

Implementation Guide for CDA R2

Consolidated CDA Templates

HL7 Ballot

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

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Acknowledgments

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Health Level Seven (HL7) HL7 Implementation Guide: CDA Release 2 – Continuity of Care Document (CCD), HL7 Implementation Guide for CDA Release 2: History and Physical (H&P) Notes.

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Chapter 1

INTRODUCTION

Topics:

- [Overview](#)
- [Approach](#)
- [Scope](#)
- [Audience](#)
- [Organization of This Guide](#)
- [Use of Templates](#)
- [Conventions Used in This Guide](#)

Overview

This implementation guide is generated from UML models developed in the Open Health Tools (OHT) Model-Driven Health Tools (MDHT) project. The data specifications have been formalized into computational models expressed in UML. These models are used by automated tooling to generate this publication, plus validation tools and Java libraries for implementers.

Approach

Working with specifications generated from formal UML models provides the opportunity to work with the data from the perspective of the underlying model and electronic format and to explore many design issues thoroughly. Taking this as an initial step ensures that the data set developers and standards community can reach consensus prior to the larger commitment of time that would be required to bring the full data set into standard format.

This project supports reusability and ease of data collection through a standard data representation harmonized with work developed through Health Information Technology Expert Panel (HITEP), balloted through Health Level Seven (HL7) and/or recognized by the Health Information Technology Standards Panel (HITSP).

This implementation guide (IG) specifies a standard for electronic submission of NCRs in a Clinical Document Architecture (CDA), Release 2 format.

Scope

TODO: scope of this implementation guide.

Audience

The audience for this document includes software developers and implementers who wish to develop...

Organization of This Guide

The requirements as laid out in the body of this document are subject to change per the policy on implementation guides (see section 13.02" Draft Standard for Trial Use Documents" within the HL7 Governance and Operations Manual, http://www.hl7.org/documentcenter/public/membership/HL7_Governance_and_Operations_Manual.pdf).

Templates

Templates are organized by document (see Document Templates), by section (see Section Templates), and by clinical statements (see Clinical Statement Templates). Within a section, templates are arranged hierarchically, where a more specific template is nested under the more generic template that it conforms to. See Templates by Containment for a listing of the higher level templates by containment; the appendix Templates Used in This Guide includes a table of all of the templates Organized Hierarchically.

Vocabulary and Value Sets

Vocabularies recommended in this guide are from standard vocabularies. When SNOMED codes are used, rules defined in Using SNOMED CT in HL7 Version 3 are adhered to. In many cases, these vocabularies are further constrained into value sets for use within this guide. Value set names and OIDs are summarized in the table Summary of Value Sets. Each named value set in this summary table is stored in a template database that will be maintained by CHCA.

Use of Templates

When valued in an instance, the template identifier (`templateId`) signals the imposition of a set of template-defined constraints. The value of this attribute provides a unique identifier for the templates in question.

Originator Responsibilities

An originator can apply a `templateId` to assert conformance with a particular template.

In the most general forms of CDA exchange, an originator need not apply a `templateId` for every template that an object in an instance document conforms to. This implementation guide asserts when `templateIds` are required for conformance.

Recipient Responsibilities

A recipient may reject an instance that does not contain a particular `templateId` (e.g., a recipient looking to receive only CCD documents can reject an instance without the appropriate `templateId`).

A recipient may process objects in an instance document that do not contain a `templateId` (e.g., a recipient can process entries that contain Observation acts within a Problems section, even if the entries do not have `templateIds`).

Conventions Used in This Guide

Conformance Requirements

Conformance statements are grouped and identified by the name of the template, along with the `templateId` and the context of the template (e.g., ClinicalDocument, section, observation), which specifies the element under constraint. If a template is a specialization of another template, its first constraint indicates the more general template. In all cases where a more specific template conforms to a more general template, asserting the more specific template also implies conformance to the more general template. An example is shown below.

Template name

[<type of template>: `templateId` <XXXX.XX.XXX.XXX>]

Description of the template will be here

1. Conforms to <The template name> Template (`templateId`: XXXX<XX>XXX>YYY).
2. **SHALL** contain [1..1] @classCode = <AAA> <code display name> (CodeSystem: 123.456.789 <XXX> Class) **STATIC** (CONF:<number>).
3.

Figure 1: Template name and "conforms to" appearance

The conformance verb keyword at the start of a constraint (**SHALL** , **SHOULD** , **MAY** , etc.) indicates business conformance, whereas the cardinality indicator (0..1, 1..1, 1..*, etc.) specifies the allowable occurrences within an instance. Thus, " **MAY** contain 0..1" and " **SHOULD** contain 0..1" both allow for a document to omit the particular component, but the latter is a stronger recommendation that the component be included if it is known.

The following cardinality indicators may be interpreted as follows:

- 0..1 as zero to one present
- 1..1 as one and only one present
- 2..2 as two must be present
- 1..* as one or more present
- 0..* as zero to many present

Value set bindings adhere to HL7 Vocabulary Working Group best practices, and include both a conformance verb (**SHALL** , **SHOULD** , **MAY** , etc.) and an indication of **DYNAMIC** vs. **STATIC** binding. The use of **SHALL** requires that the component be valued with a member from the cited value set; however, in every case any HL7 "null" value such as other (OTH) or unknown (UNK) may be used.

Each constraint is uniquely identified (e.g., "CONF:605") by an identifier placed at or near the end of the constraint. These identifiers are not sequential as they are based on the order of creation of the constraint.

1. **SHALL** contain [1..1] component/structuredBody (CONF:4082).
 - a. This component/structuredBody **SHOULD** contain [0..1] component (CONF:4130) such that it
 - a. **SHALL** contain [1..1] Reporting Parameters section (templateId:2.16.840.1.113883.10.20.17.2.1) (CONF:4131).
 - b. This component/structuredBody **SHALL** contain [1..1] component (CONF:4132) such that it
 - a. **SHALL** contain [1..1] Patient data section - NCR (templateId:2.16.840.1.113883.10.20.17.2.5) (CONF:4133).

Figure 2: Template-based conformance statements example

CCD templates are included within this implementation guide for ease of reference. CCD templates contained within this implementation guide are formatted **WITHOUT** typical **KEYWORD** and **XML** element styles. A WIKI site is available if you would like to make a comment to be considered for the next release of CCD: http://wiki.hl7.org/index.php?title=CCD_Suggested_Enhancements The user name and password are: wiki/wikiwiki. You will need to create an account to edit the page and add your suggestion.

1. The value for "Observation / @moodCode" in a problem observation SHALL be "EVN" 2.16.840.1.113883.5.1001 ActMood STATIC. (CONF: 814).
2. A problem observation SHALL include exactly one Observation / statusCode. (CONF: 815).
3. The value for "Observation / statusCode" in a problem observation SHALL be "completed" 2.16.840.1.113883.5.14 ActStatus STATIC. (CONF: 816).
4. A problem observation SHOULD contain exactly one Observation / effectiveTime, to indicate the biological timing of condition (e.g. the time the condition started, the onset of the illness or symptom, the duration of a condition). (CONF: 817).

Figure 3: CCD conformance statements example

Keywords

The keywords SHALL, SHALL NOT, SHOULD, SHOULD NOT, MAY, and NEED NOT in this document are to be interpreted as described in the [HL7 Version 3 Publishing Facilitator's Guide](#):

- **SHALL**: an absolute requirement
- **SHALL NOT**: an absolute prohibition against inclusion
- **SHOULD/SHOULD NOT**: valid reasons to include or ignore a particular item, but must be understood and carefully weighed
- **MAY/NEED NOT**: truly optional; can be included or omitted as the author decides with no implications

XML Examples

XML samples appear in various figures in this document in a fixed-width font. Portions of the XML content may be omitted from the content for brevity, marked by an ellipsis (...) as shown in the example below.

```
<ClinicalDocument xmlns='urn:hl7-org:v3'>
...
</ClinicalDocument>
```

Figure 4: ClinicalDocument example

XPath expressions are used in the narrative and conformance requirements to identify elements because they are familiar to many XML implementers.

Chapter

2

GENERAL HEADER TEMPLATE

Topics:

- [General Header Constraints](#)

General Header Constraints

[ClinicalDocument: templateId 2.16.840.1.113883.10.20.22.1.1]

This section describes constraints that apply to the header for all documents within the scope of this implementation guide. Header constraints specific to each document type are described in the appropriate document-specific section below

Document Type Codes

CDA R2 states that LOINC is the preferred vocabulary for document type codes, which specify the type of document being exchanged (e.g., History and Physical). Each document type in this guide recommends a single preferred clinicalDocument/code, with further specification provided by author or performer, setting, or specialty

General Header Constraints Header Constraints

General Header Constraints Body Constraints

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:5252, CONF:10036) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.1"
2. **SHALL** contain exactly one [1..1] **realmCode/@code**="US" (CONF:16791)
3. **SHALL** contain exactly one [1..1] **typeId** (CONF:5361)
4. **SHALL** contain exactly one [1..1] **id** (CONF:5363)
5. **SHALL** contain exactly one [1..1] **code** (CONF:5253)
6. **SHALL** contain exactly one [1..1] **title** (CONF:5254)
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:5256)
 - *Signifies the document creation time, when the document first came into being. Where the CDA document is a transform from an original document in some other format, the ClinicalDocument.effectiveTime is the time the original document is created. The time when the transform occurred is not currently represented in CDA (CONF:9995)*
8. **SHALL** contain exactly one [1..1] **confidentialityCode**, which **SHOULD** be selected from ValueSet [HL7 BasicConfidentialityKind](#) 2.16.840.1.113883.1.11.16926 **STATIC** (CONF:5259)
9. **SHALL** contain exactly one [1..1] **languageCode**, which **SHALL** be selected from ValueSet [Language](#) 2.16.840.1.113883.1.11.11526 **DYNAMIC** (CONF:5372)
10. **SHALL** contain at least one [1..*] **recordTarget** (CONF:5266)

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

- a. Such recordTargets **SHALL** contain exactly one [1..1] **patientRole** (CONF:5268)
 - a. This patientRole **SHALL** contain at least one [1..*] **addr** with @xsi:type="US Realm Address" (CONF:5271)
 - b. This patientRole **SHALL** contain at least one [1..*] **id** (CONF:5268)
 - c. This patientRole **SHALL** contain at least one [1..*] **telecom** with @xsi:type="TEL" (CONF:5280)
 - d. This patientRole **SHALL** contain exactly one [1..1] **patient** (CONF:5283)
 - a. This patient **SHALL** contain exactly one [1..1] **administrativeGenderCode**, which **SHALL** be selected from ValueSet [Administrative Gender \(HL7 V3\)](#) 2.16.840.1.113883.1.11.1 **DYNAMIC** (CONF:6394)
 - b. This patient **SHALL** contain exactly one [1..1] **birthTime** with @xsi:type="TS" (CONF:5298)
 - c. This patient **MAY** contain zero or one [0..1] **ethnicGroupCode**, which **SHALL** be selected from ValueSet [Ethnicity Value Set](#) 2.16.840.1.114222.4.11.837 **DYNAMIC** (CONF:5323)

- d. This patient **SHOULD** contain zero or one [0..1] **maritalStatusCode** (CONF:5303), which **SHALL** be selected from ValueSet [HL7 Marital Status](#) 2.16.840.1.113883.1.11.12212 **STATIC** 1
 - e. This patient **SHALL** contain at least one [1..*] **name** with @xsi:type="US Realm Patient Name" (CONF:5284, CONF:10411)
 - f. This patient **SHOULD** contain zero or one [0..1] **raceCode**, which **SHALL** be selected from ValueSet [Race Value Set](#) 2.16.840.1.113883.1.11.14914 **DYNAMIC** (CONF:5322)
 - g. This patient **MAY** contain zero or one [0..1] **religiousAffiliationCode** (CONF:5317), which **SHALL** be selected from ValueSet [HL7 Religious Affiliation](#) 2.16.840.1.113883.1.11.19185 **STATIC** 1
 - h. This patient **MAY** contain zero or more [0..*] **sdtcRaceCode**, which **SHALL** be selected from ValueSet [Race Value Set](#) 2.16.840.1.113883.1.11.14914 **DYNAMIC** (CONF: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.*
- i. This patient **MAY** contain zero or one [0..1] **birthplace** (CONF:5395)
 - a. This birthplace **SHALL** contain exactly one [1..1] **place** (CONF:5396)
 - a. This place **SHALL** contain exactly one [1..1] **addr** (CONF:5397)
 - b. This place 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**
 - c. This place This addr **MAY** contain zero or one [0..1] postalCode, which **SHALL** be selected from ValueSet PostalCodeValueSet 2.16.840.1.113883.3.88.12.80.2 **DYNAMIC**
 - d. This place This addr **SHOULD** contain zero or one [0..1] country, which **SHALL** be selected from ValueSet CountryValueSet 2.16.840.1.113883.3.88.12.80.63 **DYNAMIC**
 - j. This patient **MAY** contain zero or more [0..*] **guardian** (CONF:5325)
 - a. Such guardians **SHOULD** contain zero or more [0..*] **addr** with @xsi:type="US Realm Address"
 - b. Such guardians **SHOULD** contain zero or one [0..1] **code** (CONF:5326)
 - c. Such guardians **MAY** contain zero or more [0..*] **telecom** with @xsi:type="TEL"
 - d. Such guardians **SHALL** contain exactly one [1..1] **guardianPerson**
 - a. This guardianPerson **SHALL** contain at least one [1..*] **name**
 - b. This guardianPerson The content of name **SHALL** be a conformant US Realm Person Name (PTN.US.FIELDDED) (2.16.840.1.113883.10.20.22.5.1.1) (CONF:10414)
 - e. Such guardians The guardian code, if present, **SHALL** be selected from ValueSet PersonalRelationshipRoleType 2.16.840.1.113883.1.11.19563 **DYNAMIC** or ValueSet Responsible Party 2.16.840.1.113883.1.11.19830 **DYNAMIC** (CONF:5326)
 - k. This patient **SHOULD** contain zero or more [0..*] **languageCommunication** (CONF:5406)
 - a. Such languageCommunications **SHALL** contain exactly one [1..1] **languageCode**, which **SHALL** be selected from ValueSet [Language](#) 2.16.840.1.113883.1.11.11526 **DYNAMIC** (CONF:5407)
 - b. Such languageCommunications **MAY** contain zero or one [0..1] **modeCode**, which **SHALL** be selected from ValueSet [HL7 LanguageAbilityMode](#) 2.16.840.1.113883.1.11.12249 **STATIC** 1 (CONF:5409)
 - c. Such languageCommunications **MAY** contain zero or one [0..1] **preferenceInd** (CONF:5414)
 - d. Such languageCommunications **SHOULD** contain zero or one [0..1] **proficiencyLevelCode**, which **SHALL** be selected from ValueSet [LanguageAbilityProficiency](#) 2.16.840.1.113883.1.11.12199 **STATIC** (CONF:9965)
 - l. This patient If sdtc:raceCode is present, then the patient **SHALL** contain [1..1] raceCode (CONF:31347)
 - e. This patientRole **MAY** contain zero or one [0..1] **providerOrganization** (CONF:5416)

- a. This providerOrganization **SHALL** contain at least one [1..*] **addr** with @xsi:type="US Realm Address" (CONF:5422)
 - b. This providerOrganization **SHALL** contain at least one [1..*] **id** (CONF:5417)
 - c. This providerOrganization **SHALL** contain at least one [1..*] **name** (CONF:5419)
 - d. This providerOrganization **SHALL** contain at least one [1..*] **telecom** with @xsi:type="TEL" (CONF:5420)
 - e. This providerOrganization The id **SHOULD** include zero or one [0..1] id where id/@root="2.16.840.1.113883.4.6" National Provider Identifier (CONF:9996) (CONF:9996)
- 11. MAY** contain zero or one [0..1] **componentOf** (CONF:9955)
- a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:9956)
 - a. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:9958)
 - b. This encompassingEncounter **SHALL** contain at least one [1..*] **id** (CONF:9959)
- 12. SHALL** contain at least one [1..*] **author** (CONF:5444)
- a. Such authors **SHALL** contain exactly one [1..1] **time** (CONF:5445)

The content SHALL be a conformant US Realm Date and Time (DTM.US.FIELDDED) (2.16.840.1.113883.10.20.22.5.4) (CONF:16866).
 - b. Such authors **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:5448)
 - a. This assignedAuthor **SHALL** contain at least one [1..*] **addr** with @xsi:type="US Realm Address" (CONF:5452)
 - b. This assignedAuthor **SHOULD** contain zero or one [0..1] **code** (CONF:16787), which **SHOULD** be selected from ValueSet *Healthcare Provider Taxonomy (NUCC - HIPAA) 2.16.840.1.114222.4.11.1066 DYNAMIC* (CONF:16788)
 - c. This assignedAuthor **SHALL** contain at least one [1..*] **id** (CONF:5449)
 - d. This assignedAuthor **SHALL** contain at least one [1..*] **telecom** with @xsi:type="TEL" (CONF:5428)
 - e. This assignedAuthor Contains zero or one [0..1] **assignedAuthoringDevice**
 - a. This assignedAuthoringDevice **SHALL** contain exactly one [1..1] **manufacturerModelName** (CONF:16784)
 - b. This assignedAuthoringDevice **SHALL** contain exactly one [1..1] **softwareName** (CONF:16785)
 - f. This assignedAuthor Contains zero or one [0..1] **assignedPerson**
 - a. This assignedPerson **SHALL** contain at least one [1..*] **name** (CONF:16789)
 - g. This assignedAuthor **SHALL** contain exactly one [1..1] assignedPerson or assignedAuthoringDevice (CONF:16790)
 - h. This assignedAuthor If this assignedAuthor is an assignedPerson, the assignedAuthor **SHOULD** contain zero to one [0..1] id such that it **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.4.6" National Provider Identifier (CONF:31135, CONF:31694)
 - c. Such authors This time **SHALL** contain exactly one [1..1] US Realm Date and Time (DTM.US.FIELDDED) (2.16.840.1.113883.10.20.22.5.4) (CONF:5446)
- 13. MAY** contain zero or one [0..1] **dataEnterer** (CONF:5441)
- a. This dataEnterer **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:5442)
 - a. This assignedEntity **SHALL** contain at least one [1..*] **addr** with @xsi:type="US Realm Address" (CONF:5460)
 - b. This assignedEntity **MAY** contain zero or one [0..1] **code**, which **SHOULD** be selected from (CodeSystem: 2.16.840.1.113883.6.101 NUCC Health Care Provider Taxonomy) (CONF:9944)
 - c. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:5443)
 - d. This assignedEntity **SHALL** contain at least one [1..*] **telecom** with @xsi:type="TEL" (CONF:5466)
 - e. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:5469)
 - a. This assignedPerson **SHALL** contain at least one [1..*] **name**

- f. This assignedEntity id **SHOULD** include zero or one [0..1] @root="2.16.840.1.113883.4.6" National Provider Identifier (CONF:16821)

14. SHALL contain exactly one [1..1] **custodian** (iv., CONF:5519)

- a. This custodian **SHALL** contain exactly one [1..1] **assignedCustodian** (CONF:5520)
 - a. This assignedCustodian **SHALL** contain exactly one [1..1] **representedCustodianOrganization** (CONF:5521)
 - a. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **addr** with @xsi:type="US *Realm Address*" (CONF:5559)
 - b. This representedCustodianOrganization **SHALL** contain at least one [1..*] **id** (CONF:5522)
 - c. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **name** (CONF:5524)
 - d. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **telecom** with @xsi:type="TEL" (CONF:5525)
 - e. This representedCustodianOrganization The id **SHOULD** include zero or one [0..1] @root="2.16.840.1.113883.4.6" National Provider Identifier (CONF:9996)

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

- a. Such informationRecipients **SHALL** contain exactly one [1..1] **intendedRecipient** (CONF:5566)
 - a. This intendedRecipient **MAY** contain zero or one [0..1] **informationRecipient** (CONF:5568)
 - a. This informationRecipient **SHALL** contain at least one [1..*] **name** (CONF:5470)
 - b. This intendedRecipient **MAY** contain zero or one [0..1] **receivedOrganization** (CONF:5577)
 - a. This receivedOrganization **SHALL** contain exactly one [1..1] **name** (CONF:5578)

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

- a. This legalAuthenticator **SHALL** contain exactly one [1..1] **signatureCode/@code="S"** (CodeSystem: 2.16.840.1.113883.5.89 Participationsignature) (CONF:5583, CONF:5584)
- b. This legalAuthenticator **SHALL** contain exactly one [1..1] **time** (CONF:5580)
- c. This legalAuthenticator Contains zero or one [0..1] **assignedEntity**
 - a. This assignedEntity **SHALL** contain at least one [1..*] **addr** with @xsi:type="US *Realm Address*" (CONF:5589)
 - b. This assignedEntity **MAY** contain zero or one [0..1] **code** (CONF:17000), which **SHOULD** be selected from ValueSet *Healthcare Provider Taxonomy (NUCC - HIPAA)* 2.16.840.1.114222.4.11.1066 **DYNAMIC**
 - c. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:5586)
 - d. This assignedEntity **SHALL** contain at least one [1..*] **telecom** with @xsi:type="TEL" (CONF:5595)
 - e. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:5597)
 - a. This assignedPerson **SHALL** contain at least one [1..*] **name** (CONF:5598)
 - f. This assignedEntity The id **MAY** include zero or one [0..1] root="2.16.840.1.113883.4.6" National Provider Identifier (CONF:9996) (CONF:16823)

17. MAY contain zero or more [0..*] **authenticator** (CONF:5607)

- a. Such authenticators **SHALL** contain exactly one [1..1] **signatureCode/@code="S"** (CodeSystem: 2.16.840.1.113883.5.89 Participationsignature) (CONF:5610)
- b. Such authenticators **SHALL** contain exactly one [1..1] **time** (CONF:5608)
- c. Such authenticators **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:5612)
 - a. This assignedEntity **SHALL** contain at least one [1..*] **addr** with @xsi:type="US *Realm Address*" (CONF:5616)
 - b. This assignedEntity **MAY** contain zero or one [0..1] **code** (CONF:16825), which **SHOULD** be selected from ValueSet *Healthcare Provider Taxonomy (NUCC - HIPAA)* 2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:16826)
 - c. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:5613)

- d. This assignedEntity **SHALL** contain at least one [1..*] **telecom** with @xsi:type="*TEL*" (CONF:5622)
- e. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:5624)
 - a. This assignedPerson **SHALL** contain at least one [1..*] **name** (CONF:5625)
 - f. This assignedEntity The id **SHOULD** include zero or one [0..1] root ="2.16.840.1.113883.4.6" National Provider Identifier (CONF:9996)
- 18. **MAY** contain zero or one [0..1] **setId** (CONF:5261)
- 19. **MAY** contain zero or one [0..1] **versionNumber** (CONF:5264)
- 20. **MAY** contain zero or more [0..*] **informant** (CONF:8001)
 - a. Such informants **MAY** contain zero or one [0..1] **assignedEntity**
 - a. This assignedEntity **SHOULD** contain zero or more [0..*] **addr** with @xsi:type="*US Realm Address*" (CONF:8220)
 - b. This assignedEntity **MAY** contain zero or one [0..1] **code**, which **SHOULD** be selected from (CodeSystem: 2.16.840.1.113883.6.101 NUCC Health Care Provider Taxonomy) (CONF:9947)
 - c. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:9945)
 - d. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:8221)
 - a. This assignedPerson **SHALL** contain at least one [1..*] **name**
 - e. This assignedEntity The id **SHOULD** include zero or one [0..1] id where id/@root ="2.16.840.1.113883.4.6" National Provider Identifier
 - b. Such informants **MAY** contain zero or one [0..1] **relatedEntity**
 - a. This relatedEntity **SHOULD** contain zero or more [0..*] **addr** with @xsi:type="*US Realm Address*" (CONF:8220)
 - b. This relatedEntity **SHALL** contain exactly one [1..1] **relatedPerson** (CONF:8221)
 - a. This relatedPerson **SHALL** contain at least one [1..*] **name**
 - c. Such informants **SHALL** satisfy: contain exactly one [1..1] assignedEntity OR exactly one [1..1] relatedEntity (CONF:8002)
 - 21. **MAY** contain zero or more [0..*] **participant** (CONF:10003)
 - a. Such participants **MAY** contain zero or one [0..1] **time** (CONF:10004)
 - b. Such participants Such participants, if present, **SHALL** have an associatedPerson or scopingOrganization element under participant/associatedEntity. (CONF:10006)
 - c. Such participants Unless otherwise specified by the document specific header constraints, when participant/@typeCode is IND, associatedEntity/@classCode **SHALL** be selected from ValueSet INDRoleclassCodes 2.16.840.1.113883.11.20.9.33 STATIC 2011-09-30.
 - 22. **MAY** contain zero or more [0..*] **inFulfillmentOf** (CONF:9952)
 - a. Such inFulfillmentOfs **SHALL** contain exactly one [1..1] **order** (CONF:9953)
 - a. This order **SHALL** contain at least one [1..*] **id** (CONF:9954)
 - 23. **MAY** contain zero or more [0..*] **documentationOf** (CONF:14835)
 - a. Such documentationOfs **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:14836)
 - a. This serviceEvent **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:14837)
 - b. This serviceEvent **SHOULD** contain zero or more [0..*] **performer** (CONF:14839)
 - a. Such performers **MAY** contain zero or one [0..1] **functionCode** (CONF:16818), which **SHOULD** be selected from (CodeSystem: 2.16.840.1.113883.5.88 ParticipationFunction) (CONF:16819)
 - b. Such performers **SHALL** contain exactly one [1..1] **@typeCode** (CONF:14840)
 - c. Such performers **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:14841)

- a. This assignedEntity **SHOULD** contain zero or one [0..1] **code** (CONF:14842), which **SHOULD** be selected from (CodeSystem: 2.16.840.1.113883.6.101 NUCC Health Care Provider Taxonomy) (CONF:14843)
- b. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:14846)
- c. This assignedEntity The id **SHOULD** include zero or one [0..1]root ="2.16.840.1.113883.4.6" National Provider Identifier (CONF:9996) (CONF:14847)
- c. This serviceEvent effectiveTime **SHALL** contain exactly one [1..1] low (CONF:14838)
- 24. **MAY** contain zero or more [0..*] **authorization** (CONF:16792)
 - a. Such authorizations **SHALL** contain exactly one [1..1] **consent** (CONF:16793)
 - a. This consent **MAY** contain zero or one [0..1] **code** (CONF:16795)

The type of consent (e.g., a consent to perform the related serviceEvent) is conveyed in consent/code (CONF:16796).
 - b. This consent **MAY** contain zero or more [0..*] **id** (CONF:16794)
 - c. This consent **SHALL** contain exactly one [1..1] **statusCode** (CONF:16797)/@code="completed" Completed (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:16798)
- 25. **SHALL** satisfy: [DEPRECATED] 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.FIELDDED), but is used with the effectiveTime element.
- 26. **SHALL** satisfy: 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.
- 27. typeId **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.1.3" (CONF:5250)
- 28. typeId **SHALL** contain exactly one [1..1] @extension="POCD_HD000040" (CONF:5251)
- 29. id **SHALL** be a globally unique identifier for the document (CONF:9991)
- 30. code **SHALL** specify the particular kind of document (e.g. History and Physical, Discharge Summary, Progress Note). (CONF:9992)
- 31. If setId is present versionNumber **SHALL** be present (CONF:6380)
- 32. If versionNumber is present setId **SHALL** be present (CONF:6387)

General Header Constraints Example

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xmlns="urn:hl7-org:v3" xmlns:sdtc="urn:hl7-org:sdtc"
xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <realmCode code="US"/>
  <typeId root="2.16.840.1.113883.1.3"/>
  <templateId root="2.16.840.1.113883.10.20.22.1.1"/>
  <id root="MDHT" extension="255303145"/>
  <code code="1503507866"/>
  <title>TEXT FOR TITLE</title>
  <effectiveTime/>
  <confidentialityCode codeSystem="2.16.840.1.113883.5.25"
codeSystemName="ConfidentialityCode"/>
  <setId root="MDHT" extension="9eda3766-7394-48f5-a573-c21b7d755c5c"/>
  <versionNumber value="1"/>
  <recordTarget>
    <patientRole>
      <id root="MDHT" extension="1387001254"/>
      <patient>
        <administrativeGenderCode codeSystem="2.16.840.1.113883.5.1"
codeSystemName="AdministrativeGenderCode"/>
        <maritalStatusCode codeSystem="2.16.840.1.113883.5.2"
codeSystemName="MaritalStatus"/>
```

