urn:oid:2.16.840.1.113883.1.11.20.275	http://phinvads.cdc.gov/vads/SearchAllVocab_search.action?searchOptions.searchText=Healthcare+Service+Location+%28NHSN%29

Name	OID	URL
HealthStatus	urn:oid:2.16.840.1.113883.1.11.20.12	https://www.hl7.org/
HL7 BasicConfidentialityKind	urn:oid:2.16.840.1.113883.1.11.16.926	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
HL7FinanciallyResponsiblePartyType	urn:oid:2.16.840.1.113883.1.11.10.416	http://www.hl7.org
HPDocumentType	urn:oid:2.16.840.1.113883.1.11.20.22	http://www.loinc.org/
INDRoleclassCodes	urn:oid:2.16.840.1.113883.11.20.9.33	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
Language	urn:oid:2.16.840.1.113883.1.11.11.526	http://www.loc.gov/standards/iso639-2/php/code_list.php
LanguageAbilityMode	urn:oid:2.16.840.1.113883.1.11.12.249	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.1.11.12.199	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
LOINC Imaging Document Codes	urn:oid:1.3.6.1.4.1.12009.10.2.5	http://search.loinc.org
Marital Status	urn:oid:2.16.840.1.113883.1.11.12.212	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
Medication Clinical Drug	urn:oid:2.16.840.1.113762.1.4.101.0.4	http://phinvads.cdc.gov/vads/ViewValueSet.action?pid=239BEF3E-971C-DF11-B334-0015173D1785
Medication Fill Status	urn:oid:2.16.840.1.113883.3.88.12.80.64	https://phinvads.cdc.gov/
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
Mental and Functional Status Response	urn:oid:2.16.840.1.113883.11.20.9.44	http://vtsl.vetmed.vt.edu/TerminologyMgt/RF2Browser/ISA.cfm?SCT_ConceptID=272520006
MoodCodeEvnInt	urn:oid:2.16.840.1.113883.11.20.9.18	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
No Immunization Reason Value Set	urn:oid:2.16.840.1.113883.1.11.19.717	http://www.hl7.org
NUBC UB-04 FL17 Patient Status	urn:oid:2.16.840.1.113883.3.88.12.80.33	http://www.nubc.org

Name	OID	URL
Nutrition Recommendations	urn:oid:2.16.840.1.113883.1.11.20.2.9	http://www.hl7.org
Nutritional Status	urn:oid:2.16.840.1.113883.1.11.20.2.7	https://vsac.nlm.nih.gov
Observation Interpretation (HL7)	urn:oid:2.16.840.1.113883.1.11.78	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.htm
ParticipationFunction	urn:oid:2.16.840.1.113883.1.11.10.267	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.htm
Patient Education	urn:oid:2.16.840.1.113883.11.20.9.34	http://browser.ihtsdotools.org/
Patient Referral Act moodCode	urn:oid:2.16.840.1.113883.11.20.9.66	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
Payer	urn:oid:2.16.840.1.114222.4.11.35.91	http://www.phdsc.org/standards/payer-typology.asp
Personal And Legal Relationship Role Type	urn:oid:2.16.840.1.113883.11.20.1.2.1	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
Physical Exam Type	urn:oid:2.16.840.1.113883.11.20.9.65	http://www.search.loinc.org
Planned Intervention moodCode	urn:oid:2.16.840.1.113883.11.20.9.54	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
Planned moodCode (Act/Encounter/Procedure)	urn:oid:2.16.840.1.113883.11.20.9.23	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
Planned moodCode (Observation)	urn:oid:2.16.840.1.113883.11.20.9.25	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
Planned moodCode (SubstanceAdministration/Supply)	urn:oid:2.16.840.1.113883.11.20.9.24	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
PostalAddressUse	urn:oid:2.16.840.1.113883.1.11.10.637	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
PostalCode	urn:oid:2.16.840.1.113883.3.88.12.80.2	http://ushik.ahrq.gov/ViewItemDetails?system=mdr&itemKey=86671000