```

        <religiousAffiliationCode codeSystem="2.16.840.1.113883.5.1076"
codeSystemName="ReligiousAffiliation"/>
        <raceCode codeSystem="2.16.840.1.113883.6.238" codeSystemName="Race
and Ethnicity - CDC"/>
        <sdtc:raceCode codeSystem="2.16.840.1.113883.6.238"
codeSystemName="Race and Ethnicity - CDC"/>
        <ethnicGroupCode codeSystem="2.16.840.1.113883.6.238"
codeSystemName="Race and Ethnicity - CDC"/>
    </patient>
    <providerOrganization/>
    </patientRole>
</recordTarget>
<author>
    <time/>
    <assignedAuthor>
        <id root="MDHT" extension="1611223422"/>
        <code codeSystem="2.16.840.1.113883.6.101" codeSystemName="NUCC Health
Care Provider Taxonomy"/>
        <assignedPerson/>
        <assignedAuthoringDevice/>
    </assignedAuthor>
</author>
<dataEnterer>
    <assignedEntity>
        <id root="MDHT" extension="1856823323"/>
        <code codeSystem="2.16.840.1.113883.6.101" codeSystemName="NUCC Health
Care Provider Taxonomy"/>
        <assignedPerson/>
    </assignedEntity>
</dataEnterer>
<informant>
    <assignedEntity>
        <id root="MDHT" extension="2147015563"/>
        <code codeSystem="2.16.840.1.113883.6.101" codeSystemName="NUCC Health
Care Provider Taxonomy"/>
        <assignedPerson/>
    </assignedEntity>
    <relatedEntity>
        <relatedPerson/>
    </relatedEntity>
</informant>
<custodian>
    <assignedCustodian>
        <representedCustodianOrganization/>
    </assignedCustodian>
</custodian>
<informationRecipient>
    <intendedRecipient>
        <informationRecipient/>
        <receivedOrganization/>
    </intendedRecipient>
</informationRecipient>
<legalAuthenticator>
    <time/>
    <signatureCode code="S"/>
    <assignedEntity>
        <id root="MDHT" extension="1086426940"/>
        <code codeSystem="2.16.840.1.113883.6.101" codeSystemName="NUCC Health
Care Provider Taxonomy"/>
        <assignedPerson/>
    </assignedEntity>
</legalAuthenticator>
<authenticator>
    <time/>

```

```

        <signatureCode code="S"/>
        <assignedEntity>
            <id root="MDHT" extension="1414008370"/>
            <code codeSystem="2.16.840.1.113883.6.101" codeSystemName="NUCC Health
Care Provider Taxonomy"/>
            <assignedPerson/>
        </assignedEntity>
    </authenticator>
    <participant>
        <time>
            <low value="2014"/>
            <high value="2014"/>
        </time>
        <associatedEntity/>
    </participant>
    <inFulfillmentOf>
        <order>
            <id root="MDHT" extension="1136131163"/>
        </order>
    </inFulfillmentOf>
    <documentationOf>
        <serviceEvent>
            <effectiveTime>
                <low value="2014"/>
                <high value="2014"/>
            </effectiveTime>
            <performer>
                <functionCode codeSystem="2.16.840.1.113883.5.88"
codeSystemName="ParticipationFunction"/>
            </performer>
        </serviceEvent>
    </documentationOf>
    <authorization>
        <consent>
            <id root="MDHT" extension="506515282"/>
            <code code="1226950259"/>
            <statusCode code="completed"/>
        </consent>
    </authorization>
    <componentOf>
        <encompassingEncounter>
            <id root="MDHT" extension="714155176"/>
            <effectiveTime>
                <low value="2014"/>
                <high value="2014"/>
            </effectiveTime>
        </encompassingEncounter>
    </componentOf>
    <component/>
</ClinicalDocument>

```

Chapter

3

DOCUMENT-LEVEL TEMPLATES

Topics:

- *Consultation Note*
 - *Continuity Of Care Document*
 - *Diagnostic Imaging Report*
 - *Discharge Summary*
 - *History And Physical Note*
 - *Operative Note*
 - *Procedure Note*
 - *Progress Note*
 - *Unstructured Document*
-

Consultation Note

[ClinicalDocument: templateId 2.16.840.1.113883.10.20.22.1.4]

For the purpose of this Implementation Guide, a consultation visit is defined by the evaluation and management guidelines for a consultation established by the Centers for Medicare and Medicaid Services (CMS). According to those guidelines, a Consultation Note must be generated as a result of a physician or nonphysician practitioner's (NPP) request for an opinion or advice from another physician or NPP. Consultations must involve face-to-face time with the patient or fall under guidelines for telemedicine visits.

A Consultation Note must be provided to the referring physician or NPP and must include the reason for the referral, history of present illness, physical examination, and decision-making component (Assessment and Plan).

An NPP is defined as any licensed medical professional as recognized by the state in which the professional practices, including, but not limited to, physician assistants, nurse practitioners, clinical nurse specialists, social workers, registered dietitians, physical therapists, and speech therapists.

Reports on visits requested by a patient, family member, or other third party are not covered by this specification. Second opinions, sometimes called "confirmatory consultations," also are not covered here. Any question on use of the Consultation Note defined here should be resolved by reference to CMS or American Medical Association (AMA) guidelines.

Consultation Note Header Constraints

Consultation Note Body Constraints

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:8375, CONF:10040) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.4"
2. **SHALL** conform to [General Header Constraints](#) template (templateId: 2.16.840.1.113883.10.20.22.1.1)
3. **SHALL** contain exactly one [1..1] **code** (CONF:17176), which **SHALL** be selected from ValueSet [ConsultDocumentType](#) 2.16.840.1.113883.11.20.9.31 **DYNAMIC** (CONF:17177)
 - *The Consultation Note limits document type codes to those codes listed in the Consultation Note LOINC Document Codes table (invalid codes are listed in a separate table). Implementation may use translation elements to specify a local code that is equivalent to a document type (see the Consultation Note translation of local code figure).*
 - The Consultation Note recommends use of a single document type code, 11488-4 "Consultation Note", with further specification provided by author or performer, setting, or specialty. The specialized codes in the Consultation Note LOINC Document Codes table are pre-coordinated with the practice setting or the training or professional level of the author. Use of these codes is not recommended, as this duplicates information that may be present in the header. 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, a Cardiology Consultation Note would not be authored by an Obstetrician.*
4. **SHALL** contain exactly one [1..1] **componentOf** (CONF:8386)
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:8387)
 - a. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:8389)
 - b. This encompassingEncounter **SHALL** contain exactly one [1..1] **id** (CONF:8388)
 - c. This encompassingEncounter **MAY** contain zero or more [0..*] **encounterParticipant** (CONF:8392)
 - a. Such encounterParticipants **SHALL** contain exactly one [1..1] **assignedEntity**, where its type is CDA Assigned Entity (CONF:8396)
 - a. Contains exactly one [1..1] CDA Assigned Entity
 - b. Such encounterParticipants The responsibleParty element, if present, **SHALL** contain an assignedEntity element which **SHALL** contain an assignedPerson element, a representedOrganization element, or both. (CONF:8396)

- d. This encompassingEncounter **MAY** contain zero or one [0..1] **responsibleParty** (CONF:8391)
 - a. This responsibleParty **SHALL** contain exactly one [1..1] **assignedEntity**, where its type is CDA Assigned Entity (CONF:8394)
 - a. Contains exactly one [1..1] CDA Assigned Entity
 - b. This responsibleParty The responsibleParty element, if present, **SHALL** contain an assignedEntity element which **SHALL** contain an assignedPerson element, a representedOrganization element, or both. (CONF:8394)
 - e. This encompassingEncounter The content of effectiveTime conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). **SHALL** be precise to the day (CONF:10132, CONF:10127)
 - f. This encompassingEncounter The content of effectiveTime conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). **SHOULD** be precise to the minute (CONF:10132, CONF:10128)
 - g. This encompassingEncounter The content of effectiveTime conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). **MAY** be precise to the second (CONF:10132, CONF:10129)
 - h. This encompassingEncounter The content of effectiveTime conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). If more precise than day, **SHOULD** include time-zone offset (CONF:10132, CONF:10130)
- 5. **MAY** contain zero or one [0..1] **component** (CONF:9491)
 - a. Contains exactly one [1..1] *Assessment And Plan Section* (templateId: 2.16.840.1.113883.10.20.22.2.9)
- 6. **MAY** contain zero or one [0..1] **component** (CONF:9487)
 - a. Contains exactly one [1..1] *Assessment Section* (templateId: 2.16.840.1.113883.10.20.22.2.8)
- 7. **MAY** contain zero or one [0..1] **component** (CONF:9489)
 - a. Contains exactly one [1..1] *Plan Of Care Section* (templateId: 2.16.840.1.113883.10.20.22.2.10)
- 8. **SHALL** contain exactly one [1..1] **component** (CONF:9493)
 - a. Contains exactly one [1..1] *History Of Present Illness Section* (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.4)
- 9. **SHOULD** contain zero or one [0..1] **component** (CONF:9495)
 - a. Contains exactly one [1..1] *Physical Exam Section* (templateId: 2.16.840.1.113883.10.20.2.10)
- 10. **MAY** contain zero or one [0..1] **component** (CONF:9498)
 - a. Contains exactly one [1..1] *Reason For Referral Section* (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.1)
- 11. **MAY** contain zero or one [0..1] **component** (CONF:9500)
 - a. Contains exactly one [1..1] *Reason For Visit Section* (templateId: 2.16.840.1.113883.10.20.22.2.12)
- 12. **MAY** contain zero or one [0..1] **component** (CONF:9507)
 - a. Contains exactly one [1..1] *Allergies Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.6)
- 13. **MAY** contain zero or one [0..1] **component** (CONF:9509)
 - a. Contains exactly one [1..1] *Chief Complaint Section* (templateId: 1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1)
- 14. **MAY** contain zero or one [0..1] **component** (CONF:10029)
 - a. Contains exactly one [1..1] *Chief Complaint And Reason For Visit Section* (templateId: 2.16.840.1.113883.10.20.22.2.13)
- 15. **MAY** contain zero or one [0..1] **component** (CONF:9513)

- a. Contains exactly one [1..1] *Family History Section* (templateId: 2.16.840.1.113883.10.20.22.2.15)
- 16. **MAY** contain zero or one [0..1] **component** (CONF:9515)
 - a. Contains exactly one [1..1] *General Status Section* (templateId: 2.16.840.1.113883.10.20.2.5)
- 17. **MAY** contain zero or one [0..1] **component** (CONF:9517)
 - a. Contains exactly one [1..1] *History Of Past Illness Section* (templateId: 2.16.840.1.113883.10.20.22.2.20)
- 18. **MAY** contain zero or one [0..1] **component** (CONF:9519)
 - a. Contains exactly one [1..1] *Immunizations Section* (templateId: 2.16.840.1.113883.10.20.22.2.2.1)
- 19. **MAY** contain zero or one [0..1] **component** (CONF:9521))
 - a. Contains exactly one [1..1] *Medications Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.1)
- 20. **MAY** contain zero or one [0..1] **component** (CONF:9523)
 - a. Contains exactly one [1..1] *Problem Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.5)
- 21. **MAY** contain zero or one [0..1] **component** (CONF:9525)
 - a. Contains exactly one [1..1] *Procedures Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.7)
- 22. **MAY** contain zero or one [0..1] **component** (CONF:9527)
 - a. Contains exactly one [1..1] *Results Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.3)
- 23. **MAY** contain zero or one [0..1] **component** (CONF:9529)
 - a. Contains exactly one [1..1] *Review Of Systems Section* (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.18)
- 24. **MAY** contain zero or one [0..1] **component** (CONF:9531)
 - a. Contains exactly one [1..1] *Social History Section* (templateId: 2.16.840.1.113883.10.20.22.2.17)
- 25. **MAY** contain zero or one [0..1] **component** (CONF:9533)
 - a. Contains exactly one [1..1] *Vital Signs Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.4)
- 26. **SHALL** contain at least one [1..*] **inFulfillmentOf** (CONF:8382)
 - a. Such inFulfillmentOfs **SHALL** contain exactly one [1..1] **order** (CONF:8385)
 - a. This order **SHALL** contain at least one [1..*] **id** (CONF:9102)
- 27. **SHALL** include an Assessment and Plan Section, or an Assessment Section and a Plan Section (CONF:9501)
- 28. **SHALL NOT** include an Assessment/Plan Section when an Assessment Section and a Plan of Care Section are present (CONF:10028)
- 29. **SHALL NOT** include a Chief Complaint and Reason for Visit Section with either a Chief Complaint Section or a Reason for Visit Section. (CONF:10055)
- 30. **SHALL** include a Reason for Referral or Reason for Visit section (CONF:9504)

Consultation Note Example

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codeSystemName="LOINC" displayName="GENERAL STATUS"/>
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        <code code="11348-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="HISTORY OF PAST ILLNESS"/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
                <statusCode code="completed"/>
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codeSystemName="LOINC" displayName="Health status"/>

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        <statusCode code="completed"/>
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codeSystemName="LOINC" displayName="Status"/>
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codeSystemName="LOINC"/>
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        <code code="1592775523"/>
        <effectiveTime value="20140803"/>
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codeSystemName="NCI Thesaurus"/>
        <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <administrationUnitCode
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codeSystemName="SNOMEDCT"/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="ActReason"/>
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    <code code="10160-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="History of medication use"/>
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        <code code="1515672612"/>
        <effectiveTime value="20140803"/>
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codeSystemName="NCI Thesaurus"/>
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codeSystemName="SNOMEDCT"/>
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        <performer/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="LOINC" displayName="Problem List"/>
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codeSystemName="SNOMEDCT"/>
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        <code code="47519-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="History of Procedures"/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="NCI Thesaurus"/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="NCI Thesaurus"/>
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codeSystemName="SNOMEDCT"/>
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laboratory data"/>
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      </observation>
    </component>
  </organizer>
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    <id root="MDHT" extension="304370184"/>
    <code code="10187-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="REVIEW OF SYSTEMS"/>
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    <confidentialityCode code="1773153345"/>
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    <code code="29762-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Social history"/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="LOINC"/>
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            </observation>
        </entryRelationship>
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        <templateId root="2.16.840.1.113883.10.20.22.4.78"/>
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        <id root="MDHT" extension="2091042977"/>
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codeSystemName="HL7ActCode" displayName="Assertion"/>
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    <observation classCode="OBS" moodCode="EVN">
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codeSystemName="HL7ActCode" displayName="Assertion"/>
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        <code code="8716-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Vital Signs"/>
        <title>TEXT FOR TITLE</title>
        <confidentialityCode code="1016125999"/>
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codeSystemName="LOINC"/>
            <statusCode code="completed"/>
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        </component>
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    </entry>
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</component>
</structuredBody>
</component>
</ClinicalDocument>

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Continuity Of Care Document

[ClinicalDocument: templateId 2.16.840.1.113883.10.20.22.1.2]

This section, Continuity of Care Document (CCD) Release 1.1, describes CDA constraints in accordance with Stage 1 Meaningful Use. The CCD requirements in this guide supersede CCD Release 1; in the near future, this guide could supersede HITSP C32 .

The CCD is 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 practitioner, system, or setting to support the continuity of care. The primary use case for the CCD is to provide a snapshot in time containing the pertinent clinical, demographic, and administrative data for a specific patient . More specific use cases, such as a Discharge Summary or Progress Note, are available as alternative documents in this guide.

Continuity Of Care Document Header Constraints

Continuity Of Care Document Body Constraints

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:8450, CONF:10038) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.2"
2. **SHALL** conform to [General Header Constraints](#) template (templateId: 2.16.840.1.113883.10.20.22.1.1)
3. **SHALL** contain exactly one [1..1] **code** (CONF:17180)/**@code**="34133-9" *Summarization of Episode Note* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:17181)
4. **SHALL** contain exactly one [1..1] **languageCode** (CONF:5)
5. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:8452)
 - a. This documentationOf **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:8480)
 - a. This serviceEvent **SHALL** contain exactly one [1..1] **@classCode**="PCPR" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8453)
 - b. This serviceEvent **SHALL** contain exactly one [1..1] **effectiveTime** with **@xsi:type**="Effective Time" (CONF:8481)
 - c. This serviceEvent **SHOULD** contain zero or more [0..*] **performer** (CONF:8482)

- a. Such performers **SHALL** contain exactly one [1..1] **@typeCode**= "PRF" (CONF:8458)
 - b. Such performers **MAY** contain zero or one [0..1] **assignedEntity** (CONF:8459)
 - a. This assignedEntity **MAY** contain zero or one [0..1] **code**, which **MAY** be selected from (CodeSystem: 2.16.840.1.113883.6.101 NUCC Health Care Provider Taxonomy) (CONF:8461)
 - b. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:10027)
 - c. This assignedEntity **SHOULD** include zero or one [0..1] id where id/@root ="2.16.840.1.113883.4.6" National Provider Identifier (CONF:10027)
6. **SHALL** contain at least one [1..*] **author** (CONF:9442)
 - a. Such authors **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:9443)
 - a. This assignedAuthor **SHALL** contain exactly one [1..1] assignedPerson or exactly one [1..1] representedOrganization. (CONF:8456)
 - b. This assignedAuthor 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:8457)
7. **SHALL** contain exactly one [1..1] **component** (CONF:9445)
 - a. Contains exactly one [1..1] *Allergies Section* (templateId: 2.16.840.1.113883.10.20.22.2.6.1)
8. **SHALL** contain exactly one [1..1] **component** (CONF:9447)
 - a. Contains exactly one [1..1] *Medications Section* (templateId: 2.16.840.1.113883.10.20.22.2.1.1)
9. **SHALL** contain exactly one [1..1] **component** (CONF:9449)
 - a. Contains exactly one [1..1] *Problem Section* (templateId: 2.16.840.1.113883.10.20.22.2.5.1)
10. **SHALL** contain exactly one [1..1] **component** (CONF:9451)
 - a. Contains exactly one [1..1] *Procedures Section* (templateId: 2.16.840.1.113883.10.20.22.2.7.1)
11. **SHALL** contain exactly one [1..1] **component** (CONF:9453)
 - a. Contains exactly one [1..1] *Results Section* (templateId: 2.16.840.1.113883.10.20.22.2.3.1)
12. **MAY** contain zero or one [0..1] **component** (CONF:9455)
 - a. Contains exactly one [1..1] *Advance Directives Section* (templateId: 2.16.840.1.113883.10.20.22.2.21.1)
13. **MAY** contain zero or one [0..1] **component** (CONF:9457)
 - a. Contains exactly one [1..1] *Encounters Section* (templateId: 2.16.840.1.113883.10.20.22.2.22.1)
14. **MAY** contain zero or one [0..1] **component** (CONF:9459)
 - a. Contains exactly one [1..1] *Family History Section* (templateId: 2.16.840.1.113883.10.20.22.2.15)
15. **MAY** contain zero or one [0..1] **component** (CONF:9461)
 - a. Contains exactly one [1..1] *Functional Status Section* (templateId: 2.16.840.1.113883.10.20.22.2.14)
16. **MAY** contain zero or one [0..1] **component** (CONF:9463)
 - a. Contains exactly one [1..1] *Immunizations Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.2)
17. **MAY** contain zero or one [0..1] **component** (CONF:9466)
 - a. Contains exactly one [1..1] *Medical Equipment Section* (templateId: 2.16.840.1.113883.10.20.22.2.23)
18. **MAY** contain zero or one [0..1] **component** (CONF:9468)
 - a. Contains exactly one [1..1] *Payers Section* (templateId: 2.16.840.1.113883.10.20.22.2.18)
19. **MAY** contain zero or one [0..1] **component** (CONF:9470)

- a. Contains exactly one [1..1] *Plan Of Care Section* (templateId: 2.16.840.1.113883.10.20.22.2.10)
- 20.MAY** contain zero or one [0..1] **component** (CONF:9472)
- a. Contains exactly one [1..1] *Social History Section* (templateId: 2.16.840.1.113883.10.20.22.2.17)
- 21.MAY** contain zero or one [0..1] **component** (CONF:9474)
- a. Contains exactly one [1..1] *Vital Signs Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.4)

Continuity Of Care Document Example

```
<?xml version="1.0" encoding="UTF-8"?>
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xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
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codeSystemName="LOINC" displayName="Allergies, adverse reactions, alerts"/>
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codeSystemName="HL7ActCode"/>
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codeSystemName="LOINC" displayName="History of medication use"/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="LOINC" displayName="History of Procedures"/>
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codeSystemName="LOINC" displayName="Functional status assessment"/>
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        <languageCode code="Code forlanguageCode"/>
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            <templateId root="2.16.840.1.113883.10.20.22.4.1"/>
            <id root="MDHT" extension="2046371307"/>
            <code code="1006163239"/>
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                    <templateId root="2.16.840.1.113883.10.20.22.4.2"/>
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codeSystemName="LOINC"/>
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codeSystemName="LOINC"/>
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        </entryRelationship>
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</entry>
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        <id root="MDHT" extension="1624816440"/>
        <code code="373930000" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Cognitive function finding"/>
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        <languageCode code="Code forlanguageCode"/>
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      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <id root="MDHT" extension="1221029827"/>
      <code code="248536006" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="finding of functional performance
and activity"/>
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    <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
    <id root="MDHT" extension="758669152"/>
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          <code code="2264892003" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="number of pressure ulcers"/>
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          <author/>
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          <code code="420905001" codeSystem="2.16.840.1.113883.6.96"
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codeSystemName="LOINC"/>
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        <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
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codeSystemName="SNOMEDCT"/>
                <statusCode code="completed"/>
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codeSystemName="SNOMEDCT"/>
                <statusCode code="completed"/>
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codeSystemName="ActReason"/>
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codeSystemName="LOINC" displayName="Payment Sources"/>
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    <code code="18776-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Treatment plan"/>
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        <id root="MDHT" extension="1741901427"/>
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        <code code="1506864305"/>
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    <entry>
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codeSystemName="SNOMEDCT"/>
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        <id root="MDHT" extension="2053991243"/>
        <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Assertion"/>
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    <templateId root="2.16.840.1.113883.10.20.22.4.85"/>
    <id root="MDHT" extension="1773831800"/>
    <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Assertion"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <languageCode code="Code forlanguageCode"/>
  </observation>
</entry>
</section>
</component>
<component>
  <section>
    <typeId root="2.16.840.1.113883.1.3"/>
    <templateId root="2.16.840.1.113883.10.20.22.2.4"/>
    <id root="MDHT" extension="1106155193"/>
    <code code="8716-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Vital Signs"/>
    <title>TEXT FOR TITLE</title>
    <confidentialityCode code="1820773641"/>
    <languageCode code="Code forlanguageCode"/>
    <entry>
      <organizer classCode="CLUSTER" moodCode="EVN">
        <typeId root="2.16.840.1.113883.1.3"/>
        <templateId root="2.16.840.1.113883.10.20.22.4.26"/>
        <id root="MDHT" extension="1986051714"/>
        <code code="46680005" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Vital signs"/>
        <statusCode code="completed"/>
        <effectiveTime>
          <low value="2014"/>
          <high value="2014"/>
        </effectiveTime>
        <component>
          <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.27"/>
            <code codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
            <statusCode code="completed"/>
          </observation>
        </component>
      </organizer>
    </entry>
  </section>
</component>

```

```
</organizer>
</entry>
</section>
</component>
</structuredBody>
</component>
</ClinicalDocument>
```

Diagnostic Imaging Report

[ClinicalDocument: templateId 2.16.840.1.113883.10.20.22.1.5]

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.

Diagnostic Imaging Report Header Constraints

Diagnostic Imaging Report Body Constraints

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:8404, CONF:10042) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.5"
2. **SHALL** conform to [General Header Constraints](#) template (templateId: 2.16.840.1.113883.10.20.22.1.1)
3. **SHALL** contain exactly one [1..1] **code** (CONF:14833), which **SHALL** be selected from ValueSet [DIRDocumentTypeCodes](#) 2.16.840.1.113883.11.20.9.32 **DYNAMIC** (CONF:14834)
 - *Given that DIR documents may be transformed from established collections of imaging reports already stored with their own type codes, there is no static set of Document Type codes. The set of LOINC codes listed in the DIR LOINC Document Type Codes table may be extended by additions to LOINC and supplemented by local codes as translations.*

The DIR document recommends use of a single document type code, 18748-4 "Diagnostic Imaging Report", with further specification provided by author or performer, setting, or specialty. Some of these codes in the DIR LOINC Document Type Codes table are pre-coordinated with either the imaging modality, body part examined, or specific imaging method such as the view. Use of these codes is not recommended, as this duplicates information potentially present with the header. 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. This table is drawn from LOINC Version 2.36, June 30, 2011, and consists of codes whose scale is DOC and that refer to reports for diagnostic imaging procedures.
4. **SHALL** contain exactly one [1..1] **id** (CONF:5363)
5. **SHALL** contain [0..0] **informant** (CONF:8410)
 - a. Contains exactly one [1..1] CDA Informant12
6. **MAY** contain zero or more [0..*] **informationRecipient** (CONF:8411)
 - *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.*
 - *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.*
 - a. Contains exactly one [1..1] CDA Information Recipient
7. **MAY** contain zero or one [0..1] **participant** (CONF:8414)
 - a. This participant **SHALL** contain exactly one [1..1] **associatedEntity** (CONF:8415)

- a. This associatedEntity **SHALL** contain exactly one [1..1] **associatedPerson** (CONF:8415)
- a. This associatedPerson **SHALL** contain exactly one [1..1] **name** (CONF:9406)
- 8. **MAY** contain zero or one [0..1] **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 and 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. In both cases, inFulfillmentOf/order/id is mapped to the DICOM Accession Number in the imaging data.

- a.
 - 9. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:8416)
 - a. This documentationOf **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:8431)
 - a. This serviceEvent **SHALL** contain exactly one [1..1] **@classCode= "ACT"** Act (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8430)
 - b. This serviceEvent **SHALL** contain exactly one [1..1] **code** (CONF:8419)
- 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.*
- c. This serviceEvent **SHOULD** contain zero or more [0..*] **id** (CONF:8418)
 - d. This serviceEvent **SHOULD** contain zero or more [0..*] **performer**, where its type is *Physician Reading Study Performer* (CONF:8422)
 - a. Contains exactly one [1..1] *Physician Reading Study Performer* (templateId: 2.16.840.1.113883.10.20.6.2.1)

- 10. **MAY** contain zero or one [0..1] **relatedDocument** (CONF:8432)

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.

- a. This relatedDocument The relatedDocument/id/@root attribute **SHALL** be a syntactically correct OID, and **SHALL NOT** be a UUID. (CONF:10030)
 - 11. **MAY** contain zero or one [0..1] **componentOf** (CONF:8434)
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:8449)
 - a. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:8437)
 - b. This encompassingEncounter **SHALL** contain at least one [1..*] **id** (CONF:8435)
- In the case of transformed DICOM SR documents, an appropriate null flavor MAY be used if the id is unavailable.*
- c. This encompassingEncounter **SHOULD** contain zero or one [0..1] **encounterParticipant**, where its type is *Physicianof Record Participant* (CONF:8448)

- a. Contains exactly one [1..1] *Physicianof Record Participant* (templateId: 2.16.840.1.113883.10.20.6.2.2)
- d. This encompassingEncounter **MAY** contain zero or one [0..1] **responsibleParty** (CONF:8438)
 - a. This responsibleParty **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:9407)
 - a. This assignedEntity **SHOULD** contain zero or one [0..1] assignedPerson OR contain zero or one [0..1] representedOrganization (CONF:8439)
- e. This encompassingEncounter The content of effectiveTime conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). **SHALL** be precise to the day (CONF:10133, CONF:10127)
- f. This encompassingEncounter The content of effectiveTime conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). **SHOULD** be precise to the minute (CONF:10133, CONF:10128)
- g. This encompassingEncounter The content of effectiveTime conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). **MAY** be precise to the second (CONF:10133, CONF:10129)
- h. This encompassingEncounter The content of effectiveTime conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). If more precise than day, **SHOULD** include time-zone offset (CONF:10133, CONF:10130)
- 12. **SHALL** contain exactly one [1..1] **component** (CONF:9484)
 - a. Contains exactly one [1..1] *Findings Section* (templateId: 2.16.840.1.113883.10.20.6.1.2)
- 13. **SHOULD** contain zero or one [0..1] **component** (CONF:15141)
 - a. Contains exactly one [1..1] *DICOM Object Catalog Section* (templateId: 2.16.840.1.113883.10.20.6.1.1)
- 14. This code **SHOULD** contain zero or one [0..1] @code="18748-4" Diagnostic Imaging Report (CodeSystem: LOINC2.16.840.1.113883.6.1) (CONF:8409)
- 15. 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
- 16. With the exception of the DICOM Object Catalog (templateId 2.16.840.1.113883.10.20.6.1.1), all sections within the Diagnostic Imaging Report content **SHOULD** contain a title element (CONF:9409)
- 17. The section/code **SHOULD** be selected from LOINC or DICOM for sections not listed in the DIR Section Type Codes table (CONF:9410)
- 18. All sections defined in the DIR Section Type Codes table **SHALL** be top-level sections (CONF:9411)
- 19. A section element **SHALL** have a code element which **SHALL** contain a LOINC code or DCM code for sections which have no LOINC equivalent. This only applies to sections described in the DIR Section Type Codes table (CONF:9412)
- 20. Apart from the DICOM Object Catalog (templateId 2.16.840.1.113883.10.20.6.1.1), all other instances of section **SHALL** contain at least one text element or one or more component elements (CONF:9413)
- 21. All text or component elements **SHALL** contain content. text elements **SHALL** contain PCDATA or child elements, and component elements **SHALL** contain child elements (CONF:9414)
- 22. 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
- 23. If clinical statements are present, the section/text **SHALL** represent faithfully all such statements and **MAY** contain additional text

Diagnostic Imaging Report Example

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <realmCode code="US"/>
  <typeId root="2.16.840.1.113883.1.3"/>
```

```
<templateId root="2.16.840.1.113883.10.20.22.1.5"/>
<templateId root="2.16.840.1.113883.10.20.22.1.1"/>
<id root="MDHT" extension="1043626978"/>
<code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
<title>TEXT FOR TITLE</title>
<effectiveTime/>
<confidentialityCode codeSystem="2.16.840.1.113883.5.25"
codeSystemName="ConfidentialityCode"/>
<setId root="MDHT" extension="5b8412ae-33e3-4efc-ba81-d249dfdda4a7"/>
<versionNumber value="1"/>
<recordTarget>
  <typeId root="2.16.840.1.113883.1.3"/>
  <patientRole/>
</recordTarget>
<author>
  <typeId root="2.16.840.1.113883.1.3"/>
  <time/>
  <assignedAuthor/>
</author>
<informant/>
<custodian/>
<informationRecipient/>
<participant>
  <associatedEntity>
    <associatedPerson/>
  </associatedEntity>
</participant>
<inFulfillmentOf>
  <order/>
</inFulfillmentOf>
<documentationOf>
  <serviceEvent classCode="ACT">
    <id root="MDHT" extension="205819016"/>
    <code code="739349761"/>
    <performer/>
  </serviceEvent>
</documentationOf>
<relatedDocument>
  <parentDocument/>
</relatedDocument>
<componentOf>
  <encompassingEncounter>
    <id root="MDHT" extension="52419059"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <responsibleParty/>
    <encounterParticipant/>
  </encompassingEncounter>
</componentOf>
<component>
  <structuredBody>
    <component>
      <section>
        <typeId root="2.16.840.1.113883.1.3"/>
        <templateId root="2.16.840.1.113883.10.20.6.1.2"/>
        <id root="MDHT" extension="1193414586"/>
        <code code="2040100127"/>
        <title>TEXT FOR TITLE</title>
        <confidentialityCode code="183499768"/>
      </section>
    </component>
  </structuredBody>
</component>
```



```
<section>
  <typeId root="2.16.840.1.113883.1.3"/>
  <templateId root="2.16.840.1.113883.10.20.6.1.1"/>
  <id root="MDHT" extension="495649256"/>
  <code code="121181" codeSystem="1.2.840.10008.2.16.4"
codeSystemName="DCM" displayName="Dicom Object Catalog"/>
  <title>TEXT FOR TITLE</title>
  <confidentialityCode code="16328311"/>
  <entry>
    <act classCode="ACT" moodCode="EVN">
      <typeId root="2.16.840.1.113883.1.3"/>
      <templateId root="2.16.840.1.113883.10.20.6.2.6"/>
      <id root="MDHT" extension="487513392"/>
      <code code="113014" codeSystem="1.2.840.10008.2.16.4"
codeSystemName="DCM"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <entryRelationship>
        <act classCode="ACT" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.63"/>
          <code code="113015" codeSystem="1.2.840.10008.2.16.4"
codeSystemName="DCM"/>
          </act>
        </entryRelationship>
      </act>
    </entry>
  </section>
</component>
</structuredBody>
</component>
</ClinicalDocument>
```

Discharge Summary

[ClinicalDocument: templateId 2.16.840.1.113883.10.20.22.1.8]

Discharge Summary Header Constraints

Discharge Summary Body Constraints

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:8375, CONF:10043) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.8"
2. **SHALL** conform to [General Header Constraints](#) template (templateId: 2.16.840.1.113883.10.20.22.1.1)
3. **SHALL** contain exactly one [1..1] **code** (CONF:17178), which **SHALL** be selected from ValueSet [DischargeSummaryDocumentTypeCode](#) 2.16.840.1.113883.11.20.4.1 **DYNAMIC** (CONF:17179)
4. **MAY** contain zero or one [0..1] **component** (CONF:10111)
 - a. Contains exactly one [1..1] [Hospital Admission Medications Section Entries Optional](#) (templateId: 2.16.840.1.113883.10.20.22.2.44)
5. **SHALL** contain exactly one [1..1] **component** (CONF:9928)
 - a. Contains exactly one [1..1] [Hospital Admission Diagnosis Section](#) (templateId: 2.16.840.1.113883.10.20.22.2.43)
6. **SHALL** contain exactly one [1..1] **component** (CONF:9546)

- a. Contains exactly one [1..1] *Hospital Discharge Diagnosis Section* (templateId: 2.16.840.1.113883.10.20.22.2.24)
- 7. **MAY** contain zero or one [0..1] **component** (CONF:9558)
 - a. Contains exactly one [1..1] *Discharge Diet Section* (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.33)
- 8. **SHALL** contain exactly one [1..1] **component** (CONF:9548)
 - a. Contains exactly one [1..1] *Hospital Discharge Medications Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.11)
- 9. **MAY** contain zero or one [0..1] **component** (CONF:9562)
 - a. Contains exactly one [1..1] *Functional Status Section* (templateId: 2.16.840.1.113883.10.20.22.2.14)
- 10. **MAY** contain zero or one [0..1] **component** (CONF:9566)
 - a. Contains exactly one [1..1] *History Of Present Illness Section* (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.4)
- 11. **SHALL** contain exactly one [1..1] **component** (CONF:9544)
 - a. Contains exactly one [1..1] *Hospital Course Section* (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.5)
- 12. **SHALL** contain exactly one [1..1] **component** (CONF:9550)
 - a. Contains exactly one [1..1] *Plan Of Care Section* (templateId: 2.16.840.1.113883.10.20.22.2.10)
- 13. **MAY** contain zero or one [0..1] **component** (CONF:9564)
 - a. Contains exactly one [1..1] *History Of Past Illness Section* (templateId: 2.16.840.1.113883.10.20.22.2.20)
- 14. **SHALL** contain exactly one [1..1] **componentOf** (CONF:9539)
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:8472)
 - a. This encompassingEncounter **SHALL** contain exactly one [1..1] **dischargeDispositionCode** (CONF:8476)
 - b. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:8473, CONF:8475)
 - c. This encompassingEncounter **MAY** contain zero or one [0..1] **encounterParticipant** (CONF:8478)
 - a. This encounterParticipant **SHALL** contain at least one [1..*] **assignedEntity**, where its type is CDA Assigned Entity (CONF:8478)
 - a. Contains exactly one [1..1] CDA Assigned Entity
 - b. This encounterParticipant The responsibleParty element, if present, **SHALL** contain an assignedEntity element which **SHALL** contain an assignedPerson element, a representedOrganization element, or both. (CONF:8478)
 - d. This encompassingEncounter **MAY** contain zero or one [0..1] **responsibleParty** (CONF:8479)
 - a. This responsibleParty **SHALL** contain at least one [1..*] **assignedEntity**, where its type is CDA Assigned Entity (CONF:8479)
 - a. Contains exactly one [1..1] CDA Assigned Entity
 - b. This responsibleParty The responsibleParty element, if present, **SHALL** contain an assignedEntity element which **SHALL** contain an assignedPerson element, a representedOrganization element, or both. (CONF:8479)
 - e. This encompassingEncounter This encompassingEncounter **SHALL** contain exactly one [1..1] effectiveTime/low (CONF:8473)
 - f. This encompassingEncounter This encompassingEncounter **SHALL** contain exactly one [1..1] effectiveTime/high (CONF:8475)
 - g. This encompassingEncounter dischargeDispositionCode **SHOULD** be selected from ValueSet NUBC UB-04 FL17-Patient Status 2.16.840.1.113883.6.301.5 STATIC (CONF:8476)

- h. This encompassingEncounter dischargeDispositionCode, if access to NUBC is unavailable, **MAY** be selected from CodeSystem 2.16.840.1.113883.12.112 HL7 Discharge Disposition (CONF:8476)
- 15. **MAY** contain zero or one [0..1] **component** (CONF:9556)
 - a. Contains exactly one [1..1] *Chief Complaint And Reason For Visit Section* (templateId: 2.16.840.1.113883.10.20.22.2.13)
- 16. **MAY** contain zero or one [0..1] **component** (CONF:9554)
 - a. Contains exactly one [1..1] *Chief Complaint Section* (templateId: 1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1)
- 17. **MAY** contain zero or one [0..1] **component** (CONF:9560)
 - a. Contains exactly one [1..1] *Family History Section* (templateId: 2.16.840.1.113883.10.20.22.2.15)
- 18. **MAY** contain zero or one [0..1] **component** (CONF:9924)
 - a. Contains exactly one [1..1] *Hospital Consultations Section* (templateId: 2.16.840.1.113883.10.20.22.2.42)
- 19. **MAY** contain zero or one [0..1] **component** (CONF:9926)
 - a. Contains exactly one [1..1] *Hospital Discharge Instructions Section* (templateId: 2.16.840.1.113883.10.20.22.2.41)
- 20. **MAY** contain zero or one [0..1] **component** (CONF:9568)
 - a. Contains exactly one [1..1] *Hospital Discharge Physical Section* (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.26)
- 21. **MAY** contain zero or one [0..1] **component** (CONF:9570)
 - a. Contains exactly one [1..1] *Hospital Discharge Studies Summary Section* (templateId: 2.16.840.1.113883.10.20.22.2.16)
- 22. **MAY** contain zero or one [0..1] **component** (CONF:9572)
 - a. Contains exactly one [1..1] *Immunizations Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.2)
- 23. **MAY** contain zero or one [0..1] **component** (CONF:9574)
 - a. Contains exactly one [1..1] *Problem Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.5)
- 24. **MAY** contain zero or one [0..1] **component** (CONF:9576)
 - a. Contains exactly one [1..1] *Procedures Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.7)
- 25. **MAY** contain zero or one [0..1] **component** (CONF:9578)
 - a. Contains exactly one [1..1] *Reason For Visit Section* (templateId: 2.16.840.1.113883.10.20.22.2.12)
- 26. **MAY** contain zero or one [0..1] **component** (CONF:9580)
 - a. Contains exactly one [1..1] *Review Of Systems Section* (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.18)
- 27. **MAY** contain zero or one [0..1] **component** (CONF:9582)
 - a. Contains exactly one [1..1] *Social History Section* (templateId: 2.16.840.1.113883.10.20.22.2.17)
- 28. **SHALL** contain exactly one [1..1] **component** (CONF:9542)
 - a. Contains exactly one [1..1] *Allergies Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.6)
- 29. **MAY** contain zero or one [0..1] **component** (CONF:9584)
 - a. Contains exactly one [1..1] *Vital Signs Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.4)

30. SHALL NOT include a Chief Complaint and Reason for Visit Section with either a Chief Complaint Section or a Reason for Visit Section. (CONF:10055)

Discharge Summary Example

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <realmCode code="US"/>
  <typeId root="2.16.840.1.113883.1.3"/>
  <templateId root="2.16.840.1.113883.10.20.22.1.8"/>
  <templateId root="2.16.840.1.113883.10.20.22.1.1"/>
  <id root="MDHT" extension="526073652"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <title>TEXT FOR TITLE</title>
  <effectiveTime/>
  <confidentialityCode codeSystem="2.16.840.1.113883.5.25"
codeSystemName="ConfidentialityCode"/>
  <setId root="MDHT" extension="13006dd4-324d-4654-8764-6102f34d1227"/>
  <versionNumber value="1"/>
  <recordTarget>
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History And Physical Note

[ClinicalDocument: templateId 2.16.840.1.113883.10.20.22.1.3]

A History and Physical 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, typically supplied by the patient or their caregiver, about 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 History and Physical Note.

History And Physical Note Header Constraints

History And Physical Note Body Constraints

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:8283) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.3"
2. **SHALL** conform to [General Header Constraints](#) template (templateId: 2.16.840.1.113883.10.20.22.1.1)
3. **SHALL** contain exactly one [1..1] **code** (CONF:17185), which **SHALL** be selected from ValueSet [HPDocumentType](#) 3. 2.16.840.1.113883.1.11.20.22 **DYNAMIC** (CONF:17186)
4. **MAY** contain zero or more [0..*] **inFulfillmentOf** (CONF:8336, CONF:8337)
 - *An inFulfillmentOf element records 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 this HP Note may be in partial fulfillment of that referral.*
 - a. Contains exactly one [1..1] CDA In Fulfillment Of
5. **SHALL** contain exactly one [1..1] **componentOf** (CONF:8338)
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:8339)
 - a. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (ii., CONF:8341)
 - b. This encompassingEncounter **SHALL** contain exactly one [1..1] **id** (i., CONF:8340)
 - c. This encompassingEncounter **MAY** contain zero or one [0..1] **encounterParticipant** (v., CONF:8342)
 - a. This encounterParticipant **SHALL** contain exactly one [1..1] **assignedEntity**, where its type is CDA Assigned Entity (CONF:8343)
 - a. Contains exactly one [1..1] CDA Assigned Entity
 - b. This encounterParticipant The responsibleParty element, if present, **SHALL** contain an assignedEntity element which **SHALL** contain an assignedPerson element, a representedOrganization element, or both. (CONF:8343)
 - d. This encompassingEncounter **MAY** contain zero or one [0..1] **location**, where its type is CDA Location (CONF:8344)
 - a. Contains exactly one [1..1] CDA Location
 - e. This encompassingEncounter **MAY** contain zero or one [0..1] **responsibleParty** (iv., CONF:8345)
 - a. This responsibleParty **SHALL** contain exactly one [1..1] **assignedEntity**, where its type is CDA Assigned Entity (CONF:8348)
 - a. Contains exactly one [1..1] CDA Assigned Entity
 - b. This responsibleParty The responsibleParty element, if present, **SHALL** contain an assignedEntity element which **SHALL** contain an assignedPerson element, a representedOrganization element, or both. (CONF:8348)
 - f. This encompassingEncounter The content of effectiveTime conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). **SHALL** be precise to the day (CONF:10135, CONF:10127)
 - g. This encompassingEncounter The content of effectiveTime conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). **SHOULD** be precise to the minute (CONF:10135, CONF:10128)
 - h. This encompassingEncounter The content of effectiveTime conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). **MAY** be precise to the second (CONF:10135, CONF:10129)

- i. This encompassingEncounter The content of effectiveTime conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). If more precise than day, **SHOULD** include time-zone offset (CONF:10135, CONF:10130)
6. **SHALL** contain exactly one [1..1] **component** (CONF:9602)
 - a. Contains exactly one [1..1] *Allergies Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.6)
7. **MAY** contain zero or one [0..1] **component** (CONF:9605)
 - a. Contains exactly one [1..1] *Assessment Section* (templateId: 2.16.840.1.113883.10.20.22.2.8)
8. **MAY** contain zero or one [0..1] **component** (CONF:9607)
 - a. Contains exactly one [1..1] *Plan Of Care Section* (templateId: 2.16.840.1.113883.10.20.22.2.10)
9. **MAY** contain zero or one [0..1] **component** (CONF:9987)
 - a. Contains exactly one [1..1] *Assessment And Plan Section* (templateId: 2.16.840.1.113883.10.20.22.2.9)
10. **MAY** contain zero or one [0..1] **component** (CONF:9611)
 - a. Contains exactly one [1..1] *Chief Complaint Section* (templateId: 1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1)
11. **MAY** contain zero or one [0..1] **component** (CONF:9613)
 - a. Contains exactly one [1..1] *Chief Complaint And Reason For Visit Section* (templateId: 2.16.840.1.113883.10.20.22.2.13)
12. **SHALL** contain exactly one [1..1] **component** (CONF:9615)
 - a. Contains exactly one [1..1] *Family History Section* (templateId: 2.16.840.1.113883.10.20.22.2.15)
13. **SHALL** contain exactly one [1..1] **component** (CONF:9617)
 - a. Contains exactly one [1..1] *General Status Section* (templateId: 2.16.840.1.113883.10.20.2.5)
14. **SHALL** contain exactly one [1..1] **component** (CONF:9619)
 - a. Contains exactly one [1..1] *History Of Past Illness Section* (templateId: 2.16.840.1.113883.10.20.22.2.20)
15. **SHALL** contain exactly one [1..1] **component** (CONF:9623)
 - a. Contains exactly one [1..1] *Medications Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.1)
16. **SHALL** contain exactly one [1..1] **component** (CONF:9625)
 - a. Contains exactly one [1..1] *Physical Exam Section* (templateId: 2.16.840.1.113883.10.20.2.10)
17. **MAY** contain zero or one [0..1] **component** (CONF:9627)
 - a. Contains exactly one [1..1] *Reason For Visit Section* (templateId: 2.16.840.1.113883.10.20.22.2.12)
18. **SHALL** contain exactly one [1..1] **component** (CONF:9629)
 - a. Contains exactly one [1..1] *Results Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.3)
19. **SHALL** contain exactly one [1..1] **component** (CONF:9631)
 - a. Contains exactly one [1..1] *Review Of Systems Section* (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.18)
20. **SHALL** contain exactly one [1..1] **component** (CONF:9633)
 - a. Contains exactly one [1..1] *Social History Section* (templateId: 2.16.840.1.113883.10.20.22.2.17)
21. **SHOULD** contain zero or one [0..1] **component** (CONF:9621)
 - a. Contains exactly one [1..1] *History Of Present Illness Section* (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.4)

22. MAY contain zero or one [0..1] **component** (CONF:9637)

- a. Contains exactly one [1..1] *Immunizations Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.2)

23. MAY contain zero or one [0..1] **component** (CONF:9639)

- a. Contains exactly one [1..1] *Problem Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.5)

24. MAY contain zero or one [0..1] **component** (CONF:9641)

- a. Contains exactly one [1..1] *Procedures Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.7)

25. SHALL contain exactly one [1..1] **component** (CONF:9635)

- a. Contains exactly one [1..1] *Vital Signs Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.4)

26. MAY contain zero or one [0..1] **component** (CONF:16807)

- a. Contains exactly one [1..1] *Instructions Section* (templateId: 2.16.840.1.113883.10.20.22.2.45)

27. SHALL include an Assessment and Plan Section, or an Assessment Section and a Plan Section (CONF:9986)

28. SHALL NOT include an Assessment/Plan Section when an Assessment Section and a Plan of Care Section are present

29. SHALL include a Chief Complaint and Reason for Visit Section, Chief Complaint Section, or a Reason for Visit Section (CONF:9642)

30. SHALL NOT include a Chief Complaint and Reason for Visit Section with either a Chief Complaint Section or a Reason for Visit Section. (CONF:10057)

History And Physical Note Example

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<?xml version="1.0" encoding="UTF-8"?>
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  xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
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codeSystemName="LOINC" displayName="PHYSICAL EXAMINATION"/>
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codeSystemName="HL7ActCode" displayName="Assertion"/>
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codeSystemName="SNOMEDCT"/>
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        <id root="MDHT" extension="1501841439"/>
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codeSystemName="SNOMEDCT" displayName="number of pressure ulcers"/>
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codeSystemName="SNOMEDCT" displayName="Highest Pressure Ulcer Stage"/>
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codeSystemName="LOINC" displayName="Reason for Visit"/>
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    <code code="30954-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Relevant diagnostic tests and/or
laboratory data"/>
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codeSystemName="LOINC" displayName="Social history"/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="HL7ActCode" displayName="Assertion"/>
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codeSystemName="NCI Thesaurus"/>
        <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
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        <performer/>
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codeSystemName="LOINC" displayName="Problem List"/>
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codeSystemName="HL7ActClass" displayName="Concern"/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="LOINC" displayName="History of Procedures"/>
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codeSystemName="SNOMEDCT"/>
    <specimen/>
    <performer/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="LOINC" displayName="Vital Signs"/>
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codeSystemName="SNOMEDCT" displayName="Vital signs"/>
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codeSystemName="LOINC" displayName="Instructions"/>
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codeSystemName="SNOMEDCT"/>
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        </act>
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    </section>
  </component>
</structuredBody>
</component>
</ClinicalDocument>

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Operative Note

[ClinicalDocument: templateId 2.16.840.1.113883.10.20.22.1.7]

The Operative Note Fluids section may be used to record fluids administered during the surgical procedure.

Operative Note Header Constraints

Operative Note Body Constraints

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:8483, CONF:10048) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.7"
2. **SHALL** conform to [General Header Constraints](#) template (templateId: 2.16.840.1.113883.10.20.22.1.1)
3. **SHALL** contain exactly one [1..1] **code** (CONF:17187), which **SHALL** be selected from ValueSet [SurgicalOperationNoteDocumentTypeCode](#) 2.16.840.1.113883.11.20.1.1 **DYNAMIC** (CONF:17188)
4. **SHALL** contain at least one [1..*] **documentationOf** (CONF:8486)
 - a. Such **documentationOfs** **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:8493)
 - a. This **serviceEvent** **SHALL** contain exactly one [1..1] **code** (i., CONF:8487)
 - b. This **serviceEvent** **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:8494)
 - c. This **serviceEvent** **SHALL** contain exactly one [1..1] **performer** (CONF:8489)

The performer represents 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 Nonphysician Providers (NPP) 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 orthopaedic 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.

- a. This **performer** **SHALL** contain exactly one [1..1] **@typeCode**="PPRF" (CONF:8495)
- b. This **performer** **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:10917)
 - a. This **assignedEntity** **SHALL** contain exactly one [1..1] **code** (CONF:8490, CONF:8491), which **SHALL** be selected from ValueSet [ProviderType](#) 2.16.840.1.113883.3.88.12.3221.4 **DYNAMIC**

The performer represents 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 Nonphysician Providers (NPP) 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 orthopaedic 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.

- d. This serviceEvent i. 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 Procedure 2.16.840.1.113883.3.88.12.80.28 DYNAMIC. (CONF:8487)
 - e. This serviceEvent The serviceEvent/effectiveTime **SHALL** be present with effectiveTime/low (CONF:8488)
 - f. This serviceEvent If a width is not present, the serviceEvent/effectiveTime **SHALL** include effectiveTime/high. (CONF:10058)
 - g. This serviceEvent 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:10060)
 - h. This serviceEvent Any assistants **SHALL** be identified and **SHALL** be identified as secondary performers (SPRF)
 - i. This serviceEvent The content of effectiveTime conforms to US Realm Date and Time (DT.US.FIELDDED) (2.16.840.1.113883.10.20.22.5.4). **SHALL** be precise to the day (CONF:10136, CONF:10127)
 - j. This serviceEvent The content of effectiveTime conforms to US Realm Date and Time (DT.US.FIELDDED) (2.16.840.1.113883.10.20.22.5.4). **SHOULD** be precise to the minute (CONF:10136, CONF:10128)
 - k. This serviceEvent The content of effectiveTime conforms to US Realm Date and Time (DT.US.FIELDDED) (2.16.840.1.113883.10.20.22.5.4). **MAY** be precise to the second (CONF:10136, CONF:10129)
 - l. This serviceEvent The content of effectiveTime conforms to US Realm Date and Time (DT.US.FIELDDED) (2.16.840.1.113883.10.20.22.5.4). If more precise than day, **SHOULD** include time-zone offset (CONF:10136, CONF:10130)
5. **SHALL** contain exactly one [1..1] **component** (CONF:9883)
 - a. Contains exactly one [1..1] *Anesthesia Section* (templateId: 2.16.840.1.113883.10.20.22.2.25)
 6. **SHALL** contain exactly one [1..1] **component** (CONF:9885)
 - a. Contains exactly one [1..1] *Complications Section* (templateId: 2.16.840.1.113883.10.20.22.2.37)
 7. **SHALL** contain exactly one [1..1] **component** (CONF:9913)
 - a. Contains exactly one [1..1] *Postoperative Diagnosis Section* (templateId: 2.16.840.1.113883.10.20.22.2.35)
 8. **SHALL** contain exactly one [1..1] **component** (CONF:9888)
 - a. Contains exactly one [1..1] *Preoperative Diagnosis Section* (templateId: 2.16.840.1.113883.10.20.22.2.34)
 9. **SHALL** contain exactly one [1..1] **component** (CONF:9890)
 - a. Contains exactly one [1..1] *Procedure Estimated Blood Loss Section* (templateId: 2.16.840.1.113883.10.20.18.2.9)
 10. **SHALL** contain exactly one [1..1] **component** (CONF:9892)
 - a. Contains exactly one [1..1] *Procedure Findings Section* (templateId: 2.16.840.1.113883.10.20.22.2.28)
 11. **SHALL** contain exactly one [1..1] **component** (CONF:9894)
 - a. Contains exactly one [1..1] *Procedure Specimens Taken Section* (templateId: 2.16.840.1.113883.10.20.22.2.31)
 12. **SHALL** contain exactly one [1..1] **component** (CONF:9896)
 - a. Contains exactly one [1..1] *Procedure Description Section* (templateId: 2.16.840.1.113883.10.20.22.2.27)
 13. **MAY** contain zero or one [0..1] **component** (CONF:9898)
 - a. Contains exactly one [1..1] *Procedure Implants Section* (templateId: 2.16.840.1.113883.10.20.22.2.40)
 14. **MAY** contain zero or one [0..1] **component** (CONF:9900)

- a. Contains exactly one [1..1] *Operative Note Fluid Section* (templateId: 2.16.840.1.113883.10.20.7.12)
- 15. **MAY** contain zero or one [0..1] **component** (CONF:9902)
 - a. Contains exactly one [1..1] *Operative Note Surgical Procedure Section* (templateId: 2.16.840.1.113883.10.20.7.14)
- 16. **MAY** contain zero or one [0..1] **component** (CONF:9904)
 - a. Contains exactly one [1..1] *Plan Of Care Section* (templateId: 2.16.840.1.113883.10.20.22.2.10)
- 17. **MAY** contain zero or one [0..1] **component** (CONF:9906)
 - a. Contains exactly one [1..1] *Planned Procedure Section* (templateId: 2.16.840.1.113883.10.20.22.2.30)
- 18. **MAY** contain zero or one [0..1] **component** (CONF:9908)
 - a. Contains exactly one [1..1] *Procedure Disposition Section* (templateId: 2.16.840.1.113883.10.20.18.2.12)
- 19. **MAY** contain zero or one [0..1] **component** (CONF:9910)
 - a. Contains exactly one [1..1] *Procedure Indications Section* (templateId: 2.16.840.1.113883.10.20.22.2.29)
- 20. **MAY** contain zero or one [0..1] **component** (CONF:9912)
 - a. Contains exactly one [1..1] *Surgical Drains Section* (templateId: 2.16.840.1.113883.10.20.7.13)

Operative Note Example

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codeSystemName="LOINC" displayName="Planned Procedure"/>
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        <code code="59775-7" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Procedure Disposition"/>
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        <id root="MDHT" extension="259391643"/>
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codeSystemName="LOINC" displayName="Procedure Indications"/>
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```