Name	OID	URL
Pressure Point	urn:oid:2.16.840.1.113883.11.20.9.36	https://vsac.nlm.nih.gov
Pressure Ulcer Stage	urn:oid:2.16.840.1.113883.11.20.9.35	https://vsac.nlm.nih.gov
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://phinvals.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.3221.7.4
Problem Severity	urn:oid:2.16.840.1.113883.3.88.12.3221.6.8	https://vsac.nlm.nih.gov
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 http://www.ihtsdo.org/snomed-ct/
ProblemAct statusCode	urn:oid:2.16.840.1.113883.11.20.9.19	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
ProcedureAct statusCode	urn:oid:2.16.840.1.113883.11.20.9.22	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
ProcedureNoteDocumentTypeCodes	urn:oid:2.16.840.1.113883.11.20.6.1	http://search.loinc.org
ProgressNoteDocumentTypeCode	urn:oid:2.16.840.1.113883.11.20.8.1	http://www.loinc.org/
Provider Role	urn:oid:2.16.840.1.113883.3.88.12.3221.4.2	http://www.nucc.org/index.php?option=com_content&view=article&id=14&Itemid=125
Race	urn:oid:2.16.840.1.113883.1.11.14.914	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/
Referral Types	urn:oid:2.16.840.1.113883.11.20.9.56	http://vtsl.vetmed.vt.edu/TerminologyMgt/RF2Browser/ISA.cfm?SCT_ConceptID=3457005
ReferralDocumentType	urn:oid:2.16.840.1.113883.1.11.20.2.3	http://www.loinc.org/
Related Document (append/replace)	urn:oid:2.16.840.1.113883.11.20.9.62	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
Religious Affiliation	urn:oid:2.16.840.1.113883.1.11.19.185	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
Residence and Accommodation	urn:oid:2.16.840.1.113883.11.20.9	https://vsac.nlm.nih.gov

Name	OID	URL
Type	.49	
Result Status	urn:oid:2.16.840.1.113883.11.20.9.39	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
Sensory Status Problem Type	urn:oid:2.16.840.1.113883.11.20.9.50	https://vsac.nlm.nih.gov
Social History Type	urn:oid:2.16.840.1.113883.3.88.12.80.60	https://vsac.nlm.nih.gov
Specific Vaccine Clinical Drug	urn:oid:2.16.840.1.113762.1.4.101.0.10	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
Substance-Reactant for Intolerance	urn:oid:2.16.840.1.113762.1.4.101.0.1	http://www.hl7.org
SupportedFileFormats	urn:oid:2.16.840.1.113883.11.20.7.1	http://www.hl7.org
SurgicalOperationNoteDocumentTypeCode	urn:oid:2.16.840.1.113883.11.20.1.1	http://www.loinc.org/
TargetSite Qualifiers	urn:oid:2.16.840.1.113883.11.20.9.37	https://vsac.nlm.nih.gov
Telecom Use (US Realm Header)	urn:oid:2.16.840.1.113883.11.20.9.20	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
Tobacco Use	urn:oid:2.16.840.1.113883.11.20.9.41	http://vtsl.vetmed.vt.edu/TerminologyMgt/RF2Browser/ISA.cfm?SCT_ConceptID=365980008
TransferDocumentType	urn:oid:2.16.840.1.113883.1.11.20.2.4	http://search.loinc.org/search.zul?query=transfer+summary+note
UnitsOfMeasureCaseSensitive	urn:oid:2.16.840.1.113883.1.11.12.839	http://unitsofmeasure.org/ucum.html
Vaccine Clinical Drug	urn:oid:2.16.840.1.113762.1.4.101.0.8	https://vsac.nlm.nih.gov/
Vital Sign Result	urn:oid:2.16.840.1.113883.3.88.12.80.62	http://www.loinc.org/
Wound Characteristic	urn:oid:2.16.840.1.113883.11.20.9.58	https://vsac.nlm.nih.gov
Wound Measurements	urn:oid:2.16.840.1.113883.1.11.20.2.5	https://vsac.nlm.nih.gov
Wound Type	urn:oid:2.16.840.1.113883.1.11.20.2.6	https://vsac.nlm.nih.gov
x_ServiceEventPerformer	urn:oid:2.16.840.1.113883.1.11.19.601	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html

7 CODE SYSTEMS IN THIS GUIDE

Table 532: 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
DCM	urn:oid:1.2.840.10008.2.16.4
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
FDA RouteOfAdministration	urn:oid:2.16.840.1.113883.3.26.1.1
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 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
ICD10CM	urn:oid:2.16.840.1.113883.6.90
Insurance Type Code	urn:oid:2.16.840.1.113883.3.88.12.3221.5.2
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
Media Type	urn:oid:2.16.840.1.113883.5.79
NDFRT	urn:oid:2.16.840.1.113883.3.26.1.5
nubc-UB-04-Manual-code set	urn:oid:2.16.840.1.113883.6.301

Name	OID
ObservationValue	urn:oid:2.16.840.1.113883.5.1063
participationFunction	urn:oid:2.16.840.1.113883.5.88
Participationsignature	urn:oid:2.16.840.1.113883.5.89
Provider Role (HL7)	urn:oid:2.16.840.1.113883.3.88.12.3221.4
Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238
Race & Ethnicity - CDC	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