        <observation classCode="OBS" moodCode="EVN">
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codeSystemName="SNOMEDCT"/>
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  <component>
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      <code code="11537-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Surgical Drains"/>
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  </component>
</structuredBody>
</component>
</ClinicalDocument>

```

Procedure Note

[ClinicalDocument: templateId 2.16.840.1.113883.10.20.22.1.6]

Procedure Note Header Constraints

Procedure Note Body Constraints

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:8496, CONF:10050) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.6"
2. **SHALL** conform to [General Header Constraints](#) template (templateId: 2.16.840.1.113883.10.20.22.1.1)
3. **SHALL** contain exactly one [1..1] **code** (CONF:17182), which **SHALL** be selected from ValueSet [ProcedureNoteDocumentTypeCodes](#) 2.16.840.1.113883.11.20.6.1 **DYNAMIC** (CONF:17183)
4. **SHOULD** contain zero or one [0..1] **componentOf** (CONF:8499)
 - a. This componentOf **SHOULD** contain zero or one [0..1] **encompassingEncounter** (CONF:8501)
 - a. This encompassingEncounter **SHALL** contain exactly one [1..1] **code** (CONF:8501)
 - b. This encompassingEncounter **MAY** contain zero or one [0..1] **encounterParticipant** (CONF:8502)
 - a. This encounterParticipant **SHALL** contain exactly one [1..1] **@typeCode**="REF" (CONF:8503)
 - c. This encompassingEncounter **SHALL** contain exactly one [1..1] **location**
 - a. This location **SHALL** contain exactly one [1..1] **healthCareFacility**
 - a. This healthCareFacility **SHALL** contain at least one [1..*] **id** (b., CONF:8500)
5. **MAY** contain zero or one [0..1] **component** (CONF:9645)

- a. Contains exactly one [1..1] [Assessment Section](#) (templateId: 2.16.840.1.113883.10.20.22.2.8)
6. **MAY** contain zero or one [0..1] **component** (CONF:9647)
 - a. Contains exactly one [1..1] [Plan Of Care Section](#) (templateId: 2.16.840.1.113883.10.20.22.2.10)
7. **MAY** contain zero or one [0..1] **component** (CONF:9649)
 - a. Contains exactly one [1..1] [Assessment And Plan Section](#) (templateId: 2.16.840.1.113883.10.20.22.2.9)
8. **SHALL** contain exactly one [1..1] **component** (CONF:9802)
 - a. Contains exactly one [1..1] [Complications Section](#) (templateId: 2.16.840.1.113883.10.20.22.2.37)
9. **SHALL** contain exactly one [1..1] **component** (CONF:9850)
 - a. Contains exactly one [1..1] [Postprocedure Diagnosis Section](#) (templateId: 2.16.840.1.113883.10.20.22.2.36)
10. **SHALL** contain exactly one [1..1] **component** (CONF:9805)
 - a. Contains exactly one [1..1] [Procedure Description Section](#) (templateId: 2.16.840.1.113883.10.20.22.2.27)
11. **SHALL** contain exactly one [1..1] **component** (CONF:9807)
 - a. Contains exactly one [1..1] [Procedure Indications Section](#) (templateId: 2.16.840.1.113883.10.20.22.2.29)
12. **MAY** contain zero or one [0..1] **component** (CONF:9809)
 - a. Contains exactly one [1..1] [Allergies Section Entries Optional](#) (templateId: 2.16.840.1.113883.10.20.22.2.6)
13. **MAY** contain zero or one [0..1] **component** (CONF:9811)
 - a. Contains exactly one [1..1] [Anesthesia Section](#) (templateId: 2.16.840.1.113883.10.20.22.2.25)
14. **MAY** contain zero or one [0..1] **component** (CONF:9813)
 - a. Contains exactly one [1..1] [Chief Complaint Section](#) (templateId: 1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1)
15. **MAY** contain zero or one [0..1] **component** (CONF:9815)
 - a. Contains exactly one [1..1] [Chief Complaint And Reason For Visit Section](#) (templateId: 2.16.840.1.113883.10.20.22.2.13)
16. **MAY** contain zero or one [0..1] **component** (CONF:9817)
 - a. Contains exactly one [1..1] [Family History Section](#) (templateId: 2.16.840.1.113883.10.20.22.2.15)
17. **MAY** contain zero or one [0..1] **component** (CONF:9819)
 - a. Contains exactly one [1..1] [History Of Past Illness Section](#) (templateId: 2.16.840.1.113883.10.20.22.2.20)
18. **MAY** contain zero or one [0..1] **component** (CONF:9821)
 - a. Contains exactly one [1..1] [History Of Present Illness Section](#) (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.4)
19. **MAY** contain zero or one [0..1] **component** (CONF:9823)
 - a. Contains exactly one [1..1] [Medical History Section](#) (templateId: 2.16.840.1.113883.10.20.22.2.39)
20. **MAY** contain zero or one [0..1] **component** (CONF:9825)
 - a. Contains exactly one [1..1] [Medications Section Entries Optional](#) (templateId: 2.16.840.1.113883.10.20.22.2.1)
21. **MAY** contain zero or one [0..1] **component** (CONF:9827)
 - a. Contains exactly one [1..1] [Medications Administered Section](#) (templateId: 2.16.840.1.113883.10.20.22.2.38)

22. **MAY** contain zero or one [0..1] **component** (CONF:9829)
 - a. Contains exactly one [1..1] *Physical Exam Section* (templateId: 2.16.840.1.113883.10.20.2.10)
23. **MAY** contain zero or one [0..1] **component** (CONF:9831)
 - a. Contains exactly one [1..1] *Planned Procedure Section* (templateId: 2.16.840.1.113883.10.20.22.2.30)
24. **MAY** contain zero or one [0..1] **component** (CONF:9833)
 - a. Contains exactly one [1..1] *Procedure Disposition Section* (templateId: 2.16.840.1.113883.10.20.18.2.12)
25. **MAY** contain zero or one [0..1] **component** (CONF:9835)
 - a. Contains exactly one [1..1] *Procedure Estimated Blood Loss Section* (templateId: 2.16.840.1.113883.10.20.18.2.9)
26. **MAY** contain zero or one [0..1] **component** (CONF:9837)
 - a. Contains exactly one [1..1] *Procedure Findings Section* (templateId: 2.16.840.1.113883.10.20.22.2.28)
27. **MAY** contain zero or one [0..1] **component** (CONF:9839)
 - a. Contains exactly one [1..1] *Procedure Implants Section* (templateId: 2.16.840.1.113883.10.20.22.2.40)
28. **MAY** contain zero or one [0..1] **component** (CONF:9841)
 - a. Contains exactly one [1..1] *Procedure Specimens Taken Section* (templateId: 2.16.840.1.113883.10.20.22.2.31)
29. **MAY** contain zero or one [0..1] **component** (CONF:9843)
 - a. Contains exactly one [1..1] *Procedures Section Entries Optional* (templateId: 2.16.840.1.113883.10.20.22.2.7)
30. **MAY** contain zero or one [0..1] **component** (CONF:9845)
 - a. Contains exactly one [1..1] *Reason For Visit Section* (templateId: 2.16.840.1.113883.10.20.22.2.12)
31. **MAY** contain zero or one [0..1] **component** (CONF:9847)
 - a. Contains exactly one [1..1] *Review Of Systems Section* (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.18)
32. **MAY** contain zero or one [0..1] **component** (CONF:9849)
 - a. Contains exactly one [1..1] *Social History Section* (templateId: 2.16.840.1.113883.10.20.22.2.17)
33. **MAY** contain zero or more [0..*] **participant** (CONF:8504)
 - a. Contains exactly one [1..1] CDA Participant1
34. **SHALL** contain at least one [1..*] **documentationOf** (CONF:8510)
 - a. Such documentationOfs **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:10061)
 - a. This serviceEvent **SHALL** contain exactly one [1..1] **code** (CONF:8511)
 - b. This serviceEvent **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:10062)
 - c. This serviceEvent **SHALL** contain exactly one [1..1] **performer** (CONF:8520)
 - a. This performer **SHALL** contain exactly one [1..1] **@typeCode="PPRF"** (CONF:8521)
 - b. This performer **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:14911)
 - a. This assignedEntity **SHOULD** contain zero or one [0..1] **code** (CONF:14912), which **SHALL** be selected from ValueSet *Healthcare Provider Taxonomy (NUCC - HIPAA)* 2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:14913)
 - d. This serviceEvent i. 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 Procedure 2.16.840.1.113883.3.88.12.80.28 DYNAMIC.
(CONF:8511)

- e. This serviceEvent The serviceEvent/effectiveTime **SHALL** be present with effectiveTime/low (CONF:8513)
 - f. This serviceEvent If a width is not present, the serviceEvent/effectiveTime **SHALL** include effectiveTime/high. (CONF:8514)
 - g. This serviceEvent 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:8515)
 - h. This serviceEvent Any assistants **SHALL** be identified and **SHALL** be identified as secondary performers (SPRF) (CONF:8524)
 - i. This serviceEvent The content of effectiveTime conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). **SHALL** be precise to the day (CONF:10063, CONF:10127)
 - j. This serviceEvent The content of effectiveTime conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). **SHOULD** be precise to the minute (CONF:10063, CONF:10128)
 - k. This serviceEvent The content of effectiveTime conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). **MAY** be precise to the second (CONF:10063, CONF:10129)
 - l. This serviceEvent The content of effectiveTime conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). If more precise than day, **SHOULD** include time-zone offset (CONF:10063, CONF:10130)
35. **SHALL** include an Assessment and Plan Section, or an Assessment Section and a Plan Section (CONF:9643)
36. **SHALL NOT** include an Assessment/Plan Section when an Assessment Section and a Plan of Care Section are present (CONF:10064)
37. **SHALL NOT** include a Chief Complaint and Reason for Visit Section with either a Chief Complaint Section or a Reason for Visit Section. (CONF:10065)
38. Each section **SHALL** have a title and the title **SHALL NOT** be empty (CONF:9937)

Procedure Note Example

```
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  xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
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codeSystemName="ConfidentialityCode"/>
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    <patientRole/>
  </recordTarget>
  <author>
    <typeId root="2.16.840.1.113883.1.3"/>
    <time/>
    <assignedAuthor/>
  </author>
  <custodian/>
  <participant/>
  <documentationOf>
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      <code code="1604084940"/>
      <effectiveTime/>
    </serviceEvent>
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</ClinicalDocument>
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```

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  <componentOf>
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  <component>
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codeSystemName="LOINC" displayName="Assessments"/>
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          <confidentialityCode code="854279556"/>
        </section>
      </component>
      <component>
        <section>
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          <code code="18776-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Treatment plan"/>
          <title>TEXT FOR TITLE</title>
          <confidentialityCode code="683166230"/>
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              <code code="156878074"/>
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            </act>
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    </structuredBody>
  </component>

```

```

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          <code code="215927030"/>
          <effectiveTime>
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          <templateId root="2.16.840.1.113883.10.20.22.4.43"/>
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          <code code="1988010059"/>
          <effectiveTime value="20140803"/>
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        <act classCode="ACT" moodCode="INT">
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          <id root="MDHT" extension="795391801"/>
          <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
          <statusCode code="completed"/>
          <effectiveTime>
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          </effectiveTime>
        </act>
      </entry>
    </section>
  </component>
</component>
<section>
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```

        <code code="51847-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="ASSESSMENT AND PLAN"/>
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    <component>
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codeSystemName="LOINC" displayName="Complications"/>
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codeSystemName="SNOMEDCT"/>
            <statusCode code="completed"/>
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codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
                <statusCode code="completed"/>
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              <observation classCode="OBS" moodCode="EVN">
                <templateId root="2.16.840.1.113883.10.20.22.4.5"/>
                <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Health status"/>
                <statusCode code="completed"/>
              </observation>
            </entryRelationship>
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              <observation classCode="OBS" moodCode="EVN">
                <templateId root="2.16.840.1.113883.10.20.22.4.6"/>
                <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
                <statusCode code="completed"/>
              </observation>
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    </entry>
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    <code code="59769-0" codeSystem="2.16.840.1.113883.6.1"
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            <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
            <id root="MDHT" extension="848133683"/>
            <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
            <statusCode code="completed"/>
            <effectiveTime>
              <low value="2014"/>
              <high value="2014"/>
            </effectiveTime>
          </observation>
          <entryRelationship>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.22.4.31"/>

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```

        <code code="445518008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
        <statusCode code="completed"/>
      </observation>
    </entryRelationship>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
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codeSystemName="LOINC" displayName="Health status"/>
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    </entryRelationship>
    <entryRelationship>
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        <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
        <statusCode code="completed"/>
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    </entryRelationship>
  </observation>
</entry>
</section>
</component>
<component>
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codeSystemName="LOINC" displayName="Procedure Implants"/>
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codeSystemName="LOINC" displayName="Procedure Specimens Taken"/>
    <title>TEXT FOR TITLE</title>
    <confidentialityCode code="958643654"/>
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</component>
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    <id root="MDHT" extension="570842749"/>
    <code code="47519-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="History of Procedures"/>
    <title>TEXT FOR TITLE</title>
    <confidentialityCode code="1509618875"/>
  <entry>
    <procedure classCode="PROC">
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      <id root="MDHT" extension="653896997"/>
      <code code="1824764054"/>
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  </entry>

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```

        <high value="2014"/>
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      <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
      <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
      <specimen/>
      <performer/>
      <entryRelationship typeCode="COMP" inversionInd="true"/>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
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codeSystemName="SNOMEDCT"/>
          <statusCode code="completed"/>
        </observation>
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          <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
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codeSystemName="NCI Thesaurus"/>
          <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        </substanceAdministration>
      </entryRelationship>
      <entryRelationship>
        <act classCode="ACT" moodCode="INT">
          <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
          <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
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    </procedure>
  </entry>
  <entry>
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codeSystemName="ActPriority"/>
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codeSystemName="SNOMEDCT"/>
      <performer/>
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codeSystemName="SNOMEDCT"/>
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```

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codeSystemName="NCI Thesaurus"/>
        <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
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</observation>
</entry>
<entry>
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        <id root="MDHT" extension="2002346920"/>
        <code code="2130536599"/>
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            <low value="2014"/>
            <high value="2014"/>
        </effectiveTime>
        <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
        <performer/>
        <entryRelationship typeCode="COMP" inversionInd="true"/>
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codeSystemName="SNOMEDCT"/>
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            </act>
        </entryRelationship>
        <entryRelationship>
            <observation classCode="OBS" moodCode="EVN">
                <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
                <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
                <statusCode code="completed"/>
            </observation>
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        <entryRelationship>
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codeSystemName="NCI Thesaurus"/>
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codeSystemName="SNOMEDCT"/>
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        </entryRelationship>
    </act>
</entry>
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</component>
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        <code code="29299-5" codeSystem="2.16.840.1.113883.6.1"
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        <code code="10187-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="REVIEW OF SYSTEMS"/>
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        <confidentialityCode code="1459131542"/>
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        <id root="MDHT" extension="1132421662"/>
        <code code="29762-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Social history"/>
        <title>TEXT FOR TITLE</title>
        <confidentialityCode code="219715450"/>
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        <observation classCode="OBS" moodCode="EVN">
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            <templateId root="2.16.840.1.113883.10.20.22.4.38"/>
            <id root="MDHT" extension="4977165"/>
            <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
            <statusCode code="completed"/>
            <effectiveTime>
                <low value="2014"/>
                <high value="2014"/>
            </effectiveTime>
        </observation>
    </entry>
    <entry>
        <observation classCode="OBS" moodCode="EVN">
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            <id root="MDHT" extension="2138938737"/>
            <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Assertion"/>
            <statusCode code="completed"/>
            <effectiveTime>
                <low value="2014"/>
                <high value="2014"/>
            </effectiveTime>
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                    <code code="11778-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
                    <statusCode code="completed"/>
                </observation>
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    </entry>
    <entry>
        <observation classCode="OBS" moodCode="EVN">

```

```

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<id root="MDHT" extension="97423497"/>
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codeSystemName="HL7ActCode" displayName="Assertion"/>
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  <low value="2014"/>
  <high value="2014"/>
</effectiveTime>
</observation>
</entry>
<entry>
  <observation classCode="OBS" moodCode="EVN">
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    <templateId root="2.16.840.1.113883.10.20.22.4.85"/>
    <id root="MDHT" extension="805699048"/>
    <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Assertion"/>
    <statusCode code="completed"/>
    <effectiveTime>
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      <high value="2014"/>
    </effectiveTime>
  </observation>
</entry>
</section>
</component>
</structuredBody>
</component>
</ClinicalDocument>

```

Progress Note

[ClinicalDocument: templateId 2.16.840.1.113883.10.20.22.1.9]

A Progress Note documents a patient's clinical status during a hospitalization or outpatient visit; thus, it is associated with an 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.

Progress Note Header Constraints

Progress Note Body Constraints

1. **SHALL** contain exactly one [1..1] templateId (CONF:9483, CONF:10051) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.1.9"
2. **SHALL** conform to [General Header Constraints](#) template (templateId: 2.16.840.1.113883.10.20.22.1.1)
3. **SHALL** contain exactly one [1..1] **code** (CONF:17189), which **SHALL** be selected from ValueSet [ProgressNoteDocumentTypeCode](#) 2.16.840.1.113883.11.20.8.1 **DYNAMIC** (CONF:17190)

- *The Progress Note limits document type codes to those codes listed in the Progress Note LOINC Document Codes, as of publication of this implementation guide. This is a dynamic value set meaning that these codes may be added to or deprecated by LOINC. The table lists all codes that have the scale DOC (document) and a 'component' referring to "subsequent evaluation notes".*

The Progress Note recommends use of a single document type code, 11506-3 "Subsequent evaluation note", using post-coordination for author or performer, setting, or specialty. Some of the LOINC codes in the Progress Note LOINC Document Codes 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 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. Note: The LOINC display name "Subsequent evaluation note" is equivalent to Progress Note.

4. SHOULD contain zero or one [0..1] **documentationOf** (CONF:7603)

a. This **documentationOf** **SHALL** contain exactly one [1..1] **serviceEvent**

- a.** This **serviceEvent** **SHALL** contain exactly one [1..1] **@classCode= "PCPR"** (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7604)
- b.** This **serviceEvent** **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:9481)
- c.** This **serviceEvent** The **serviceEvent/effectiveTime** element **SHOULD** be present with **effectiveTime/low** element (CONF:9482)
- d.** This **serviceEvent** If a **width** element is not present, the **serviceEvent** **SHALL** include **effectiveTime/** (CONF:10066)
- e.** This **serviceEvent** The content of **effectiveTime** conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). **SHALL** be precise to the day (CONF:10137, CONF:10127)
- f.** This **serviceEvent** The content of **effectiveTime** conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). **SHOULD** be precise to the minute (CONF:10137, CONF:10128)
- g.** This **serviceEvent** The content of **effectiveTime** conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). **MAY** be precise to the second (CONF:10137, CONF:10129)
- h.** This **serviceEvent** The content of **effectiveTime** conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). If more precise than day, **SHOULD** include time-zone offset (CONF:10137, CONF:10130)

5. SHALL contain exactly one [1..1] **componentOf**

a. This **componentOf** **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:7596)

- a.** This **encompassingEncounter** **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:7598)
- b.** This **encompassingEncounter** **SHALL** contain at least one [1..*] **id** (CONF:7597)
- c.** This **encompassingEncounter** **SHALL** contain exactly one [1..1] **location**
 - a.** This **location** **SHALL** contain exactly one [1..1] **healthCareFacility**
 - a.** This **healthCareFacility** **SHALL** contain exactly one [1..1] **id** (CONF:7611)
- d.** This **encompassingEncounter** The content of **effectiveTime** conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). **SHALL** be precise to the day (CONF:10138, CONF:10127)
- e.** This **encompassingEncounter** The content of **effectiveTime** conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). **SHOULD** be precise to the minute (CONF:10138, CONF:10128)
- f.** This **encompassingEncounter** The content of **effectiveTime** conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). **MAY** be precise to the second (CONF:10138, CONF:10129)
- g.** This **encompassingEncounter** The content of **effectiveTime** conforms to US Realm Date and Time (DT.US.FIELDED) (2.16.840.1.113883.10.20.22.5.4). If more precise than day, **SHOULD** include time-zone offset (CONF:10138, CONF:10130)

6. MAY contain zero or one [0..1] **component** (CONF:8776)

- a. Contains exactly one [1..1] [Assessment Section](#) (templateId: 2.16.840.1.113883.10.20.22.2.8)
- 7. **MAY** contain zero or one [0..1] **component** (CONF:8775)
 - a. Contains exactly one [1..1] [Plan Of Care Section](#) (templateId: 2.16.840.1.113883.10.20.22.2.10)
- 8. **MAY** contain zero or one [0..1] **component** (CONF:8774)
 - a. Contains exactly one [1..1] [Assessment And Plan Section](#) (templateId: 2.16.840.1.113883.10.20.22.2.9)
- 9. **MAY** contain zero or one [0..1] **component** (CONF:8773)
 - a. Contains exactly one [1..1] [Allergies Section Entries Optional](#) (templateId: 2.16.840.1.113883.10.20.22.2.6)
- 10. **MAY** contain zero or one [0..1] **component** (CONF:8772)
 - a. Contains exactly one [1..1] [Chief Complaint Section](#) (templateId: 1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1)
- 11. **MAY** contain zero or one [0..1] **component** (CONF:8778)
 - a. Contains exactly one [1..1] [Interventions Section](#) (templateId: 2.16.840.1.113883.10.20.21.2.3)
- 12. **MAY** contain zero or one [0..1] **component** (CONF:8771)
 - a. Contains exactly one [1..1] [Medications Section Entries Optional](#) (templateId: 2.16.840.1.113883.10.20.22.2.1)
- 13. **MAY** contain zero or one [0..1] **component** (CONF:8770)
 - a. Contains exactly one [1..1] [Objective Section](#) (templateId: 2.16.840.1.113883.10.20.21.2.1)
- 14. **MAY** contain zero or one [0..1] **component** (CONF:8780)
 - a. Contains exactly one [1..1] [Physical Exam Section](#) (templateId: 2.16.840.1.113883.10.20.2.10)
- 15. **MAY** contain zero or one [0..1] **component** (CONF:8786)
 - a. Contains exactly one [1..1] [Problem Section Entries Optional](#) (templateId: 2.16.840.1.113883.10.20.22.2.5)
- 16. **MAY** contain zero or one [0..1] **component** (CONF:8782)
 - a. Contains exactly one [1..1] [Results Section Entries Optional](#) (templateId: 2.16.840.1.113883.10.20.22.2.3)
- 17. **MAY** contain zero or one [0..1] **component** (CONF:8788)
 - a. Contains exactly one [1..1] [Review Of Systems Section](#) (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.18)
- 18. **MAY** contain zero or one [0..1] **component** (CONF:8790)
 - a. Contains exactly one [1..1] [Subjective Section](#) (templateId: 2.16.840.1.113883.10.20.21.2.2)
- 19. **MAY** contain zero or one [0..1] **component** (CONF:8784)
 - a. Contains exactly one [1..1] [Vital Signs Section Entries Optional](#) (templateId: 2.16.840.1.113883.10.20.22.2.4)
- 20. **MAY** contain zero or one [0..1] **component** (CONF:16806)
 - a. Contains exactly one [1..1] [Instructions Section](#) (templateId: 2.16.840.1.113883.10.20.22.2.45)
- 21. **SHALL** include an Assessment and Plan Section, or an Assessment Section and a Plan Section (CONF:8704)
- 22. **SHALL NOT** include an Assessment/Plan Section when an Assessment Section and a Plan of Care Section are present (CONF:10069)

Progress Note Example

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <realmCode code="US"/>
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```

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<id root="MDHT" extension="2142984076"/>
<code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
<title>TEXT FOR TITLE</title>
<effectiveTime/>
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codeSystemName="ConfidentialityCode"/>
<setId root="MDHT" extension="f495a11c-5605-4dd3-9b84-35elffccc055"/>
<versionNumber value="1"/>
<recordTarget>
  <typeId root="2.16.840.1.113883.1.3"/>
  <patientRole/>
</recordTarget>
<author>
  <typeId root="2.16.840.1.113883.1.3"/>
  <time/>
  <assignedAuthor/>
</author>
<custodian/>
<documentationOf>
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    <templateId root="2.16.840.1.113883.10.20.21.3.1"/>
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codeSystemName="LOINC" displayName="Assessments"/>
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        <confidentialityCode code="731914747"/>
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        <code code="18776-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Treatment plan"/>
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        <confidentialityCode code="1513585919"/>
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        <act classCode="ACT">

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        <code code="656508890"/>
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        </effectiveTime>
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        <code code="117625768"/>
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    <entry>
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        <code code="1516815311"/>
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        <id root="MDHT" extension="165356222"/>
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        <code code="1339533993"/>
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        <templateId root="2.16.840.1.113883.10.20.22.4.43"/>
        <id root="MDHT" extension="1141819976"/>
        <code code="1849762033"/>
        <effectiveTime value="20140803"/>
      </supply>
    </entry>
  </list>

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</entry>
<entry>
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codeSystemName="SNOMEDCT"/>
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    <id root="MDHT" extension="1889612795"/>
    <code code="51847-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="ASSESSMENT AND PLAN"/>
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    <confidentialityCode code="2070626150"/>
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    <code code="48765-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Allergies, adverse reactions, alerts"/>
    <title>TEXT FOR TITLE</title>
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        </effectiveTime>
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          <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.7"/>
            <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode"/>
            <statusCode code="completed"/>

```

```

        </observation>
      </entryRelationship>
    </act>
  </entry>
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    <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1"/>
    <id root="MDHT" extension="1025879682"/>
    <code code="10154-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="CHIEF COMPLAINT"/>
    <title>TEXT FOR TITLE</title>
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    <id root="MDHT" extension="1678905916"/>
    <code code="62387-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
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    <confidentialityCode code="2052574601"/>
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    <templateId root="2.16.840.1.113883.10.20.22.2.1"/>
    <id root="MDHT" extension="424103460"/>
    <code code="10160-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="History of medication use"/>
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    <confidentialityCode code="959978752"/>
    <entry>
      <substanceAdministration classCode="SBADM">
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        <id root="MDHT" extension="732810233"/>
        <code code="1643197483"/>
        <effectiveTime value="20140803"/>
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codeSystemName="NCI Thesaurus"/>
        <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <consumable/>
        <performer/>
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        </entryRelationship>
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    </entry>
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```

        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="LOINC" displayName="Objective"/>
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        <code code="29545-1" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="PHYSICAL EXAMINATION"/>
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codeSystemName="HL7ActCode" displayName="Assertion"/>
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codeSystemName="SNOMEDCT"/>
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codeSystemName="SNOMEDCT" displayName="number of pressure ulcers"/>
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  <high value="2014"/>
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    <id root="MDHT" extension="1987360972"/>
    <code code="420905001" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Highest Pressure Ulcer Stage"/>
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    <id root="MDHT" extension="15173336874"/>
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codeSystemName="LOINC" displayName="Problem List"/>
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codeSystemName="HL7ActClass" displayName="Concern"/>
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            <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
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codeSystemName="LOINC" displayName="Relevant diagnostic tests and/or
laboratory data"/>
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    <id root="MDHT" extension="1560477231"/>
    <code code="392176426"/>
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codeSystemName="LOINC" displayName="REVIEW OF SYSTEMS"/>
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    <id root="MDHT" extension="1897932712"/>
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codeSystemName="LOINC" displayName="Subjective"/>
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codeSystemName="LOINC" displayName="Vital Signs"/>
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        <templateId root="2.16.840.1.113883.10.20.22.4.26"/>
        <id root="MDHT" extension="345174910"/>
        <code code="46680005" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Vital signs"/>

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            <code codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
            <statusCode code="completed"/>
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    <id root="MDHT" extension="803232268"/>
    <code code="69730-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Instructions"/>
    <title>TEXT FOR TITLE</title>
    <confidentialityCode code="1299680931"/>
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        <id root="MDHT" extension="1929283047"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
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    </entry>
  </section>
</component>
</structuredBody>
</component>
</ClinicalDocument>

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Unstructured Document

[ClinicalDocument: templateId 2.16.840.1.113883.10.20.21.1.10]

An unstructured document is a document which is used when the patient record is captured in an unstructured format that is encapsulated within an image file or as unstructured text in an electronic file such as a word processing or Portable Document Format (PDF) document.

There is a need to raise the level of interoperability for these documents to provide full access to the longitudinal patient record across a continuum of care. Until this gap is addressed, image and multi-media files will continue to be a portion of the patient record that remains difficult to access and share with all participants in a patient's care. The Unstructured Document type addresses this gap by providing consistent guidance on the use of CDA for such documents.

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 subsections which 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 implementation guide 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, please review the appendix on XDS-SD and US Realm Clinical Document Header Comparison and ensure that your documents at a minimum conform to all the SHALL constraints from either specification .

Unstructured Document Header Constraints

Unstructured Document Body Constraints

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:7710, CONF:10054) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.21.1.10"
2. **SHALL** conform to [General Header Constraints](#) template (templateId: 2.16.840.1.113883.10.20.22.1.1)
3. **SHALL** contain exactly one [1..1] **recordTarget** (CONF:7643)
 - a. This recordTarget **SHALL** contain exactly one [1..1] **patientRole**
 - a. This patientRole **SHALL** contain exactly one [1..1] **id** (CONF:7643)
4. **SHALL** contain exactly one [1..1] **author** (CONF:7640)
 - a. This author **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:7640)
 - a. This assignedAuthor **SHALL** contain exactly one [1..1] **addr** (CONF:7641)
 - b. This assignedAuthor **SHALL** contain exactly one [1..1] **telecom** (CONF:7642)
5. **SHALL** contain exactly one [1..1] **component** (CONF:14097)
 - a.
6. **SHALL** contain exactly one [1..1] **custodian** (CONF:7645)
 - a. This custodian **SHALL** contain exactly one [1..1] **assignedCustodian** (CONF:7645)
 - a. This assignedCustodian **SHALL** contain exactly one [1..1] **representedCustodianOrganization** (CONF:7645)
 - a. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **addr** (CONF:7651)
 - b. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **id** (CONF:7648)
 - c. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **name** (CONF:7649)
 - d. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **telecom** (CONF:7650)

Unstructured Document Example

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<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <realmCode code="US"/>
  <typeId root="2.16.840.1.113883.1.3"/>
  <templateId root="2.16.840.1.113883.10.20.21.1.10"/>
  <templateId root="2.16.840.1.113883.10.20.22.1.1"/>
  <id root="MDHT" extension="1944206772"/>
  <code code="1426452770"/>
```

```

<title>TEXT FOR TITLE</title>
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codeSystemName="ConfidentialityCode"/>
<setId root="MDHT" extension="7c8d2977-5e78-46ef-ad39-82f85f69d431"/>
<versionNumber value="1"/>
<recordTarget>
  <patientRole>
    <id root="MDHT" extension="135678161"/>
  </patientRole>
</recordTarget>
<author>
  <time/>
  <assignedAuthor>
    <id root="MDHT" extension="264576603"/>
    <addr/>
    <telecom/>
  </assignedAuthor>
</author>
<custodian>
  <assignedCustodian>
    <representedCustodianOrganization/>
  </assignedCustodian>
</custodian>
<component/>
</ClinicalDocument>

```

Chapter

4

SECTION-LEVEL TEMPLATES

Topics:

- *Advance Directives Section*
- *Allergies Section*
- *Anesthesia Section*
- *Assessment And Plan Section*
- *Assessment Section*
- *Chief Complaint And Reason For Visit Section*
- *Chief Complaint Section*
- *Complications Section*
- *DICOM Object Catalog Section*
- *Discharge Diet Section*
- *Encounters Section*
- *Family History Section*
- *Findings Section*
- *Functional Status Section*
- *General Status Section*
- *History Of Past Illness Section*
- *History Of Present Illness Section*
- *Hospital Admission Diagnosis Section*
- *Hospital Consultations Section*
- *Hospital Course Section*
- *Hospital Discharge Diagnosis Section*
- *Hospital Discharge Instructions Section*
- *Hospital Discharge Medications Section*
- *Hospital Discharge Physical Section*
- *Hospital Discharge Studies Summary Section*
- *Immunizations Section*
- *Instructions Section*
- *Interventions Section*
- *Medical Equipment Section*

- *Medical History Section*
- *Medications Administered Section*
- *Medications Section*
- *Objective Section*
- *Operative Note Fluid Section*
- *Operative Note Surgical Procedure Section*
- *Payers Section*
- *Physical Exam Section*
- *Plan Of Care Section*
- *Planned Procedure Section*
- *Postoperative Diagnosis Section*
- *Postprocedure Diagnosis Section*
- *Preoperative Diagnosis Section*
- *Problem Section*
- *Procedure Description Section*
- *Procedure Disposition Section*
- *Procedure Estimated Blood Loss Section*
- *Procedure Findings Section*
- *Procedure Implants Section*
- *Procedure Indications Section*
- *Procedure Specimens Taken Section*
- *Procedures Section*
- *Reason For Referral Section*
- *Reason For Visit Section*
- *Results Section*
- *Review Of Systems Section*
- *Social History Section*
- *Subjective Section*
- *Surgical Drains Section*
- *Vital Signs Section*

Advance Directives Section

This section contains data defining the patient's advance directives and any reference to supporting documentation. The most recent and up-to-date directives are required, if known, and should be listed in as much detail as possible. This section contains data such as the existence of living wills, healthcare proxies, and CPR and resuscitation status. If referenced documents are available, they can be included in the CCD exchange package.

NOTE: The descriptions in this section differentiate between "advance directives" and "advance directive documents". The former are the directions whereas the latter are legal documents containing those directions. Thus, an advance directive might be "no cardiopulmonary resuscitation", and this directive might be stated in a legal advance directive document.

Optional Entries

[Section: templateId 2.16.840.1.113883.10.20.22.2.21]

The following constraints apply to a Advance Directives Section in which entries are not required.

- 1. **SHALL** contain exactly one [1..1] templateId (CONF:7928, CONF:10376) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.21"
- 2. **SHALL** contain exactly one [1..1] **code** (CONF:15340)/@code="42348-3" *Advance Directives* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15342)
- 3. **SHALL** contain exactly one [1..1] **title** (CONF:7930)
- 4. **SHALL** contain exactly one [1..1] **text** (CONF:7931)
- 5. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:7957, CONF:8800)
 - a. Contains exactly one [1..1] *Advance Directive Observation* (templateId: 2.16.840.1.113883.10.20.22.4.48)

Required Entries

The following constraints apply to a Advance Directives Section in which entries are required.

- 1. **SHALL** contain exactly one [1..1] templateId (CONF:8643, CONF:10377) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.21.1"
- 2. **SHALL** conform to *Advance Directives Section Entries Optional* template (templateId: 2.16.840.1.113883.10.20.22.2.21)
- 3. **SHALL** contain exactly one [1..1] **code** (CONF:15343)/@code="42348-3" *Advance directives* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15344)
- 4. **SHALL** contain exactly one [1..1] **title** (CONF:8645)
- 5. **SHALL** contain exactly one [1..1] **text** (CONF:8646)
- 6. If section/@nullFlavor is not present, **SHALL** contain at least one [1..*] **entry** (CONF:8647, CONF:8801)
 - a. Contains exactly one [1..1] *Advance Directive Observation* (templateId: 2.16.840.1.113883.10.20.22.4.48)

Advance Directives Section Table

consol::AdvanceDirectivesSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.21]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15344	LOINC 2.16.840.1.113883.6.1LOINC

consol::AdvanceDirectivesSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.21]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
							2.16.840.1.113883.6.142348-3
title	title	1..1	SHALL	YES	ST		
advanceDirectiveObservation	cda:observation[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.48]	1..*	SHALL	YES	AdvanceDirectiveObservation	CONF:8647CONF:8801	
advanceDirectivesSection	AdvanceDirectivesSection		MAY	YES	AdvanceDirectivesSection	CONF:9455	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8646	

Advance Directives Section Sample

The following XML snippet is a sample for Advance Directives Section Entries Optional

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.21.1"/>
  <templateId root="2.16.840.1.113883.10.20.22.2.21"/>
  <id root="MDHT" extension="308186"/>
  <code code="42348-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Advance Directives"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.48"/>
      <id root="MDHT" extension="1175642391"/>
      <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
      <text>Text Value</text>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <participant typeCode="VRF">
        <time>
          <low value="2014"/>
          <high value="2014"/>
        </time>
        <participantRole/>
      </participant>
      <participant typeCode="CST">
        <participantRole classCode="AGNT"/>
      </participant>
      <reference typeCode="REFR">
        <externalDocument/>
      </reference>
    </observation>
  </entry>
</section>
```

Figure 5: Advance Directives Section Entries Optional example

Allergies Section

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) used to assure the safety of health care delivery. At a minimum, it should list currently active and any relevant historical allergies and adverse reactions.

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) used to assure the safety of health care delivery. At a minimum, it should list currently active and any relevant historical allergies and adverse reactions.

Optional Entries

[Section: templateId 2.16.840.1.113883.10.20.22.2.6]

The following constraints apply to a Allergies Section in which entries are not required.

- 1. **SHALL** contain exactly one [1..1] templateId (CONF:7800, CONF:10378) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.6"
- 2. **SHALL** contain exactly one [1..1] **code** (CONF:15345)/@code="48765-2" *Allergies, adverse reactions, alerts* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15346)
- 3. **SHALL** contain exactly one [1..1] **title** (CONF:7802)
- 4. **SHALL** contain exactly one [1..1] **text** (CONF:7803)
- 5. If section/@nullFlavor is not present, **SHOULD** contain zero or more [0..*] **entry** (CONF:7804, CONF:7805)
 - a. Contains exactly one [1..1] *Allergy Problem Act* (templateId: 2.16.840.1.113883.10.20.22.4.30)

Required Entries

The following constraints apply to a Allergies Section in which entries are required.

- 1. **SHALL** contain exactly one [1..1] templateId (CONF:7527, CONF:10379) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.6.1"
- 2. **SHALL** conform to *Allergies Section Entries Optional* template (templateId: 2.16.840.1.113883.10.20.22.2.6)
- 3. **SHALL** contain exactly one [1..1] **code** (CONF:15349)/@code="48765-2" *Allergies, adverse reactions, alerts* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15350)
- 4. **SHALL** contain exactly one [1..1] **title** (CONF:7534)
- 5. **SHALL** contain exactly one [1..1] **text** (CONF:7530)
- 6. If section/@nullFlavor is not present, **SHALL** contain at least one [1..*] **entry** (CONF:7531, CONF:7532)
 - a. Contains exactly one [1..1] *Allergy Problem Act* (templateId: 2.16.840.1.113883.10.20.22.4.30)

Allergies Section Table

consol::AllergiesSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.6]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15350	LOINC 2.16.840.1.113883.6.1LOINC 2.16.840.1.113883.6.1 48765-2
title	title	1..1	SHALL	YES	ST	CONF:7534	

consol::AllergiesSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.6]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
allergiesSection	allergiesSection	1..1	SHALL	YES	AllergiesSection	CONF:9445	
allergyProblemAct	cda:entry/ cda:act[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.30]	1..*	SHALL	YES	AllergyProblemAct	CONF:7531CONF:7532	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7530	

Allergies Section Sample

The following XML snippet is a sample for Allergies Section Entries Optional

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.6.1"/>
  <templateId root="2.16.840.1.113883.10.20.22.2.6"/>
  <id root="MDHT" extension="579504272"/>
  <code code="48765-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Allergies, adverse reactions, alerts"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.30"/>
      <id root="MDHT" extension="1334224944"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.7"/>
          <id root="MDHT" extension="2082653625"/>
          <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode"/>
          <text>Text Value</text>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
          </effectiveTime>
          <participant typeCode="CSM"/>
        </entryRelationship>
        <entryRelationship>
          <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
            <statusCode code="completed"/>
          </observation>
        </entryRelationship>
        <entryRelationship>
          <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.8"/>
            <code code="SEV" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Severity observation"/>
            <statusCode code="completed"/>
          </observation>
        </entryRelationship>
      </entryRelationship>
    </act>
  </entry>
</section>
```

```
</observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.28"/>
    <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
    <statusCode code="completed"/>
  </observation>
</entryRelationship>
</observation>
</entryRelationship>
</act>
</entry>
</section>
```

Figure 6: Allergies Section Entries Optional example

Anesthesia Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.25]

The Anesthesia section briefly records the type of anesthesia (e.g., general or local) and may state the actual agent used. This may or may not be a subsection of the Procedure Description section. The full details of anesthesia are usually found in a separate Anesthesia Note.

- 1. SHALL contain exactly one [1..1] templateId (CONF:8066, CONF:10380) such that it
 - a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.25"
- 2. SHALL contain exactly one [1..1] code (CONF:15351)/@code="59774-0" (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15352)
- 3. SHALL contain exactly one [1..1] text (CONF:8069)
- 4. SHALL contain exactly one [1..1] title (CONF:8068)
- 5. If section/@nullFlavor is not present, MAY contain zero or more [0..*] entry (CONF:8092)
 - a. Contains exactly one [1..1] Procedure Activity Procedure (templateId: 2.16.840.1.113883.10.20.22.4.14)
- 6. If section/@nullFlavor is not present, MAY contain zero or more [0..*] entry (CONF:8094)
 - a. Contains exactly one [1..1] Medication Activity (templateId: 2.16.840.1.113883.10.20.22.4.16)

Anesthesia Section Table

consol::AnesthesiaSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.25]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15352	LOINC 2.16.840.1.113883.6.1 59774-0
title	title	1..1	SHALL	YES	ST	CONF:8068	
anesthesiaSection	anesthesiaSection	1..1	SHALL	YES	AnesthesiaSection	CONF:9883	
medicationActivity	cda:entry/ cda:substanceAdministration[cda:templateId/	0..*	MAY	YES	MedicationActivity	CONF:8094	

consol::AnesthesiaSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.25]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
	@root = 2.16.840.1.113883.10.20.22.4.16]						
procedureActivity	ProcedureActivity/cda:procedure[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.14]	0..*	MAY	YES	ProcedureActivity	CONF:8092	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8069	

Anesthesia Section Sample

The following XML snippet is a sample for Anesthesia Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.25" />
  <id root="MDHT" extension="1235241265" />
  <code code="59774-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" />
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <procedure classCode="PROC">
      <templateId root="2.16.840.1.113883.10.20.22.4.14" />
      <id root="MDHT" extension="822563775" />
      <code code="1658461513" />
      <text>Text Value</text>
      <effectiveTime>
        <low value="2014" />
        <high value="2014" />
      </effectiveTime>
      <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority" />
      <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" />
      <specimen>
        <specimenRole/>
      </specimen>
      <performer>
        <assignedEntity/>
      </performer>
      <entryRelationship typeCode="COMP" inversionInd="true">
        <encounter classCode="ENC" moodCode="EVN" />
      </entryRelationship>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.19" />
          <id root="MDHT" extension="853099350" />
          <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" />
          <text>Text Value</text>
          <statusCode code="completed" />
          <effectiveTime>
            <low value="2014" />
            <high value="2014" />
          </effectiveTime>
        </observation>
      </entryRelationship>
    </procedure>
  </entry>
</section>
```



```

</observation>
</entryRelationship>
<entryRelationship>
  <substanceAdministration classCode="SBADM">
    <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
    <id root="MDHT" extension="346202580"/>
    <code code="1963203509"/>
    <text>Text Value</text>
    <effectiveTime value="20140803"/>
    <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
    <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <consumable/>
    <performer/>
    <entryRelationship>
      <supply classCode="SPLY" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
      </supply>
    </entryRelationship>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
        <statusCode code="completed"/>
      </observation>
    </entryRelationship>
    <entryRelationship>
      <act classCode="ACT" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <statusCode code="completed"/>
      </act>
    </entryRelationship>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <statusCode code="completed"/>
      </observation>
    </entryRelationship>
    <entryRelationship>
      <supply classCode="SPLY" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.18"/>
      </supply>
    </entryRelationship>
    <precondition/>
  </substanceAdministration>
</entryRelationship>
<entryRelationship>
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
    <id root="MDHT" extension="468550653"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </act>
</entryRelationship>

```

```

</procedure>
</entry>
<entry>
  <substanceAdministration classCode="SBADM">
    <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
    <id root="MDHT" extension="1448961297"/>
    <code code="1825088073"/>
    <text>Text Value</text>
    <effectiveTime value="20140803"/>
    <routeCode codeSystem="2.16.840.1.113883.3.26.1.1" codeSystemName="NCI
Thesaurus"/>
    <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <consumable>
      <manufacturedProduct/>
    </consumable>
    <performer/>
    <entryRelationship>
      <supply classCode="SPLY" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
        <id root="MDHT" extension="50530958"/>
        <code code="656555891"/>
        <text>Text Value</text>
        <effectiveTime value="20140803"/>
        <author/>
        <entryRelationship>
          <act classCode="ACT" moodCode="INT">
            <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
            <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
            <statusCode code="completed"/>
          </act>
        </entryRelationship>
      </supply>
    </entryRelationship>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
        <id root="MDHT" extension="1895841717"/>
        <code code="473220796"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
          <low value="2014"/>
          <high value="2014"/>
        </effectiveTime>
        <entryRelationship>
          <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.8"/>
            <code code="SEV" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Severity observation"/>
            <statusCode code="completed"/>
          </observation>
        </entryRelationship>
      </entryRelationship>
      <entryRelationship>
        <procedure classCode="PROC">
          <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
          <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
          <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        </procedure>
      </entryRelationship>
    </entryRelationship>
  </substanceAdministration>
</entry>

```

```

        <substanceAdministration classCode="SBADM">
            <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
            <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
            <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        </substanceAdministration>
    </entryRelationship>
</observation>
</entryRelationship>
<entryRelationship>
    <act classCode="ACT" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
        <id root="MDHT" extension="1406287115"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
        </effectiveTime>
    </act>
</entryRelationship>
<entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
        <id root="MDHT" extension="1530103409"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
        </effectiveTime>
    </observation>
</entryRelationship>
<entryRelationship>
    <supply classCode="SPLY" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.18"/>
        <id root="MDHT" extension="1094713249"/>
        <code code="1937168495"/>
        <text>Text Value</text>
        <effectiveTime value="20140803"/>
        <performer/>
        <entryRelationship>
            <supply classCode="SPLY" moodCode="INT">
                <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
            </supply>
        </entryRelationship>
    </supply>
</entryRelationship>
<precondition>
    <criteria/>
</precondition>
</substanceAdministration>
</entry>
</section>

```

Figure 7: Anesthesia Section example

Assessment And Plan Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.9]

The Assessment and Plan sections may be combined or separated to meet local policy requirements.
The Assessment and Plan section represents both the clinician's conclusions and working assumptions that will guide treatment of the patient (see Assessment Section above) and pending orders, interventions, encounters, services, and procedures for the patient (see Plan of Care Section below).

1. SHALL contain exactly one [1..1] templateId (CONF:7705, CONF:10381) such that it
- a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.9"
2. SHALL contain exactly one [1..1] code (CONF:15353)/@code="51847-2" ASSESSMENT AND PLAN (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15354)
3. SHALL contain exactly one [1..1] text (CONF:7707)
4. If section/@nullFlavor is not present, MAY contain zero or more [0..*] entry (CONF:8798)
- a. Contains exactly one [1..1] Plan Of Care Activity Act (templateId: 2.16.840.1.113883.10.20.22.4.39)

Assessment And Plan Section Table

console::AssessmentAndPlanSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.9]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15354	LOINC 2.16.840.1.113883.6.1 51847-2
assessmentAndPlanSection	assessmentAndPlanSection	1..1	MAY	YES	AssessmentAndPlanSection	CONF:1491	
planOfCareActivityAct	entry/ cda:act[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.39]	0..*	MAY	YES	PlanOfCareActivityAct	CONF:8798	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7707	

Assessment And Plan Section Sample

The following XML snippet is a sample for Assessment And Plan Section

```
<section xmlns="urn:hl7-org:v3">  
  <templateId root="2.16.840.1.113883.10.20.22.2.9"/>  
  <id root="MDHT" extension="741649418"/>  
  <code code="51847-2" codeSystem="2.16.840.1.113883.6.1"  
codeSystemName="LOINC" displayName="ASSESSMENT AND PLAN"/>  
  <title>TEXT FOR TITLE</title>  
  <text/>  
  <entry>  
    <act classCode="ACT">  
      <templateId root="2.16.840.1.113883.10.20.22.4.39"/>  
      <id root="MDHT" extension="1639927982"/>  
      <code code="508539131"/>  
      <text>Text Value</text>  
      <effectiveTime>
```

```
<low value="2014"/>
<high value="2014"/>
</effectiveTime>
</act>
</entry>
</section>
```

Figure 8: Assessment And Plan Section example

Assessment Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.8]

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.

- 1. SHALL contain exactly one [1..1] templateId (CONF:7711, CONF:10382) such that it
 - a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.8"
- 2. SHALL contain exactly one [1..1] code (CONF:14757)/@code= "51848-0" Assessments (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:14758)
- 3. SHALL contain exactly one [1..1] text (CONF:7713)
- 4. SHALL contain exactly one [1..1] title (CONF:16774)

Assessment Section Table

consol::AssessmentSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.8]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:14758	LOINC 2.16.840.1.113883.6.1 51848-0
title	title	1..1	SHALL	YES	ST	CONF:16774	
assessmentSection	assessmentSection	0..1	MAY	YES	AssessmentSection	CONF:9487	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7713	

Assessment Section Sample

The following XML snippet is a sample for Assessment Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.8"/>
  <id root="MDHT" extension="72535172"/>
  <code code="51848-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Assessments"/>
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 9: Assessment Section example

Chief Complaint And Reason For Visit Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.13]

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.

1. SHALL contain exactly one [1..1] templateId (CONF:7840, CONF:10383) such that it

a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.13"

2. SHALL contain exactly one [1..1] code (CONF:15449)/@code="46239-0" Chief Complaint and Reason for Visit (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15450)

3. SHALL contain exactly one [1..1] text (CONF:7843)

4. SHALL contain exactly one [1..1] title (CONF:7842)

Chief Complaint And Reason For Visit Section Table

consol::ChiefComplaintAndReasonForVisitSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.13]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15450	LOINC 2.16.840.1.113883.6.1 46239-0
title	title	1..1	SHALL	YES	ST	CONF:7842	
chiefComplaintAndReasonForVisitSection	chiefComplaintAndReasonForVisitSection	1..1	SHALL	YES	ChiefComplaintAndReasonForVisitSection	CONF:7840	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7843	

Chief Complaint And Reason For Visit Section Sample

The following XML snippet is a sample for Chief Complaint And Reason For Visit Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.13"/>
  <id root="MDHT" extension="1054716958"/>
  <code code="46239-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Chief Complaint and Reason for Visit"/>
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 10: Chief Complaint And Reason For Visit Section example

Chief Complaint Section

[Section: templateId 1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1]

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

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:7832, CONF:10453) 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"
2. **SHALL** contain exactly one [1..1] **code** (CONF:15451)/**@code**="10154-3" *CHIEF COMPLAINT* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15452)
3. **SHALL** contain exactly one [1..1] **text** (CONF:7835)
4. **SHALL** contain exactly one [1..1] **title** (CONF:7834)

Chief Complaint Section Table

consol::ChiefComplaintSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15452	LOINC 2.16.840.1.113883.6.1 10154-3
title	title	1..1	SHALL	YES	ST	CONF:7834	
chiefComplaintSection	chiefComplaintSection	0..1	MAY	YES	ChiefComplaintSection	CONF:9554	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7835	

Chief Complaint Section Sample

The following XML snippet is a sample for Chief Complaint Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1"/>
  <id root="MDHT" extension="894955775"/>
  <code code="10154-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="CHIEF COMPLAINT"/>
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 11: Chief Complaint Section example

Complications Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.37]

The Complications section records problems that occurred during the procedure or other activity. The complications may have been known risks or unanticipated problems.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:8174, CONF:10384) such that it
- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.37"
2. **SHALL** contain exactly one [1..1] **code** (CONF:15453)/**@code**="55109-3" *Complications* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15454)
3. **SHALL** contain exactly one [1..1] **title** (CONF:8176)
4. **SHALL** contain exactly one [1..1] **text** (CONF:8177)
5. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:8795, CONF:8796)

- a. Contains exactly one [1..1] *Problem Observation* (templateId: 2.16.840.1.113883.10.20.22.4.4)
- 6. There **SHALL** be a statement providing details of the complication(s) or it **SHALL** explicitly state there were no complications. (CONF:8797)

Complications Section Table

consol::ComplicationsSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.37]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15454	LOINC 2.16.840.1.113883.6.1 55109-3
title	title	1..1	SHALL	YES	ST	CONF:8176	
complicationsSection	complicationsSection	1..1	SHALL	YES	ComplicationsSection	CONF:9885	
problemObservation	cda:entry/ cda:observation[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.4]	0..*	MAY	YES	ProblemObservation	CONF:8795CONF:8796	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8177	

Complications Section Sample

The following XML snippet is a sample for Complications Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.37"/>
  <id root="MDHT" extension="257017272"/>
  <code code="55109-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Complications"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <id root="MDHT" extension="1959885038"/>
      <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
      <text>Text Value</text>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.31"/>
          <id root="MDHT" extension="1931987556"/>
          <code code="445518008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
          <text>Text Value</text>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
          </effectiveTime>
        </observation>
      </entryRelationship>
    </observation>
  </entry>
</section>
```



```

        </effectiveTime>
      </observation>
    </entryRelationship>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.5"/>
        <id root="MDHT" extension="1322024194"/>
        <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Health status"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
          <low value="2014"/>
          <high value="2014"/>
        </effectiveTime>
      </observation>
    </entryRelationship>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.6"/>
        <id root="MDHT" extension="829008968"/>
        <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
          <low value="2014"/>
          <high value="2014"/>
        </effectiveTime>
      </observation>
    </entryRelationship>
  </observation>
</entry>
</section>

```

Figure 12: Complications Section example

DICOM Object Catalog Section

[Section: templateId 2.16.840.1.113883.10.20.6.1.1]

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.

1. **SHALL** contain exactly one [1..1] templateId (CONF:8525, CONF:10454) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.6.1.1"
2. **SHALL** contain exactly one [1..1] **code** (CONF:15456)/@code="121181" *Dicom Object Catalog* (CodeSystem: 1.2.840.10008.2.16.4 DCM) (CONF:15457)
3. If section/@nullFlavor is not present, **SHALL** contain at least one [1..*] **entry** (CONF:8530, CONF:15458)
 - a. Contains exactly one [1..1] *Study Act* (templateId: 2.16.840.1.113883.10.20.6.2.6)
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:8527)

DICOM Object Catalog Section Table

consol::DICOMObjectCatalogSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.6.1.1]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15457	DCM 1.2.840.10008.2.16.4 121181
dicomObjectCatalogSection	dicomObjectCatalogSection	1..1	SHOULD	YES	DICOMObjectCatalogSection	CONF:1141	
studyAct	cda:entry/ cda:act[cda:templateId/ @root = 2.16.840.1.113883.10.20.6.2.6]	1..*	SHALL	YES	StudyAct	CONF:8530CONF:15458	

DICOM Object Catalog Section Sample

The following XML snippet is a sample for DICOM Object Catalog Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.6.1.1"/>
  <id root="MDHT" extension="556924079"/>
  <code code="121181" codeSystem="1.2.840.10008.2.16.4" codeSystemName="DCM"
  displayName="Dicom Object Catalog"/>
  <title>TEXT FOR TITLE</title>
  <entry>
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.6.2.6"/>
      <id root="MDHT" extension="1663473632"/>
      <code code="113014" codeSystem="1.2.840.10008.2.16.4"
codeSystemName="DCM"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <entryRelationship>
        <act classCode="ACT" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.63"/>
          <id root="MDHT" extension="2147380274"/>
          <code code="113015" codeSystem="1.2.840.10008.2.16.4"
codeSystemName="DCM"/>
          <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
          </effectiveTime>
          <entryRelationship>
            <observation classCode="DGIMG" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.6.2.8"/>
              <code codeSystem="1.2.840.10008.2.6.1"
codeSystemName="DCMUID"/>
              </observation>
            </entryRelationship>
          </act>
        </entryRelationship>
      </act>
    </entryRelationship>
  </entry>
```

```
</section>
```

Figure 13: DICOM Object Catalog Section example

Discharge Diet Section

[Section: templateId 1.3.6.1.4.1.19376.1.5.3.1.3.33]

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

- 1. **SHALL** contain exactly one [1..1] **templateId** (CONF:10455) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="1.3.6.1.4.1.19376.1.5.3.1.3.33"
- 2. **SHALL** contain exactly one [1..1] **code** (CONF:15459)/**@code**="42344-2" *Discharge Diet* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15460)
- 3. **SHALL** contain exactly one [1..1] **title** (CONF:7977)
- 4. **SHALL** contain exactly one [1..1] **text** (CONF:7978)

Discharge Diet Section Table

consol::DischargeDietSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 1.3.6.1.4.1.19376.1.5.3.1.3.33]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15460	LOINC 2.16.840.1.113883.6.1 42344-2
title	title	1..1	SHALL	YES	ST	CONF:7977	
dischargeDietSection	dischargeDietSection	1..1	MAY	YES	DischargeDietSection	CONF:9558	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7978	

Discharge Diet Section Sample

The following XML snippet is a sample for Discharge Diet Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.33"/>
  <id root="MDHT" extension="1800182011"/>
  <code code="42344-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Discharge Diet"/>
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 14: Discharge Diet Section example

Encounters Section

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 for assessing and treating the patient at a given contact, exercising independent judgment. This section may contain all encounters for the time period being summarized, but should include notable encounters.

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 for assessing and treating the patient at a given contact, exercising independent judgment. This section may contain all encounters for the time period being summarized, but should include notable encounters.

Optional Entries

[Section: templateId 2.16.840.1.113883.10.20.22.2.22]

The following constraints apply to a Encounters Section in which entries are not required.

- 1. **SHALL** contain exactly one [1..1] templateId (CONF:10386) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.22"
- 2. **SHALL** contain exactly one [1..1] **code** (CONF:15461)/@code="46240-8" *Encounters* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15462)
- 3. **SHALL** contain exactly one [1..1] **title** (CONF:7942)
- 4. **SHALL** contain exactly one [1..1] **text** (CONF:7943)
- 5. If section/@nullFlavor is not present, **SHOULD** contain zero or more [0..*] **entry** (CONF:7951, CONF:8802)
 - a. Contains exactly one [1..1] *Encounter Activities* (templateId: 2.16.840.1.113883.10.20.22.4.49)

Required Entries

The following constraints apply to a Encounters Section in which entries are required.

- 1. **SHALL** contain exactly one [1..1] templateId (CONF:10387) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.22.1"
- 2. **SHALL** conform to *Encounters Section Entries Optional* template (templateId: 2.16.840.1.113883.10.20.22.2.22)
- 3. If section/@nullFlavor is not present, **SHALL** contain at least one [1..*] **entry** (CONF:8709, CONF:8803)
 - a. Contains exactly one [1..1] *Encounter Activities* (templateId: 2.16.840.1.113883.10.20.22.4.49)
- 4. **SHALL** contain exactly one [1..1] **code** (CONF:15466)/@code="46240-8" *Encounters* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15467)
- 5. **SHALL** contain exactly one [1..1] **text** (CONF:8708)
- 6. **SHALL** contain exactly one [1..1] **title** (CONF:8707)

Encounters Section Table

consol::EncountersSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.22]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15467	LOINC 2.16.840.1.113883.6.1LOINC

console:EncountersSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.22]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
							2.16.840.1.113883.6.146240-8
title	title	1..1	SHALL	YES	ST	CONF:8707	
encounterActivities	cda:entry/cda:encounter[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.49]	1..*	SHALL	YES	EncounterActivities	CONF:8709CONF:8803	
encountersSection	encountersSection	0..1	MAY	YES	EncountersSection	CONF:9457	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8708	

Encounters Section Sample

The following XML snippet is a sample for Encounters Section Entries Optional

```
<section xmlns="urn:hl7-org:v3" xmlns:sdtc="urn:hl7-org:sdtc">
  <templateId root="2.16.840.1.113883.10.20.22.2.22.1"/>
  <templateId root="2.16.840.1.113883.10.20.22.2.22"/>
  <id root="MDHT" extension="2072085977"/>
  <code code="46240-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Encounters"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <encounter classCode="ENC" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.49"/>
      <id root="MDHT" extension="1572179770"/>
      <code codeSystem="2.16.840.1.113883.6.12" codeSystemName="CPT-4"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <performer>
        <assignedEntity/>
      </performer>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
          <id root="MDHT" extension="1356725791"/>
          <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
          <text>Text Value</text>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
          </effectiveTime>
        </observation>
      </entryRelationship>
      <entryRelationship>
        <act classCode="ACT" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.80"/>
```

```
<id root="MDHT" extension="1646366432"/>
<code code="29308-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Diagnosis"/>
<text>Text Value</text>
<effectiveTime>
  <low value="2014"/>
  <high value="2014"/>
</effectiveTime>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <statusCode code="completed"/>
  </observation>
</entryRelationship>
</act>
</entryRelationship>
<sdtc:dischargeDispositionCode codeSystem="2.16.840.1.113883.12.112"
codeSystemName="HL7DischargeDisposition"/>
</encounter>
</entry>
</section>
```

Figure 15: Encounters Section Entries Optional example

Family History Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.15]

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.

- 1. **SHALL** contain exactly one [1..1] templateId (CONF:10388) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.15"
- 2. **SHALL** contain exactly one [1..1] **code** (CONF:15469)/@code="10157-6" *Family History* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15470)
- 3. **SHALL** contain exactly one [1..1] **title** (CONF:7934)
- 4. **SHALL** contain exactly one [1..1] **text** (CONF:7935)
- 5. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:7955)
 - a. Contains exactly one [1..1] *Family History Organizer* (templateId: 2.16.840.1.113883.10.20.22.4.45)

Family History Section Table

consol::FamilyHistorySection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.15]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15470	LOINC 2.16.840.1.113883.6.1 10157-6
title	title	1..1	SHALL	YES	ST	CONF:7934	

consol::FamilyHistorySection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.15]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
familyHistory	cda:entry/ cda:organizer[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.45]	0..*	MAY	YES	FamilyHistoryOrganization	CONF:7955	
familyHistorySection	familyHistorySection	0..1	MAY	YES	FamilyHistorySection	CONF:9560	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7935	

Family History Section Sample

The following XML snippet is a sample for Family History Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.15"/>
  <id root="MDHT" extension="962131795"/>
  <code code="10157-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Family History"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <organizer classCode="CLUSTER" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.45"/>
      <id root="MDHT" extension="1246344869"/>
      <code code="1423824129"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <subject>
        <relatedSubject classCode="PRS">
          <code codeSystem="2.16.840.1.113883.5.111"
codeSystemName="RoleCode"/>
        </relatedSubject>
      </subject>
      <component>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.46"/>
          <id root="MDHT" extension="492547464"/>
          <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
          <text>Text Value</text>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
          </effectiveTime>
          <entryRelationship>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.22.4.31"/>
              <code code="445518008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
              <statusCode code="completed"/>
            </observation>
          </entryRelationship>
        </observation>
      </component>
    </organizer>
  </entry>
</section>
```

```
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.47"/>
    <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Assertion"/>
    <statusCode code="completed"/>
  </observation>
</entryRelationship>
</observation>
</component>
</organizer>
</entry>
</section>
```

Figure 16: Family History Section example

Findings Section

[Section: templateId 2.16.840.1.113883.10.20.6.1.2]

- 1. **SHALL** contain exactly one [1..1] templateId (CONF:8531, CONF:10456) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.6.1.2"
- 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:8532)

Findings Section Table

consol::FindingsSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.6.1.2]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
findingsSection	findingsSection	1..1	SHALL	YES	FindingsSection	CONF:9484	

Findings Section Sample

The following XML snippet is a sample for Findings Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.6.1.2"/>
  <id root="MDHT" extension="922633691"/>
  <title>TEXT FOR TITLE</title>
</section>
```

Figure 17: Findings Section example

Functional Status Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.14]

The Functional Status section describes the patient's physical state, status of functioning, and environmental status at the time the document was created.

A patient's physical state may include information regarding the patient's physical findings as they relate to problems, including but not limited to:

Pressure Ulcers

Amputations

Heart murmur

Ostomies

A patient's functional status may include information regarding the patient relative to their general functional and cognitive ability, including:

Ambulatory ability

Mental status or competency

Activities of Daily Living (ADLs), including bathing, dressing, feeding, grooming

Home or living situation having an effect on the health status of the patient

Ability to care for self

Social activity, including issues with social cognition, participation with friends and acquaintances other than family members

Occupation activity, including activities partly or directly related to working, housework or volunteering, family and home responsibilities or activities related to home and family

Communication ability, including issues with speech, writing or cognition required for communication

Perception, including sight, hearing, taste, skin sensation, kinesthetic sense, proprioception, or balance

A patient's environmental status may include information regarding the patient's current exposures from their daily environment, including but not limited to:

Airborne hazards such as second-hand smoke, volatile organic compounds, dust, or other allergens

Radiation

Safety hazards in home, such as throw rugs, poor lighting, lack of railings/grab bars, etc.

Safety hazards at work, such as communicable diseases, excessive heat, excessive noise, etc.

The patient's functional status may be expressed as a problem or as a result observation. A functional or cognitive status problem observation describes a patient's problem, symptoms or condition. A functional or cognitive status result observation may include observations resulting from an assessment scale, evaluation or question and answer assessment.

Any deviation from normal function displayed by the patient and recorded in the record should be included. Of particular interest are those limitations that would interfere with self-care or the medical therapeutic process in any way. In addition, a note of normal function, an improvement, or a change in functioning status may be included.

1. **SHALL** contain exactly one [1..1] templateId (CONF:10389) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.14"
2. **SHALL** contain exactly one [1..1] code/@code="47420-5" Functional status assessment (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:7921)
3. **SHALL** contain exactly one [1..1] title (CONF:7922)
4. **SHALL** contain exactly one [1..1] text (CONF:7923)
5. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] entry (CONF:14414, CONF:14415)
 - a. Contains exactly one [1..1] [Functional Status Result Organizer](#) (templateId: 2.16.840.1.113883.10.20.22.4.66)
6. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] entry (CONF:14416, CONF:14417)
 - a. Contains exactly one [1..1] [Cognitive Status Result Organizer](#) (templateId: 2.16.840.1.113883.10.20.22.4.75)
7. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] entry (CONF:14418, CONF:14419)

- a. Contains exactly one [1..1] *Functional Status Result Observation* (templateId: 2.16.840.1.113883.10.20.22.4.67)
8. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:14420, CONF:14421)
 - a. Contains exactly one [1..1] *Cognitive Status Result Observation* (templateId: 2.16.840.1.113883.10.20.22.4.74)
9. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:14422, CONF:14423)
 - a. Contains exactly one [1..1] *Functional Status Problem Observation* (templateId: 2.16.840.1.113883.10.20.22.4.68)
10. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:14424, CONF:14425)
 - a. Contains exactly one [1..1] *Cognitive Status Problem Observation* (templateId: 2.16.840.1.113883.10.20.22.4.73)
11. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:14426, CONF:14427)
 - a. Contains exactly one [1..1] *Caregiver Characteristics* (templateId: 2.16.840.1.113883.10.20.22.4.72)
12. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:14580, CONF:14581)
 - a. Contains exactly one [1..1] *Assessment Scale Observation* (templateId: 2.16.840.1.113883.10.20.22.4.69)
13. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:14582, CONF:14583)
 - a. Contains exactly one [1..1] *Non Medicinal Supply Activity* (templateId: 2.16.840.1.113883.10.20.22.4.50)
14. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:16777, CONF:16778)
 - a. Contains exactly one [1..1] *Pressure Ulcer Observation* (templateId: 2.16.840.1.113883.10.20.22.4.70)
15. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:16779, CONF:16780)
 - a. Contains exactly one [1..1] *Number Of Pressure Ulcers Observation* (templateId: 2.16.840.1.113883.10.20.22.4.76)
16. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:16781, CONF:16782)
 - a. Contains exactly one [1..1] *Highest Pressure Ulcer Stage* (templateId: 2.16.840.1.113883.10.20.22.4.77)

Functional Status Section Table

consol::FunctionalStatusSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.14]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:7921	LOINC 2.16.840.1.113883.6.1 47420-5
title	title	1..1	SHALL	YES	ST	CONF:7922	
assessmentScaleObservation	observation/cda:observation[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.69]	0..*	MAY	YES	AssessmentScaleObservation	CONF:14580CONF:14581	
caregiverCharacteristics	entry/cda:entry/cda:observation[cda:templateId/	0..*	MAY	YES	CaregiverCharacteristics	CONF:14426CONF:14427	

consol::FunctionalStatusSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.14]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
	@root = 2.16.840.1.113883.10.20.22.4.72]						
cognitiveStatusProblemObservation	cda:observation[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.4]	0..*	MAY	YES	CognitiveStatusProblemObservation	CONF:14424CONF:14425	
cognitiveStatusResidualObservation	cda:observation[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.2]	0..*	MAY	YES	CognitiveStatusResidualObservation	CONF:14420CONF:14421	
cognitiveStatusResidualOrganizer	cda:organizer[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.1]	0..*	MAY	YES	CognitiveStatusResidualOrganizer	CONF:14416CONF:14417	
functionalStatusProblemObservation	cda:observation[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.4]	0..*	MAY	YES	FunctionalStatusProblemObservation	CONF:14422CONF:14423	
functionalStatusResidualObservation	cda:observation[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.2]	0..*	MAY	YES	FunctionalStatusResidualObservation	CONF:14418CONF:14419	
functionalStatusResidualOrganizer	cda:organizer[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.1]	0..*	MAY	YES	FunctionalStatusResidualOrganizer	CONF:14414CONF:14415	
functionalStatusSection	functionalStatusSection		MAY	YES	FunctionalStatusSection	CONF:9562	
highestPressureUlcerStage	cda:observation[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.77]	0..*	MAY	YES	HighestPressureUlcerStage	CONF:16781CONF:16782	
nonMedicinalSupplyActivity	cda:supply[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.50]	0..*	MAY	YES	NonMedicinalSupplyActivity	CONF:14582CONF:14583	
numberOfPressureUlcers	cda:observation[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.76]	0..*	MAY	YES	NumberOfPressureUlcers	CONF:16779CONF:16780	
pressureUlcerObservation	cda:observation[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.70]	0..*	MAY	YES	PressureUlcerObservation	CONF:16777CONF:16778	

consol::FunctionalStatusSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.14]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
text	text	1..1	SHALL	YES	StrucDocText	CONF:7923	

Functional Status Section Sample

The following XML snippet is a sample for Functional Status Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.14"/>
  <id root="MDHT" extension="1838211318"/>
  <code code="47420-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Functional status assessment"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <organizer classCode="CLUSTER" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.66"/>
      <templateId root="2.16.840.1.113883.10.20.22.4.1"/>
      <id root="MDHT" extension="1629749898"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <component>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.67"/>
          <templateId root="2.16.840.1.113883.10.20.22.4.2"/>
          <id root="MDHT" extension="432815755"/>
          <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
          <text>Text Value</text>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
          </effectiveTime>
          <author/>
          <entryRelationship>
            <supply classCode="SPLY">
              <templateId root="2.16.840.1.113883.10.20.22.4.50"/>
            </supply>
          </entryRelationship>
          <entryRelationship>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.22.4.72"/>
              <statusCode code="completed"/>
            </observation>
          </entryRelationship>
          <entryRelationship>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.22.4.69"/>
              <statusCode code="completed"/>
            </observation>
          </entryRelationship>
          <referenceRange/>
        </observation>
      </component>
    </organizer>
  </entry>
</section>
```

```

    </component>
  </organizer>
</entry>
<entry>
  <organizer classCode="CLUSTER" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.75"/>
    <templateId root="2.16.840.1.113883.10.20.22.4.1"/>
    <id root="MDHT" extension="1336614619"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <component>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.74"/>
        <templateId root="2.16.840.1.113883.10.20.22.4.2"/>
        <id root="MDHT" extension="1770167607"/>
        <code code="373930000" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Cognitive function finding"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
          <low value="2014"/>
          <high value="2014"/>
        </effectiveTime>
        <author/>
        <entryRelationship>
          <supply classCode="SPLY">
            <templateId root="2.16.840.1.113883.10.20.22.4.50"/>
          </supply>
        </entryRelationship>
        <entryRelationship>
          <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.72"/>
            <statusCode code="completed"/>
          </observation>
        </entryRelationship>
        <entryRelationship>
          <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.69"/>
            <statusCode code="completed"/>
          </observation>
        </entryRelationship>
        <referenceRange/>
      </observation>
    </component>
  </organizer>
</entry>
<entry>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.67"/>
    <templateId root="2.16.840.1.113883.10.20.22.4.2"/>
    <id root="MDHT" extension="242923683"/>
    <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <author/>
    <entryRelationship>
      <supply classCode="SPLY">

```

```

        <templateId root="2.16.840.1.113883.10.20.22.4.50"/>
        <id root="MDHT" extension="1662216665"/>
        <text>Text Value</text>
        <effectiveTime value="20140803"/>
    </supply>
</entryRelationship>
<entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.72"/>
        <id root="MDHT" extension="1813385698"/>
        <code code="337264581"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
        </effectiveTime>
        <participant typeCode="IND"/>
    </observation>
</entryRelationship>
<entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.69"/>
        <id root="MDHT" extension="1341884462"/>
        <code code="524820412"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
        </effectiveTime>
        <author/>
    </observation>
    <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.86"/>
            <statusCode code="completed"/>
        </observation>
    </entryRelationship>
    <referenceRange/>
</observation>
</entryRelationship>
<referenceRange>
    <observationRange/>
</referenceRange>
</observation>
</entry>
<entry>
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.74"/>
        <templateId root="2.16.840.1.113883.10.20.22.4.2"/>
        <id root="MDHT" extension="1788632822"/>
        <code code="373930000" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Cognitive function finding"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
        </effectiveTime>
        <author/>
    </observation>
    <entryRelationship>
        <supply classCode="SPLY">
            <templateId root="2.16.840.1.113883.10.20.22.4.50"/>
            <id root="MDHT" extension="1192264852"/>

```

```

        <text>Text Value</text>
        <effectiveTime value="20140803"/>
    </supply>
</entryRelationship>
<entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.72"/>
        <id root="MDHT" extension="1413241148"/>
        <code code="1935393417"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
        </effectiveTime>
        <participant typeCode="IND"/>
    </observation>
</entryRelationship>
<entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.69"/>
        <id root="MDHT" extension="1349002765"/>
        <code code="1183783301"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
        </effectiveTime>
        <author/>
    </observation>
</entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.86"/>
        <statusCode code="completed"/>
    </observation>
</entryRelationship>
    <referenceRange/>
</observation>
</entryRelationship>
<referenceRange>
    <observationRange/>
</referenceRange>
</observation>
</entry>
<entry>
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.68"/>
        <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
        <id root="MDHT" extension="217201772"/>
        <code code="248536006" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="finding of functional performance
and activity"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
        </effectiveTime>
    </observation>
    <entryRelationship>
        <supply classCode="SPLY">
            <templateId root="2.16.840.1.113883.10.20.22.4.50"/>
            <id root="MDHT" extension="1389304697"/>
            <text>Text Value</text>
            <effectiveTime value="20140803"/>
        </supply>
    </entryRelationship>
</entry>

```

```

</supply>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.72"/>
    <id root="MDHT" extension="415854412"/>
    <code code="1309383377"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <participant typeCode="IND"/>
  </observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.69"/>
    <id root="MDHT" extension="1726649104"/>
    <code code="1811926949"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <author/>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.86"/>
      <statusCode code="completed"/>
    </observation>
  </entryRelationship>
  <referenceRange/>
</observation>
</entryRelationship>
</observation>
</entry>
<entry>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.73"/>
    <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
    <id root="MDHT" extension="2085223358"/>
    <code code="373930000" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Cognitive function finding"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  <entryRelationship>
    <supply classCode="SPLY">
      <templateId root="2.16.840.1.113883.10.20.22.4.50"/>
      <id root="MDHT" extension="935710705"/>
      <text>Text Value</text>
      <effectiveTime value="20140803"/>
    </supply>
  </entryRelationship>
</entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.72"/>
    <id root="MDHT" extension="1270139502"/>

```



```

        <code code="2023488265"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
        </effectiveTime>
        <participant typeCode="IND"/>
    </observation>
</entryRelationship>
<entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.69"/>
        <id root="MDHT" extension="906262044"/>
        <code code="1304275198"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
        </effectiveTime>
        <author/>
    </observation>
    <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.86"/>
            <statusCode code="completed"/>
        </observation>
    </entryRelationship>
    <referenceRange/>
</entryRelationship>
</entry>
<entry>
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.72"/>
        <id root="MDHT" extension="2020948518"/>
        <code code="626802537"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
        </effectiveTime>
        <participant typeCode="IND">
            <time>
                <low value="2014"/>
                <high value="2014"/>
            </time>
            <participantRole classCode="CAREGIVER"/>
        </participant>
    </observation>
</entry>
<entry>
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.69"/>
        <id root="MDHT" extension="178778829"/>
        <code code="1976726140"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
        </effectiveTime>
    </observation>
</entry>

```

```

<author/>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.86"/>
    <id root="MDHT" extension="686026599"/>
    <code code="800426650"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
<referenceRange>
  <observationRange/>
</referenceRange>
</observation>
</entry>
<entry>
  <supply classCode="SPLY">
    <templateId root="2.16.840.1.113883.10.20.22.4.50"/>
    <id root="MDHT" extension="1038196103"/>
    <text>Text Value</text>
    <effectiveTime value="20140803"/>
  </supply>
</entry>
<entry>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.70"/>
    <id root="MDHT" extension="259135016"/>
    <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Assertion"/>
    <text>Text Value</text>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <code code="401238003" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Length of Wound"/>
      </observation>
    </entryRelationship>
    <entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <code code="401239006" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Width of Wound"/>
      </observation>
    </entryRelationship>
    <entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <code code="425094009" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Depth of Wound"/>
      </observation>
    </entryRelationship>
  </observation>
</entry>
<entry>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.76"/>
    <id root="MDHT" extension="259568393"/>

```

```
<code code="2264892003" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="number of pressure ulcers"/>
<text>Text Value</text>
<statusCode code="completed"/>
<effectiveTime>
  <low value="2014"/>
  <high value="2014"/>
</effectiveTime>
<author/>
<entryRelationship typeCode="SUBJ">
  <observation classCode="OBS" moodCode="EVN"/>
</entryRelationship>
</observation>
</entry>
<entry>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.77"/>
    <id root="MDHT" extension="1589440759"/>
    <code code="420905001" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Highest Pressure Ulcer Stage"/>
    <text>Text Value</text>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entry>
</section>
```

Figure 18: Functional Status Section example

General Status Section

[Section: templateId 2.16.840.1.113883.10.20.2.5]

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.

- 1. SHALL contain exactly one [1..1] templateId (CONF:10457) such that it
 - a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.2.5"
- 2. SHALL contain exactly one [1..1] code (CONF:15472)/@code="10210-3" GENERAL STATUS (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15473)
- 3. SHALL contain exactly one [1..1] title (CONF:7987)
- 4. SHALL contain exactly one [1..1] text (CONF:7988)

General Status Section Table

consol::GeneralStatusSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.2.5]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15473	LOINC 2.16.840.1.113883.6.1 10210-3

consol::GeneralStatusSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.2.5]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
title	title	1..1	SHALL	YES	ST	CONF:7987	
generalStatusSection	generalStatusSection	1..1	MAY	YES	GeneralStatusSection	CONF:9515	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7988	

General Status Section Sample

The following XML snippet is a sample for General Status Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.2.5" />
  <id root="MDHT" extension="1606675899" />
  <code code="10210-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="GENERAL STATUS" />
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 19: General Status Section example

History Of Past Illness Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.20]

This section describes the history related to the patient's past complaints, problems, or diagnoses. It records these details up until and possibly pertinent to the patient's current complaint or reason for seeking medical care.

- 1. **SHALL** contain exactly one [1..1] **templateId** (CONF:10390) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.20"
- 2. **SHALL** contain exactly one [1..1] **code** (CONF:15474)/**@code**="11348-0" *HISTORY OF PAST ILLNESS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15475)
- 3. **SHALL** contain exactly one [1..1] **title** (CONF:7830)
- 4. **SHALL** contain exactly one [1..1] **text** (CONF:7831)
- 5. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:8792)
 - a. Contains exactly one [1..1] *Problem Observation* (templateId: 2.16.840.1.113883.10.20.22.4.4)

History Of Past Illness Section Table

consol::HistoryOfPastIllnessSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.20]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15475	LOINC 2.16.840.1.113883.6.1 11348-0
title	title	1..1	SHALL	YES	ST	CONF:7830	

consol::HistoryOfPastIllnessSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.20]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
historyOfPastIllnessSection	HistoryOfPastIllnessSection	1	MAY	YES	HistoryOfPastIllnessSection	CONF:564	
problemObservation	cda:entry/ cda:observation[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.4]	0..*	MAY	YES	ProblemObservation	CONF:8792	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7831	

History Of Past Illness Section Sample

The following XML snippet is a sample for History Of Past Illness Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.20"/>
  <id root="MDHT" extension="1916265067"/>
  <code code="11348-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="HISTORY OF PAST ILLNESS"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <id root="MDHT" extension="983886513"/>
      <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
      <text>Text Value</text>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.31"/>
          <id root="MDHT" extension="258771897"/>
          <code code="445518008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
          <text>Text Value</text>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
          </effectiveTime>
        </observation>
      </entryRelationship>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.5"/>
      <id root="MDHT" extension="924368095"/>
      <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Health status"/>
      <text>Text Value</text>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
</section>
```

```
<high value="2014"/>
</effectiveTime>
</observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.6"/>
    <id root="MDHT" extension="1808678012"/>
    <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
</observation>
</entry>
</section>
```

Figure 20: History Of Past Illness Section example

History Of Present Illness Section

[Section: templateId 1.3.6.1.4.1.19376.1.5.3.1.3.4]

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.

- 1. SHALL contain exactly one [1..1] templateId (CONF:10458) such that it
 - a. SHALL contain exactly one [1..1] @root="1.3.6.1.4.1.19376.1.5.3.1.3.4"
- 2. SHALL contain exactly one [1..1] code (CONF:15477)/@code="10164-2" HISTORY OF PRESENT ILLNESS (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15478)
- 3. SHALL contain exactly one [1..1] title (CONF:7850)
- 4. SHALL contain exactly one [1..1] text (CONF:7851)

History Of Present Illness Section Table

consol::HistoryOfPresentIllnessSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 1.3.6.1.4.1.19376.1.5.3.1.3.4]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15478	LOINC 2.16.840.1.113883.6.1 10164-2
title	title	1..1	SHALL	YES	ST	CONF:7850	
historyOfPresentIllnessSection	historyOfPresentIllnessSection	1..1	SHALL	YES	HistoryOfPresentIllnessSection	CONF:9493	
historyOfPresentIllnessSection	historyOfPresentIllnessSection	1..1	MAY	YES	HistoryOfPresentIllnessSection	CONF:9566	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7851	

History Of Present Illness Section Sample

The following XML snippet is a sample for History Of Present Illness Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.4" />
  <id root="MDHT" extension="722532430" />
  <code code="10164-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="HISTORY OF PRESENT ILLNESS" />
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 21: History Of Present Illness Section example

Hospital Admission Diagnosis Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.43]

The Hospital Admitting Diagnosis section contains a narrative description of the primary reason for admission to a hospital facility. The section includes an optional entry to record patient conditions.

- 1. **SHALL** contain exactly one [1..1] **templateId** (CONF:9930, CONF:10391) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.43"
- 2. **SHALL** contain exactly one [1..1] **code** (CONF:15479)/**@code**="46241-6" *HOSPITAL ADMISSION DX* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15480)
- 3. **SHALL** contain exactly one [1..1] **title** (CONF:9932)
- 4. **SHALL** contain exactly one [1..1] **text** (CONF:9933)
- 5. If section/@nullFlavor is not present, **SHOULD** contain zero or one [0..1] **entry** (CONF:9934, CONF:9935)
 - a. Contains exactly one [1..1] *Hospital Admission Diagnosis* (templateId: 2.16.840.1.113883.10.20.22.4.34)

Hospital Admission Diagnosis Section Table

consol::HospitalAdmissionDiagnosisSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.43]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15480	LOINC 2.16.840.1.113883.6.1 46241-6
title	title	1..1	SHALL	YES	ST	CONF:9932	
hospitalAdmissionDiagnosis	Diagnosis/cda:act[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.34]	0..1	SHOULD	YES	HospitalAdmissionDiagnosis	CONF:9934CONF:9935	
hospitalAdmissionDiagnosisSection	DiagnosisSection	1..1	SHALL	YES	HospitalAdmissionDiagnosisSection	CONF:9938	
text	text	1..1	SHALL	YES	StrucDocText	CONF:9933	

Hospital Admission Diagnosis Section Sample

The following XML snippet is a sample for Hospital Admission Diagnosis Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.43"/>
  <id root="MDHT" extension="81377294"/>
  <code code="46241-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="HOSPITAL ADMISSION DX"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.34"/>
      <id root="MDHT" extension="1274566543"/>
      <code code="46241-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Admission diagnosis"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
          <id root="MDHT" extension="639817233"/>
          <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
          <text>Text Value</text>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
          </effectiveTime>
          <entryRelationship>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.22.4.31"/>
              <code code="445518008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
              <statusCode code="completed"/>
            </observation>
          </entryRelationship>
          <entryRelationship>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.22.4.5"/>
              <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Health status"/>
              <statusCode code="completed"/>
            </observation>
          </entryRelationship>
          <entryRelationship>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.22.4.6"/>
              <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
              <statusCode code="completed"/>
            </observation>
          </entryRelationship>
        </observation>
      </entryRelationship>
    </act>
  </entry>
```


</section>

Figure 22: Hospital Admission Diagnosis Section example

Hospital Consultations Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.42]
The Hospital Consultations section records consultations that occurred during the admission.

- 1. SHALL contain exactly one [1..1] templateId (CONF:9915, CONF:10393) such that it
 - a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.42"
- 2. SHALL contain exactly one [1..1] code (CONF:15485)/@code="18841-7" (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15486)
- 3. SHALL contain exactly one [1..1] text (CONF:9918)
- 4. SHALL contain exactly one [1..1] title (CONF:9917)

Hospital Consultations Section Table

consol::HospitalConsultationsSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.42]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15486	LOINC 2.16.840.1.113883.6.1 18841-7
title	title	1..1	SHALL	YES	ST	CONF:9917	
hospitalConsultationsSection	hospitalConsultationsSection	1..1	MAY	YES	HospitalConsultationsSection	CONF:9924	
text	text	1..1	SHALL	YES	StrucDocText	CONF:9918	

Hospital Consultations Section Sample

The following XML snippet is a sample for Hospital Consultations Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.42" />
  <id root="MDHT" extension="119620308" />
  <code code="18841-7" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" />
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 23: Hospital Consultations Section example

Hospital Course Section

[Section: templateId 1.3.6.1.4.1.19376.1.5.3.1.3.5]

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

- 1. SHALL contain exactly one [1..1] templateId (CONF:10459) such that it
 - a. SHALL contain exactly one [1..1] @root="1.3.6.1.4.1.19376.1.5.3.1.3.5"
- 2. SHALL contain exactly one [1..1] code (CONF:15487)/@code=" 8648-8 " Hospital Course (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15488)
- 3. SHALL contain exactly one [1..1] title (CONF:7854)
- 4. SHALL contain exactly one [1..1] text (CONF:7855)

Hospital Course Section Table

consol::HospitalCourseSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 1.3.6.1.4.1.19376.1.5.3.1.3.5]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15488	LOINC 2.16.840.1.113883.6.1 8648-8
title	title	1..1	SHALL	YES	ST	CONF:7854	
hospitalCourseSection	hospitalCourseSection	1	SHALL	YES	HospitalCourseSection	CONF:9544	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7855	

Hospital Course Section Sample

The following XML snippet is a sample for Hospital Course Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.5"/>
  <id root="MDHT" extension="811911246"/>
  <code code="8648-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Hospital Course"/>
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 24: Hospital Course Section example

Hospital Discharge Diagnosis Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.24]

The Hospital Discharge Diagnosis section describes the relevant problems or diagnoses at the time of discharge that occurred during the hospitalization or that need to be followed after hospitalization. This section includes an optional entry to record patient conditions.

- 1. SHALL contain exactly one [1..1] templateId (CONF:7979) such that it
 - a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.24"

- 2. SHALL contain exactly one [1..1] code (CONF:15355)/@code="11535-2" Hospital Discharge Diagnosis (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15356)
- 3. SHALL contain exactly one [1..1] title (CONF:7981)
- 4. SHALL contain exactly one [1..1] text (CONF:7982)
- 5. If section/@nullFlavor is not present, SHOULD contain zero or one [0..1] entry (CONF:7984)
 - a. Contains exactly one [1..1] Hospital Discharge Diagnosis (templateId: 2.16.840.1.113883.10.20.22.4.33)

Hospital Discharge Diagnosis Section Table

consol::HospitalDischargeDiagnosisSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.24]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15356	LOINC 2.16.840.1.113883.6.1 11535-2
title	title	1..1	SHALL	YES	ST	CONF:7981	
hospitalDischargeDiagnosis	diagnosis/ cda:act[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.33]	0..1	SHOULD	YES	HospitalDischargeDiagnosis	CONF:7984	
hospitalDischargeDiagnosisSection	HospitalDischargeDiagnosisSection	SHALL	YES	HospitalDischargeDiagnosisSection	CONF:15356		
text	text	1..1	SHALL	YES	StrucDocText	CONF:7982	

Hospital Discharge Diagnosis Section Sample

The following XML snippet is a sample for Hospital Discharge Diagnosis Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.24"/>
  <id root="MDHT" extension="1216587667"/>
  <code code="11535-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Hospital Discharge Diagnosis"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.33"/>
      <id root="MDHT" extension="1644977507"/>
      <code code="11535-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Hospital Discharge Diagnosis"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
          <id root="MDHT" extension="1996900176"/>
          <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
```

```
<text>Text Value</text>
<statusCode code="completed"/>
<effectiveTime>
  <low value="2014"/>
  <high value="2014"/>
</effectiveTime>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.31"/>
    <code code="445518008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
    <statusCode code="completed"/>
  </observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.5"/>
    <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Health status"/>
    <statusCode code="completed"/>
  </observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.6"/>
    <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
    <statusCode code="completed"/>
  </observation>
</entryRelationship>
</observation>
</entryRelationship>
</act>
</entry>
</section>
```

Figure 25: Hospital Discharge Diagnosis Section example

Hospital Discharge Instructions Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.41]

The Hospital Discharge Instructions section records instructions at discharge.

- 1. **SHALL** contain exactly one [1..1] **templateId** (CONF:10395) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.41"
- 2. **SHALL** contain exactly one [1..1] **code** (CONF:15357)/**@code**="8653-8" *Hospital Discharge Instructions* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15358)
- 3. **SHALL** contain exactly one [1..1] **title** (CONF:9922)
- 4. **SHALL** contain exactly one [1..1] **text** (CONF:9921)

Hospital Discharge Instructions Section Table

consol::HospitalDischargeInstructionsSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.41]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15358	LOINC 2.16.840.1.113883.6.1 8653-8
title	title	1..1	SHALL	YES	ST	CONF:9922	
hospitalDischargeInstructionsSection	hospitalDischargeInstructionsSection	1..1	MAY	YES	HospitalDischargeInstructionsSection	CONF:10396	
text	text	1..1	SHALL	YES	StrucDocText	CONF:9921	

Hospital Discharge Instructions Section Sample

The following XML snippet is a sample for Hospital Discharge Instructions Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.41" />
  <id root="MDHT" extension="1713395785" />
  <code code="8653-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Hospital Discharge Instructions" />
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 26: Hospital Discharge Instructions Section example

Hospital Discharge Medications Section

The Hospital Discharge Medications section defines the medications that the patient is intended to take (or stop) after discharge. The currently active medications must be listed. The section may also include a patient's prescription history and indicate the source of the medication list, for example, from a pharmacy system versus from the patient.

The Hospital Discharge Medications section defines the medications that the patient is intended to take (or stop) after discharge. The currently active medications must be listed. The section may also include a patient's prescription history and indicate the source of the medication list, for example, from a pharmacy system versus from the patient.

Optional Entries

[Section: templateId 2.16.840.1.113883.10.20.22.2.11]

The following constraints apply to a Hospital Discharge Medications Section in which entries are not required.

- 1. **SHALL** contain exactly one [1..1] **templateId** (CONF:10396) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.11"
- 2. **SHALL** contain exactly one [1..1] **code** (CONF:15359)/**@code**="10183-2" *HOSPITAL DISCHARGE MEDICATIONS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15360)
- 3. **SHALL** contain exactly one [1..1] **title** (CONF:7818)
- 4. **SHALL** contain exactly one [1..1] **text** (CONF:7819)
- 5. If section/@nullFlavor is not present, **SHOULD** contain zero or more [0..*] **entry** (CONF:7883)
 - a. Contains exactly one [1..1] *Discharge Medication* (templateId: 2.16.840.1.113883.10.20.22.4.35)

Required Entries

The following constraints apply to a Hospital Discharge Medications Section in which entries are required.

1. SHALL contain exactly one [1..1] templateId (CONF:10397) such that it
- a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.11.1"
2. SHALL conform to *Hospital Discharge Medications Section Entries Optional* template (templateId: 2.16.840.1.113883.10.20.22.2.11)
3. If section/@nullFlavor is not present, SHALL contain at least one [1..*] entry (CONF:7827)
- a. Contains exactly one [1..1] *Discharge Medication* (templateId: 2.16.840.1.113883.10.20.22.4.35)
4. SHALL contain exactly one [1..1] code (CONF:15361)/@code="10183-2" *HOSPITAL DISCHARGE MEDICATIONS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15362)
5. SHALL contain exactly one [1..1] text (CONF:7825)
6. SHALL contain exactly one [1..1] title (CONF:7824)

Hospital Discharge Medications Section Table

consol::HospitalDischargeMedicationsSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.11]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15362	LOINC 2.16.840.1.113883.6.1LOINC 2.16.840.1.113883.6.1 10183-2
title	title	1..1	SHALL	YES	ST	CONF:7824	
dischargeMedication	cda:entry/ cda:act[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.35]	1..*	SHALL	YES	DischargeMedication	CONF:7827	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7825	

Hospital Discharge Medications Section Sample

The following XML snippet is a sample for Hospital Discharge Medications Section Entries Optional

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.11.1"/>
  <templateId root="2.16.840.1.113883.10.20.22.2.11"/>
  <id root="MDHT" extension="879550839"/>
  <code code="10183-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="HOSPITAL DISCHARGE MEDICATIONS" />
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.35"/>
      <id root="MDHT" extension="730738544"/>
      <code code="10183-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Discharge Medication"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </act>
  </entry>
</section>
```

```

</effectiveTime>
<entryRelationship>
  <substanceAdministration classCode="SBADM">
    <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
    <id root="MDHT" extension="2036506961"/>
    <code code="388172898"/>
    <text>Text Value</text>
    <effectiveTime value="20140803"/>
    <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
    <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <consumable/>
    <performer/>
    <entryRelationship>
      <supply classCode="SPLY" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
      </supply>
    </entryRelationship>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
        <statusCode code="completed"/>
      </observation>
    </entryRelationship>
    <entryRelationship>
      <act classCode="ACT" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <statusCode code="completed"/>
      </act>
    </entryRelationship>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <statusCode code="completed"/>
      </observation>
    </entryRelationship>
    <entryRelationship>
      <supply classCode="SPLY" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.18"/>
      </supply>
    </entryRelationship>
    <precondition/>
  </substanceAdministration>
</entryRelationship>
</act>
</entry>
</section>

```

Figure 27: Hospital Discharge Medications Section Entries Optional example

Hospital Discharge Physical Section

[Section: templateId 1.3.6.1.4.1.19376.1.5.3.1.3.26]

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

- 1. SHALL contain exactly one [1..1] templateId (CONF:10460) such that it
 - a. SHALL contain exactly one [1..1] @root="1.3.6.1.4.1.19376.1.5.3.1.3.26"
- 2. SHALL contain exactly one [1..1] code (CONF:15363)/@code="10184-0" Hospital Discharge Physical (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15364)
- 3. SHALL contain exactly one [1..1] title (CONF:7973)
- 4. SHALL contain exactly one [1..1] text (CONF:7974)

Hospital Discharge Physical Section Table

consol::HospitalDischargePhysicalSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 1.3.6.1.4.1.19376.1.5.3.1.3.26]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15364	LOINC 2.16.840.1.113883.6.1 10184-0
title	title	1..1	SHALL	YES	ST	CONF:7973	
hospitalDischargePhysicalSection	hospitalDischargePhysicalSection	1..1	MAY	YES	HospitalDischargePhysicalSection	CONF:15368	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7974	

Hospital Discharge Physical Section Sample

The following XML snippet is a sample for Hospital Discharge Physical Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.26" />
  <id root="MDHT" extension="1862237491" />
  <code code="10184-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Hospital Discharge Physical" />
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 28: Hospital Discharge Physical Section example

Hospital Discharge Studies Summary Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.16]

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 where 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.

- 1. SHALL contain exactly one [1..1] templateId (CONF:10398) such that it
 - a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.16"
- 2. SHALL contain exactly one [1..1] code (CONF:15365)/@code="11493-4" Hospital Discharge Studies Summary (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15366)
- 3. SHALL contain exactly one [1..1] title (CONF:7912)
- 4. SHALL contain exactly one [1..1] text (CONF:7913)

Hospital Discharge Studies Summary Section Table

consol::HospitalDischargeStudiesSummarySection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.16]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15366	LOINC 2.16.840.1.113883.6.1 11493-4
title	title	1..1	SHALL	YES	ST	CONF:7912	
hospitalDischargeStudiesSummarySection	hospitalDischargeStudiesSummarySection	1..1	MAY	YES	HospitalDischargeStudiesSummarySection	CONF:9570	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7913	

Hospital Discharge Studies Summary Section Sample

The following XML snippet is a sample for Hospital Discharge Studies Summary Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.16" />
  <id root="MDHT" extension="24807296" />
  <code code="11493-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Hospital Discharge Studies Summary" />
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 29: Hospital Discharge Studies Summary Section example

Immunizations Section

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.

Optional Entries

[Section: templateId 2.16.840.1.113883.10.20.22.2.2]

The following constraints apply to a Immunizations Section in which entries are not required.

1. SHALL contain exactly one [1..1] templateId (CONF:7965, CONF:10399) such that it
- a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.2"
2. SHALL contain exactly one [1..1] code (CONF:15367)/@code="11369-6" (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15368)
3. SHALL contain exactly one [1..1] title (CONF:7967)
4. SHALL contain exactly one [1..1] text (CONF:7968)
5. If section/@nullFlavor is not present, SHOULD contain zero or more [0..*] entry (CONF:7969, CONF:7970)
- a. Contains exactly one [1..1] Immunization Activity (templateId: 2.16.840.1.113883.10.20.22.4.52)

Required Entries

The following constraints apply to a Immunizations Section in which entries are required.

1. SHALL contain exactly one [1..1] templateId (CONF:9015, CONF:10400) such that it
- a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.2.1"
2. SHALL conform to Immunizations Section Entries Optional template (templateId: 2.16.840.1.113883.10.20.22.2.2)
3. SHALL contain exactly one [1..1] code (CONF:15369)/@code="11369-6" (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15370)
4. SHALL contain exactly one [1..1] title (CONF:9017)
5. SHALL contain exactly one [1..1] text (CONF:9018)
6. If section/@nullFlavor is not present, SHALL contain at least one [1..*] entry (CONF:9019, CONF:9020)
- a. Contains exactly one [1..1] Immunization Activity (templateId: 2.16.840.1.113883.10.20.22.4.52)

Immunizations Section Table

consol::ImmunizationsSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.2]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15370	LOINC 2.16.840.1.113883.6.1LOINC 2.16.840.1.113883.6.1 11369-6
title	title	1..1	SHALL	YES	ST	CONF:9017	
immunization	cda:entry/ cda:substanceAdministration[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.52]	1..*	SHALL	YES	ImmunizationActivity	CONF:9019CONF:9020	
immunizationsSectionOptional	immunizationsSectionOptional	1..1	MAY	YES	ImmunizationsSectionOptional	CONF:9519	
text	text	1..1	SHALL	YES	StrucDocText	CONF:9018	

Immunizations Section Sample

The following XML snippet is a sample for Immunizations Section Entries Optional

```
<section xmlns="urn:hl7-org:v3">
```

```

<templateId root="2.16.840.1.113883.10.20.22.2.2.1"/>
<templateId root="2.16.840.1.113883.10.20.22.2.2"/>
<id root="MDHT" extension="1888522687"/>
<code code="11369-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
<title>TEXT FOR TITLE</title>
<text/>
<entry>
  <substanceAdministration classCode="SBADM">
    <templateId root="2.16.840.1.113883.10.20.22.4.52"/>
    <id root="MDHT" extension="1651157790"/>
    <code code="1491270280"/>
    <text>Text Value</text>
    <effectiveTime value="20140803"/>
    <routeCode codeSystem="2.16.840.1.113883.3.26.1.1" codeSystemName="NCI
Thesaurus"/>
    <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <administrationUnitCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
    <consumable>
      <manufacturedProduct/>
    </consumable>
    <performer/>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
        <id root="MDHT" extension="1667989346"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
          <low value="2014"/>
          <high value="2014"/>
        </effectiveTime>
      </observation>
    </entryRelationship>
    <entryRelationship>
      <act classCode="ACT" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
        <id root="MDHT" extension="424884893"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
          <low value="2014"/>
          <high value="2014"/>
        </effectiveTime>
      </act>
    </entryRelationship>
    <entryRelationship>
      <supply classCode="SPLY" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.18"/>
        <id root="MDHT" extension="1572605180"/>
        <code code="1520744797"/>
        <text>Text Value</text>
        <effectiveTime value="20140803"/>
        <performer/>
      </entryRelationship>
      <supply classCode="SPLY" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
        <supply/>
      </supply>
    </entryRelationship>
  </substanceAdministration>
</entry>

```

```

    </entryRelationship>
  </supply>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
    <id root="MDHT" extension="1162482881"/>
    <code code="2090227583"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.8"/>
        <code code="SEV" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Severity observation"/>
        <statusCode code="completed"/>
      </observation>
    </entryRelationship>
    <entryRelationship>
      <procedure classCode="PROC">
        <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
        <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
        <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
      </procedure>
    </entryRelationship>
    <entryRelationship>
      <substanceAdministration classCode="SBADM">
        <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
        <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
        <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
      </substanceAdministration>
    </entryRelationship>
  </observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.53"/>
    <id root="MDHT" extension="865975870"/>
    <code codeSystem="2.16.840.1.113883.5.8"
codeSystemName="ActReason"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
<entryRelationship>
  <supply classCode="SPLY" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
    <id root="MDHT" extension="1389612394"/>
    <code code="1957432274"/>
    <text>Text Value</text>
    <effectiveTime value="20140803"/>
    <author/>
  </supply>
</entryRelationship>

```

```
<entryRelationship>
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.20" />
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" />
    <statusCode code="completed" />
  </act>
</entryRelationship>
</supply>
</entryRelationship>
<precondition>
  <criteria/>
</precondition>
</substanceAdministration>
</entry>
</section>
```

Figure 30: Immunizations Section Entries Optional example

Instructions Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.45]

The Instructions section records instructions given to a patient. List patient decision aids here.

- 1. **SHALL** contain exactly one [1..1] templateId (CONF:10112, CONF:10402) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.45"
- 2. **SHALL** contain exactly one [1..1] code (CONF:15375)/@code="69730-0" Instructions (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15376)
- 3. **SHALL** contain exactly one [1..1] text (CONF:10115)
- 4. **SHALL** contain exactly one [1..1] title (CONF:10114)
- 5. If section/@nullFlavor is not present, **SHOULD** contain zero or more [0..*] entry (CONF:10116, CONF:10117)
 - a. Contains exactly one [1..1] Instructions (templateId: 2.16.840.1.113883.10.20.22.4.20)

Instructions Section Table

consol::InstructionsSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.45]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15376	LOINC 2.16.840.1.113883.6.1 69730-0
title	title	1..1	SHALL	YES	ST	CONF:10114	
instructions	cda:entry/ cda:act[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.20]	0..*	SHOULD	YES	Instructions	CONF:10116CONF:10117	
instructionsSection	instructionsSection	0..1	MAY	YES	InstructionsSection	CONF:16807	

consol::InstructionsSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.45]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
text	text	1..1	SHALL	YES	StrucDocText	CONF:10115	

Instructions Section Sample

The following XML snippet is a sample for Instructions Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.45" />
  <id root="MDHT" extension="1877488012" />
  <code code="69730-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Instructions" />
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <act classCode="ACT" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.20" />
      <id root="MDHT" extension="1915096594" />
      <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT" />
      <text>Text Value</text>
      <statusCode code="completed" />
      <effectiveTime>
        <low value="2014" />
        <high value="2014" />
      </effectiveTime>
    </act>
  </entry>
</section>
```

Figure 31: Instructions Section example

Interventions Section

[Section: templateId 2.16.840.1.113883.10.20.21.2.3]

The Interventions section contains information about the specific interventions provided during the healthcare visit. Depending on the type of intervention(s) provided (procedural, education, application of assistive equipment, etc.), the details will vary but may include specification of frequency, intensity, and duration.

1. SHALL contain exactly one [1..1] templateId (CONF:8680) such that it
- a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.21.2.3"
2. SHALL contain exactly one [1..1] code (CONF:15377)/@code=" 62387-6 " (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15378)
3. SHALL contain exactly one [1..1] text (CONF:8683)
4. SHALL contain exactly one [1..1] title (CONF:8682)

Interventions Section Table

consol::InterventionsSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.21.2.3]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15378	LOINC 2.16.840.1.113883.6.1 62387-6
title	title	1..1	SHALL	YES	ST	CONF:8682	
interventionsSection	interventionsSection	0..1	MAY	YES	InterventionsSection	CONF:8778	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8683	

Interventions Section Sample

The following XML snippet is a sample for Interventions Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.21.2.3"/>
  <id root="MDHT" extension="1768985759"/>
  <code code="62387-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 32: Interventions Section example

Medical Equipment Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.23]

The Medical Equipment section defines a patient's implanted and external medical devices and equipment that their health status depends on, as well as any pertinent equipment or device history. This section is also used to itemize any pertinent current or historical durable medical equipment (DME) used to help maintain the patient's health status. All pertinent equipment relevant to the diagnosis, care, and treatment of a patient should be included.

- 1. SHALL contain exactly one [1..1] templateId (CONF:7944.CONF:10404) such that it
 - a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.23"
- 2. SHALL contain exactly one [1..1] code (CONF:15381)/@code="46264-8" Medical Equipment (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15382)
- 3. SHALL contain exactly one [1..1] title (CONF:7946)
- 4. SHALL contain exactly one [1..1] text (CONF:7947)
- 5. If section/@nullFlavor is not present, SHOULD contain zero or more [0..*] entry (CONF:7948.CONF:8755)
 - a. Contains exactly one [1..1] Non Medicinal Supply Activity (templateId: 2.16.840.1.113883.10.20.22.4.50)

Medical Equipment Section Table

consol::MedicalEquipmentSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.23]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15382	LOINC 2.16.840.1.113883.6.1 46264-8
title	title	1..1	SHALL	YES	ST	CONF:7946	
medicalEquipmentSection	medicalEquipmentSection	1..1	MAY	YES	MedicalEquipmentSection	CONF:9466	
nonMedicinalSupply	nonMedicinalSupply/cda:supply[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.50]	0..*	SHOULD	YES	NonMedicinalSupply	CONF:7948,CONF:8755	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7947	

Medical Equipment Section Sample

The following XML snippet is a sample for Medical Equipment Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.23"/>
  <id root="MDHT" extension="1778652111"/>
  <code code="46264-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Medical Equipment"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <supply classCode="SPLY">
      <templateId root="2.16.840.1.113883.10.20.22.4.50"/>
      <id root="MDHT" extension="1899318496"/>
      <code code="1079861941"/>
      <text>Text Value</text>
      <effectiveTime value="20140803"/>
    </supply>
  </entry>
</section>
```

Figure 33: Medical Equipment Section example

Medical History Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.39]

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.

1. SHALL contain exactly one [1..1] templateId (CONF:8160, CONF:10403) such that it

a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.39"

2. SHALL contain exactly one [1..1] code (CONF:15379)/@code="11329-0" (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15380)

3. SHALL contain exactly one [1..1] text (CONF:8163)

4. SHALL contain exactly one [1..1] title (CONF:8162)

Medical History Section Table

consol::MedicalHistorySection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.39]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15380	LOINC 2.16.840.1.113883.6.1 11329-0
title	title	1..1	SHALL	YES	ST	CONF:8162	
medicalHistorySection	medicalHistorySection	0..1	MAY	YES	MedicalHistorySection	CONF:9823	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8163	

Medical History Section Sample

The following XML snippet is a sample for Medical History Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.39" />
  <id root="MDHT" extension="527800477" />
  <code code="11329-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" />
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 34: Medical History Section example

Medications Administered Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.38]

The Medications Administered section defines medications and fluids administered during the procedure, encounter, or other activity excluding anesthetic medications. This guide recommends anesthesia medications be documented as described in the section on Anesthesia.

1. SHALL contain exactly one [1..1] templateId (CONF:8152, CONF:10405) such that it

a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.38"

2. SHALL contain exactly one [1..1] code (CONF:15383)/@code="29549-3" Medications Administered (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15384)

3. SHALL contain exactly one [1..1] text (CONF:8155)

4. SHALL contain exactly one [1..1] title (CONF:8154)

5. If section/@nullFlavor is not present, MAY contain zero or more [0..*] entry (CONF:8156)

a. Contains exactly one [1..1] *Medication Activity* (templateId: 2.16.840.1.113883.10.20.22.4.16)

Medications Administered Section Table

consol::MedicationsAdministeredSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.38]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15384	LOINC 2.16.840.1.113883.6.1 29549-3
title	title	1..1	SHALL	YES	ST	CONF:8154	
medicationActivity	cda:entry/ cda:substanceAdministration[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.16]	0..*	MAY	YES	MedicationActivity	CONF:8156	
medicationsAdministeredSection	medicationsAdministeredSection	1..1	MAY	YES	MedicationsAdministeredSection	CONF:8157	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8155	

Medications Administered Section Sample

The following XML snippet is a sample for Medications Administered Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.38"/>
  <id root="MDHT" extension="2042755532"/>
  <code code="29549-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Medications Administered"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <substanceAdministration classCode="SBADM">
      <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
      <id root="MDHT" extension="579708952"/>
      <code code="1543923689"/>
      <text>Text Value</text>
      <effectiveTime value="20140803"/>
      <routeCode codeSystem="2.16.840.1.113883.3.26.1.1" codeSystemName="NCI
Thesaurus"/>
      <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
      <consumable>
        <manufacturedProduct/>
      </consumable>
      <performer/>
      <entryRelationship>
        <supply classCode="SPLY" moodCode="INT">
          <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
          <id root="MDHT" extension="1796471754"/>
          <code code="1933391160"/>
          <text>Text Value</text>
          <effectiveTime value="20140803"/>
          <author/>
        </entryRelationship>
      </supply>
    </substanceAdministration>
  </entry>
</section>
```

```

        <act classCode="ACT" moodCode="INT">
          <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
          <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
          <statusCode code="completed"/>
        </act>
      </entryRelationship>
    </supply>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
      <id root="MDHT" extension="986204893"/>
      <code code="2050480295"/>
      <text>Text Value</text>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.8"/>
          <code code="SEV" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Severity observation"/>
          <statusCode code="completed"/>
        </observation>
      </entryRelationship>
      <entryRelationship>
        <procedure classCode="PROC">
          <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
          <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
          <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        </procedure>
      </entryRelationship>
      <entryRelationship>
        <substanceAdministration classCode="SBADM">
          <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
          <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
          <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        </substanceAdministration>
      </entryRelationship>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <act classCode="ACT" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
      <id root="MDHT" extension="231071390"/>
      <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
      <text>Text Value</text>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </act>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">

```

```
<templateId root="2.16.840.1.113883.10.20.22.4.19"/>
<id root="MDHT" extension="1141506519"/>
<code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
<text>Text Value</text>
<statusCode code="completed"/>
<effectiveTime>
  <low value="2014"/>
  <high value="2014"/>
</effectiveTime>
</observation>
</entryRelationship>
<entryRelationship>
  <supply classCode="SPLY" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.18"/>
    <id root="MDHT" extension="1535831606"/>
    <code code="512189867"/>
    <text>Text Value</text>
    <effectiveTime value="20140803"/>
    <performer/>
    <entryRelationship>
      <supply classCode="SPLY" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
      </supply>
    </entryRelationship>
  </supply>
</entryRelationship>
<precondition>
  <criteria/>
</precondition>
</substanceAdministration>
</entry>
</section>
```

Figure 35: Medications Administered Section example

Medications Section

The Medications section defines a patient's current medications and pertinent medication history. At a minimum, the currently active medications are to be listed, with an entire medication history as an option. The section may also include a patient's prescription and dispense history.

This section requires that there be either an entry indicating the subject is not known to be on any medications, or that there be entries summarizing the subject's medications.

Optional Entries

[Section: templateId 2.16.840.1.113883.10.20.22.2.1]

The following constraints apply to a Medications Section in which entries are not required.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:7791) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.1"
2. **SHALL** contain exactly one [1..1] **code/@code**="10160-0" *History of medication use* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:7792)
3. **SHALL** contain exactly one [1..1] **title** (CONF:7793)
4. **SHALL** contain exactly one [1..1] **text** (CONF:7794)
5. If section/@nullFlavor is not present, **SHOULD** contain zero or more [0..*] **entry** (CONF:7795, CONF:7573)
 - a. Contains exactly one [1..1] *Medication Activity* (templateId: 2.16.840.1.113883.10.20.22.4.16)

6. If medication use is unknown, the appropriate nullFlavor **MAY** be present (see unknown information in Section 1)

Required Entries

The following constraints apply to a Medications Section in which entries are required.

- 1. **SHALL** contain exactly one [1..1] templateId (CONF:7568, CONF:10433) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.1.1"
- 2. **SHALL** conform to *Medications Section Entries Optional* template (templateId: 2.16.840.1.113883.10.20.22.2.1)
- 3. **SHALL** contain exactly one [1..1] code/@code="10160-0" *History of medication use* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:7569)
- 4. **SHALL** contain exactly one [1..1] title (CONF:7570)
- 5. **SHALL** contain exactly one [1..1] text (CONF:7571)
- 6. If section/@nullFlavor is not present, **SHALL** contain at least one [1..*] entry (CONF:7572, CONF:7573)
 - a. Contains exactly one [1..1] *Medication Activity* (templateId: 2.16.840.1.113883.10.20.22.4.16)
- 7. If medication use is unknown, the appropriate nullFlavor **MAY** be present (see unknown information in Section 1)

Medications Section Table

consol::MedicationsSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.1]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:7569	LOINC 2.16.840.1.113883.6.1LOINC 2.16.840.1.113883.6.1 10160-0
title	title	1..1	SHALL	YES	ST	CONF:7570	
medication	cda:entry/ cda:substanceAdministration[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.16]	1..*	SHALL	YES	MedicationActivity	CONF:7572CONF:7573	
medicationsSection	medicationsSection	1..1	SHALL	YES	MedicationsSection	CONF:9447	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7571	

Medications Section Sample

The following XML snippet is a sample for Medications Section Entries Optional

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.1.1"/>
  <templateId root="2.16.840.1.113883.10.20.22.2.1"/>
  <id root="MDHT" extension="1353375862"/>
  <code code="10160-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="History of medication use"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <substanceAdministration classCode="SBADM">
      <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
      <id root="MDHT" extension="404672319"/>
      <text>Text Value</text>
```

```

    <effectiveTime value="20140803"/>
    <routeCode codeSystem="2.16.840.1.113883.3.26.1.1" codeSystemName="NCI
Thesaurus"/>
    <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <consumable>
      <manufacturedProduct/>
    </consumable>
    <performer/>
    <entryRelationship>
      <supply classCode="SPLY" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
        <id root="MDHT" extension="1208202933"/>
        <text>Text Value</text>
        <effectiveTime value="20140803"/>
        <author/>
        <entryRelationship>
          <act classCode="ACT" moodCode="INT">
            <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
            <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
            <statusCode code="completed"/>
          </act>
        </entryRelationship>
      </supply>
    </entryRelationship>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
        <id root="MDHT" extension="1343950034"/>
        <code code="1556143707"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
          <low value="2014"/>
          <high value="2014"/>
        </effectiveTime>
        <entryRelationship>
          <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.8"/>
            <code code="SEV" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Severity observation"/>
            <statusCode code="completed"/>
          </observation>
        </entryRelationship>
      </entryRelationship>
      <entryRelationship>
        <procedure classCode="PROC">
          <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
          <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
          <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        </procedure>
      </entryRelationship>
      <entryRelationship>
        <substanceAdministration classCode="SBADM">
          <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
          <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
          <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        </substanceAdministration>
      </entryRelationship>
    </observation>

```

```

</entryRelationship>
<entryRelationship>
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
    <id root="MDHT" extension="892788983"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </act>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
    <id root="MDHT" extension="1915770070"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
<entryRelationship>
  <supply classCode="SPLY" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.18"/>
    <id root="MDHT" extension="1259900578"/>
    <text>Text Value</text>
    <effectiveTime value="20140803"/>
    <performer/>
    <entryRelationship>
      <supply classCode="SPLY" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
      </supply>
    </entryRelationship>
  </supply>
</entryRelationship>
<precondition>
  <criterion/>
</precondition>
</substanceAdministration>
</entry>
</section>

```

Figure 36: Medications Section Entries Optional example

Objective Section

[Section: templateId 2.16.840.1.113883.10.20.21.2.1]

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.

1. **SHALL** contain exactly one [1..1] templateId (CONF:7869, CONF:10462) such that it

- a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.21.2.1"
- 2. SHALL contain exactly one [1..1] code (CONF:15389)/@code="61149-1" Objective (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15390)
- 3. SHALL contain exactly one [1..1] text (CONF:7872)
- 4. SHALL contain exactly one [1..1] title (CONF:7871)

Objective Section Table

consol::ObjectiveSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.21.2.1]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15390	LOINC 2.16.840.1.113883.6.1 61149-1
title	title	1..1	SHALL	YES	ST	CONF:7871	
objectiveSection	objectiveSection	0..1	MAY	YES	ObjectiveSection	CONF:8770	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7872	

Objective Section Sample

The following XML snippet is a sample for Objective Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.21.2.1"/>
  <id root="MDHT" extension="1431304106"/>
  <code code="61149-1" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Objective"/>
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 37: Objective Section example

Operative Note Fluid Section

[Section: templateId 2.16.840.1.113883.10.20.7.12]

The Operative Note Fluids section may be used to record fluids administered during the surgical procedure.

- 1. SHALL contain exactly one [1..1] templateId (CONF:8030, CONF:10463) such that it
 - a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.7.12"
- 2. SHALL contain exactly one [1..1] code (CONF:15391)/@code="10216-0" Operative Note Fluids (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15392)
- 3. SHALL contain exactly one [1..1] text (CONF:8033)
- 4. SHALL contain exactly one [1..1] title (CONF:8032)
- 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:8052)

Operative Note Fluid Section Table

consol::OperativeNoteFluidSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.7.12]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15392	LOINC 2.16.840.1.113883.6.1 10216-0
title	title	1..1	SHALL	YES	ST	CONF:8032	
operativeNoteFluidSection	operativeNoteFluidSection	1..1	MAY	YES	OperativeNoteFluidSection	CONF:9900	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8033	

Operative Note Fluid Section Sample

The following XML snippet is a sample for Operative Note Fluid Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.7.12"/>
  <id root="MDHT" extension="1914231449"/>
  <code code="10216-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Operative Note Fluids"/>
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 38: Operative Note Fluid Section example

Operative Note Surgical Procedure Section

[Section: templateId 2.16.840.1.113883.10.20.7.14]

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.

- 1. SHALL contain exactly one [1..1] templateId (CONF:8034, CONF:10464) such that it
 - a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.7.14"
- 2. SHALL contain exactly one [1..1] code (CONF:15393)/@code="10223-6" Operative Note Surgical (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15394)
- 3. SHALL contain exactly one [1..1] text (CONF:8037)
- 4. SHALL contain exactly one [1..1] title (CONF:8036)
- 5. If the surgical procedure section is present there SHALL be text indicating the procedure performed. (CONF:8054)

Operative Note Surgical Procedure Section Table

consol::OperativeNoteSurgicalProcedureSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.7.14]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15394	LOINC 2.16.840.1.113883.6.1 10223-6
title	title	1..1	SHALL	YES	ST	CONF:8036	
operativeNoteSurgicalProcedureSection	operativeNoteSurgicalProcedureSection	1..1	MAY	YES	OperativeNoteSurgicalProcedureSection	CONF:9902	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8037	

Operative Note Surgical Procedure Section Sample

The following XML snippet is a sample for Operative Note Surgical Procedure Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.7.14"/>
  <id root="MDHT" extension="244646694"/>
  <code code="10223-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Operative Note Surgical"/>
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 39: Operative Note Surgical Procedure Section example

Payers Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.18]

The Payers section contains data on the patient s payers, whether a 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.

- 1. **SHALL** contain exactly one [1..1] **templateId** (CONF:7924, CONF:10434) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.18"
- 2. **SHALL** contain exactly one [1..1] **code** (CONF:15395)/**@code**= " 48768-6 " *Payers* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15396)
- 3. **SHALL** contain exactly one [1..1] **title** (CONF:7926)
- 4. **SHALL** contain exactly one [1..1] **text** (CONF:7927)
- 5. If section/@nullFlavor is not present, **SHOULD** contain zero or more [0..*] **entry** (CONF:7959, CONF:8905)

a. Contains exactly one [1..1] *Coverage Activity* (templateId: 2.16.840.1.113883.10.20.22.4.60)

Payers Section Table

consol::PayersSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.18]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15396	LOINC 2.16.840.1.113883.6.1 48768-6
title	title	1..1	SHALL	YES	ST	CONF:7926	
coverageActivity	cda:entry/ cda:act[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.60]	0..*	SHOULD	YES	CoverageActivity	CONF:7959CONF:8905	
payersSection	payersSection	0..1	MAY	YES	PayersSection	CONF:9468	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7927	

Payers Section Sample

The following XML snippet is a sample for Payers Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.18"/>
  <id root="MDHT" extension="2045296419"/>
  <code code="48768-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Payers"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.60"/>
      <id root="MDHT" extension="1686897341"/>
      <code code="48768-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Payment Sources"/>
      <text>Text Value</text>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <entryRelationship>
        <act classCode="ACT" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.61"/>
          <id root="MDHT" extension="1973297522"/>
          <code codeSystemName=""/>
          <text>Text Value</text>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
          </effectiveTime>
          <performer typeCode="PRF">
```

```

        <templateId root="2.16.840.1.113883.10.20.22.4.87" />
      </performer>
      <performer typeCode="PRF">
        <templateId root="2.16.840.1.113883.10.20.22.4.88" />
      </performer>
      <participant typeCode="COV">
        <templateId root="2.16.840.1.113883.10.20.22.4.89" />
      </participant>
      <participant typeCode="HLD">
        <templateId root="2.16.840.1.113883.10.20.22.4.90" />
      </participant>
      <entryRelationship typeCode="REFR" />
    </act>
  </entryRelationship>
</act>
</entry>
</section>

```

Figure 40: Payers Section example

Physical Exam Section

[Section: templateId 2.16.840.1.113883.10.20.2.10]

The Physical Exam section includes direct observations made by the clinician. The examination may include the use of simple instruments and may also describe simple maneuvers performed directly on the patient's body. This section includes only observations made by the examining clinician using 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: Vital Signs, General Status, and those listed in the Additional Physical Examination Subsections appendix.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:10465) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.2.10"
2. **SHALL** contain exactly one [1..1] **code** (CONF:15397)/**@code**="29545-1" *PHYSICAL EXAMINATION* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15398)
3. **SHALL** contain exactly one [1..1] **title** (CONF:7808)
4. **SHALL** contain exactly one [1..1] **text** (CONF:7809)
5. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:17094, CONF:17095)
 - a. Contains exactly one [1..1] *Pressure Ulcer Observation* (templateId: 2.16.840.1.113883.10.20.22.4.70)
6. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:17096, CONF:17097)
 - a. Contains exactly one [1..1] *Number Of Pressure Ulcers Observation* (templateId: 2.16.840.1.113883.10.20.22.4.76)
7. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:17098, CONF:17099)
 - a. Contains exactly one [1..1] *Highest Pressure Ulcer Stage* (templateId: 2.16.840.1.113883.10.20.22.4.77)

Physical Exam Section Table

consol::PhysicalExamSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.2.10]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15398	LOINC 2.16.840.1.113883.6.1 29545-1
title	title	1..1	SHALL	YES	ST	CONF:7808	
highestPressureUlcerStage	cda:entry/ cda:observation[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.77]	0..*	MAY	YES	HighestPressureUlcerStage	CONF:7098CONF:17099	
numberOfPressureUlcersObserved	cda:entry/ cda:observation[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.76]	0..*	MAY	YES	NumberOfPressureUlcersObserved	CONF:15396CONF:17097	
physicalExamSection	physicalExamSection	0..1	SHOULD	YES	PhysicalExamSection	CONF:9495	
pressureUlcerObservation	cda:entry/ cda:observation[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.70]	0..*	MAY	YES	PressureUlcerObservation	CONF:17094CONF:17095	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7809	

Physical Exam Section Sample

The following XML snippet is a sample for Physical Exam Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.2.10"/>
  <id root="MDHT" extension="417617227"/>
  <code code="29545-1" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="PHYSICAL EXAMINATION"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.70"/>
      <id root="MDHT" extension="313248435"/>
      <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Assertion"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
      <entryRelationship typeCode="COMP">
        <observation classCode="OBS" moodCode="EVN">
          <code code="401238003" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Length of Wound"/>
        </observation>
      </entryRelationship>
    </observation>
  </entry>
</section>
```

```

</entryRelationship>
<entryRelationship typeCode="COMP">
  <observation classCode="OBS" moodCode="EVN">
    <code code="401239006" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Width of Wound"/>
  </observation>
</entryRelationship>
<entryRelationship typeCode="COMP">
  <observation classCode="OBS" moodCode="EVN">
    <code code="425094009" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Depth of Wound"/>
  </observation>
</entryRelationship>
</observation>
</entry>
<entry>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.76"/>
    <id root="MDHT" extension="396218457"/>
    <code code="2264892003" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="number of pressure ulcers"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <author/>
    <entryRelationship typeCode="SUBJ">
      <observation classCode="OBS" moodCode="EVN"/>
    </entryRelationship>
  </observation>
</entry>
<entry>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.77"/>
    <id root="MDHT" extension="1990681679"/>
    <code code="420905001" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Highest Pressure Ulcer Stage"/>
    <text>Text Value</text>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entry>
</section>

```

Figure 41: Physical Exam Section example

Plan Of Care Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.10]

The Plan of Care section contains data that defines pending orders, interventions, encounters, services, and procedures for the patient. It is limited to prospective, unfulfilled, or incomplete orders and requests only, which 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 unless constrained due to privacy issues. The plan may also contain information about ongoing care of the patient and information regarding goals and clinical reminders. Clinical reminders are

placed here to provide prompts for disease prevention and management, patient safety, and health-care quality improvements, including widely accepted performance measures. The plan may also indicate that patient education was given or will be provided.

- 1. SHALL contain exactly one [1..1] templateId (CONF:10435) such that it
 - a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.10"
- 2. SHALL contain exactly one [1..1] code (CONF:14749)/@code="18776-5" Treatment plan (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:14750)
- 3. SHALL contain exactly one [1..1] title (CONF:16986)
- 4. SHALL contain exactly one [1..1] text (CONF:7725)
- 5. If section/@nullFlavor is not present, MAY contain zero or more [0..*] entry (CONF:7726.CONF:8804)
 - a. Contains exactly one [1..1] Plan Of Care Activity Act (templateId: 2.16.840.1.113883.10.20.22.4.39)
- 6. If section/@nullFlavor is not present, MAY contain zero or more [0..*] entry (CONF:8805, CONF:8806)
 - a. Contains exactly one [1..1] Plan Of Care Activity Encounter (templateId: 2.16.840.1.113883.10.20.22.4.40)
- 7. If section/@nullFlavor is not present, MAY contain zero or more [0..*] entry (CONF:8808, CONF:8807)
 - a. Contains exactly one [1..1] Plan Of Care Activity Observation (templateId: 2.16.840.1.113883.10.20.22.4.44)
- 8. If section/@nullFlavor is not present, MAY contain zero or more [0..*] entry (CONF:8809, CONF:8810)
 - a. Contains exactly one [1..1] Plan Of Care Activity Procedure (templateId: 2.16.840.1.113883.10.20.22.4.41)
- 9. If section/@nullFlavor is not present, MAY contain zero or more [0..*] entry (CONF:8811, CONF:8812)
 - a. Contains exactly one [1..1] Plan Of Care Activity Substance Administration (templateId: 2.16.840.1.113883.10.20.22.4.42)
- 10. If section/@nullFlavor is not present, MAY contain zero or more [0..*] entry (CONF:8813, CONF:14756)
 - a. Contains exactly one [1..1] Plan Of Care Activity Supply (templateId: 2.16.840.1.113883.10.20.22.4.43)
- 11. If section/@nullFlavor is not present, MAY contain zero or more [0..*] entry (CONF:14695, CONF:16751)
 - a. Contains exactly one [1..1] Instructions (templateId: 2.16.840.1.113883.10.20.22.4.20)

Plan Of Care Section Table

consol::PlanOfCareSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.10]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:14750	LOINC 2.16.840.1.113883.6.1 18776-5
title	title	1..1	SHALL	YES	ST	CONF:16986	
instructions	cda:entry/ cda:act[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.20]	0..*	MAY	YES	Instructions	CONF:14695CONF:16751	
planOfCareActivityAct	cda:entry/ cda:act[cda:templateId/	0..*	MAY	YES	PlanOfCareActivityAct	CONF:7726.CONF:8804	

consol::PlanOfCareSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.10]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
	@root = 2.16.840.1.113883.10.20.22.4.39]						
planOfCareActivity	cda:encounter[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.40]	0..*	MAY	YES	PlanOfCareActivity	CONF:8805CONF:8806	
planOfCareActivity	cda:observation[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.44]	0..*	MAY	YES	PlanOfCareActivity	CONF:8808CONF:8807	
planOfCareActivity	cda:procedure[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.41]	0..*	MAY	YES	PlanOfCareActivity	CONF:8809CONF:8810	
planOfCareActivity	cda:substanceAdministration[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.42]	0..*	MAY	YES	PlanOfCareActivity	CONF:8811CONF:8812	
planOfCareActivity	cda:supply[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.43]	0..*	MAY	YES	PlanOfCareActivity	CONF:8813CONF:14756	
planOfCareSection	planOfCareSection	1..1	SHALL	YES	PlanOfCareSection	CONF:9550	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7725	

Plan Of Care Section Sample

The following XML snippet is a sample for Plan Of Care Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.10" />
  <id root="MDHT" extension="2132884995" />
  <code code="18776-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Treatment plan" />
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <act classCode="ACT">
      <templateId root="2.16.840.1.113883.10.20.22.4.39" />
      <id root="MDHT" extension="1671464205" />
      <code code="157792735" />
      <text>Text Value</text>
      <effectiveTime>
        <low value="2014" />
        <high value="2014" />
      </effectiveTime>
    </act>
  </entry>
</section>
```



```

<entry>
  <encounter classCode="ENC">
    <templateId root="2.16.840.1.113883.10.20.22.4.40"/>
    <id root="MDHT" extension="449883895"/>
    <code code="844546054"/>
    <text>Text Value</text>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </encounter>
</entry>
<entry>
  <observation classCode="OBS">
    <templateId root="2.16.840.1.113883.10.20.22.4.44"/>
    <id root="MDHT" extension="1601707488"/>
    <code code="2077747191"/>
    <text>Text Value</text>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entry>
<entry>
  <procedure classCode="PROC">
    <templateId root="2.16.840.1.113883.10.20.22.4.41"/>
    <id root="MDHT" extension="514803488"/>
    <code code="2124077646"/>
    <text>Text Value</text>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </procedure>
</entry>
<entry>
  <substanceAdministration classCode="SBADM">
    <templateId root="2.16.840.1.113883.10.20.22.4.42"/>
    <id root="MDHT" extension="1911191624"/>
    <code code="882843860"/>
    <text>Text Value</text>
    <effectiveTime value="20140803"/>
    <consumable/>
  </substanceAdministration>
</entry>
<entry>
  <supply classCode="SPLY">
    <templateId root="2.16.840.1.113883.10.20.22.4.43"/>
    <id root="MDHT" extension="588717423"/>
    <code code="1157620137"/>
    <text>Text Value</text>
    <effectiveTime value="20140803"/>
  </supply>
</entry>
<entry>
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
    <id root="MDHT" extension="618641294"/>
    <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>

```

```
<high value="2014"/>
</effectiveTime>
</act>
</entry>
</section>
```

Figure 42: Plan Of Care Section example

Planned Procedure Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.30]

The Planned Procedure section records the procedure(s) that a clinician thought would need to be done based on the preoperative assessment. It may be important to record the procedure(s) that were originally planned for, consented to, and perhaps pre-approved by the payor, particularly if different from the actual procedure(s) and procedure details, to provide evidence to various stakeholders that the providers are aware of the discrepancy and the justification can be found in the procedure details.

- 1. SHALL contain exactly one [1..1] templateId (CONF:8082, CONF:10436) such that it
 - a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.30"
- 2. SHALL contain exactly one [1..1] code (CONF:15399)/@code=" 59772-4" Planned Procedure (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15400)
- 3. SHALL contain exactly one [1..1] text (CONF:8085)
- 4. SHALL contain exactly one [1..1] title (CONF:8084)
- 5. If section/@nullFlavor is not present, MAY contain zero or more [0..*] entry (CONF:8744, CONF:8766)
 - a. Contains exactly one [1..1] Plan Of Care Activity Procedure (templateId: 2.16.840.1.113883.10.20.22.4.41)

Planned Procedure Section Table

consol::PlannedProcedureSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.30]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15400	LOINC 2.16.840.1.113883.6.1 59772-4
title	title	1..1	SHALL	YES	ST	CONF:8084	
plannedProcedureSection	plannedProcedureSection	1..1	MAY	YES	PlannedProcedureSection	CONF:9906	
planOfCareActivityProcedure	planOfCareActivityProcedure cda:procedure[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.41]	0..*	MAY	YES	PlanOfCareActivityProcedure	CONF:8744CONF:8766	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8085	

Planned Procedure Section Sample

The following XML snippet is a sample for Planned Procedure Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.30"/>
  <id root="MDHT" extension="84728805"/>
  <code code="59772-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Planned Procedure"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <procedure classCode="PROC">
      <templateId root="2.16.840.1.113883.10.20.22.4.41"/>
      <id root="MDHT" extension="1956665776"/>
      <code code="1379232885"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </procedure>
  </entry>
</section>
```

Figure 43: Planned Procedure Section example

Postoperative Diagnosis Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.35]

The Postoperative Diagnosis section records the diagnosis or diagnoses discovered or confirmed during the surgery. Often it is the same as the preoperative diagnosis.

- 1. SHALL contain exactly one [1..1] templateId (CONF:8101, CONF:10437) such that it
 - a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.35"
- 2. SHALL contain exactly one [1..1] code (CONF:15401)/@code="10218-6" Postoperative Diagnosis (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15402)
- 3. SHALL contain exactly one [1..1] text (CONF:8104)
- 4. SHALL contain exactly one [1..1] title (CONF:8103)

Postoperative Diagnosis Section Table

consol::PostoperativeDiagnosisSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.35]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15402	LOINC 2.16.840.1.113883.6.1 10218-6
title	title	1..1	SHALL	YES	ST	CONF:8103	
postoperativeDiagnosisSection	postoperativeDiagnosisSection		SHALL	YES	PostoperativeDiagnosisSection	CONF:9913	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8104	

Postoperative Diagnosis Section Sample

The following XML snippet is a sample for Postoperative Diagnosis Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.35" />
  <id root="MDHT" extension="1550838407" />
  <code code="10218-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Postoperative Diagnosis" />
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 44: Postoperative Diagnosis Section example

Postprocedure Diagnosis Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.36]

The Postprocedure Diagnosis section records the diagnosis or diagnoses discovered or confirmed during the procedure. Often it is the same as the pre-procedure diagnosis or indication.

- 1. **SHALL** contain exactly one [1..1] **templateId** (CONF:8167, CONF:10438) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.36"
- 2. **SHALL** contain exactly one [1..1] **code** (CONF:15403)/**@code**="59769-0" *Postprocedure Diagnosis* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15404)
- 3. **SHALL** contain exactly one [1..1] **text** (CONF:8171)
- 4. **SHALL** contain exactly one [1..1] **title** (CONF:8170)
- 5. If section/@nullFlavor is not present, **SHOULD** contain zero or one [0..1] **entry** (CONF:8762, CONF:8764)
 - a. Contains exactly one [1..1] *Postprocedure Diagnosis* (templateId: 2.16.840.1.113883.10.20.22.4.51)

Postprocedure Diagnosis Section Table

consol::PostprocedureDiagnosisSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.36]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15404	LOINC 2.16.840.1.113883.6.1 59769-0
title	title	1..1	SHALL	YES	ST	CONF:8170	
postprocedureDiagnosisEntry	postprocedureDiagnosisEntry/cda:act[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.51]	0..1	SHOULD	YES	PostprocedureDiagnosisSection	CONF:8762CONF:8764	
postprocedureDiagnosisSection	postprocedureDiagnosisSection	1..1	SHALL	YES	PostprocedureDiagnosisSection	CONF:8765	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8171	

Postprocedure Diagnosis Section Sample

The following XML snippet is a sample for Postprocedure Diagnosis Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.36"/>
  <id root="MDHT" extension="352573641"/>
  <code code="59769-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Postprocedure Diagnosis"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.51"/>
      <id root="MDHT" extension="1174688983"/>
      <code code="59769-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Postprocedure Diagnosis"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
          <id root="MDHT" extension="1017047170"/>
          <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
          <text>Text Value</text>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
          </effectiveTime>
          <entryRelationship>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.22.4.31"/>
              <code code="445518008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
              <statusCode code="completed"/>
            </observation>
          </entryRelationship>
          <entryRelationship>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.22.4.5"/>
              <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Health status"/>
              <statusCode code="completed"/>
            </observation>
          </entryRelationship>
          <entryRelationship>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.22.4.6"/>
              <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
              <statusCode code="completed"/>
            </observation>
          </entryRelationship>
        </entryRelationship>
      </act>
    </entry>
  </entryRelationship>
</section>
```

</section>

Figure 45: Postprocedure Diagnosis Section example

Preoperative Diagnosis Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.34]

The Preoperative Diagnosis section records 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.

- 1. SHALL contain exactly one [1..1] templateId (CONF:8097, CONF:10439) such that it
 - a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.34"
- 2. SHALL contain exactly one [1..1] code (CONF:15405)/@code="10219-4" Preoperative Diagnosis (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15406)
- 3. SHALL contain exactly one [1..1] text (CONF:8100)
- 4. SHALL contain exactly one [1..1] title (CONF:8099)
- 5. If section/@nullFlavor is not present, SHOULD contain zero or one [0..1] entry (CONF:10096, CONF:10097)
 - a. Contains exactly one [1..1] Preoperative Diagnosis (templateId: 2.16.840.1.113883.10.20.22.4.65)

Preoperative Diagnosis Section Table

consol::PreoperativeDiagnosisSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.34]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15406	LOINC 2.16.840.1.113883.6.1 10219-4
title	title	1..1	SHALL	YES	ST	CONF:8099	
preoperativeDiagnosis	consol:entry/cda:act[cda:templateId/@root = 2.16.840.1.113883.10.20.22.4.65]	0..1	SHOULD	YES	PreoperativeDiagnosis	CONF:10096CONF:10097	
preoperativeDiagnosisSection	consol:PreoperativeDiagnosisSection	1..1	SHALL	YES	PreoperativeDiagnosisSection	CONF:10088	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8100	

Preoperative Diagnosis Section Sample

The following XML snippet is a sample for Preoperative Diagnosis Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.34"/>
  <id root="MDHT" extension="1636153377"/>
  <code code="10219-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Preoperative Diagnosis"/>
  <title>TEXT FOR TITLE</title>
```

```
<text/>
<entry>
  <act classCode="ACT" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.65"/>
    <id root="MDHT" extension="577537900"/>
    <code code="10219-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
    <text>Text Value</text>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
        <id root="MDHT" extension="45290206"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
          <low value="2014"/>
          <high value="2014"/>
        </effectiveTime>
        <entryRelationship>
          <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.31"/>
            <code code="445518008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
            <statusCode code="completed"/>
          </observation>
        </entryRelationship>
        <entryRelationship>
          <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.5"/>
            <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Health status"/>
            <statusCode code="completed"/>
          </observation>
        </entryRelationship>
        <entryRelationship>
          <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.6"/>
            <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
            <statusCode code="completed"/>
          </observation>
        </entryRelationship>
      </observation>
    </entryRelationship>
  </act>
</entry>
</section>
```

Figure 46: Preoperative Diagnosis Section example

Problem Section

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.

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.

Optional Entries

[Section: templateId 2.16.840.1.113883.10.20.22.2.5]

The following constraints apply to a Problem Section in which entries are not required.

- 1. **SHALL** contain exactly one [1..1] templateId (CONF:7877) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.5"
- 2. **SHALL** contain exactly one [1..1] code (CONF:15407)/@code="11450-4" *Problem List* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15408)
- 3. **SHALL** contain exactly one [1..1] title (CONF:7879)
- 4. **SHALL** contain exactly one [1..1] text (CONF:7880)
- 5. If section/@nullFlavor is not present, **SHOULD** contain zero or more [0..*] entry (CONF:7882)
 - a. Contains exactly one [1..1] *Problem Concern Act* (templateId: 2.16.840.1.113883.10.20.22.4.3)

Required Entries

The following constraints apply to a Problem Section in which entries are required.

- 1. **SHALL** contain exactly one [1..1] templateId (CONF:9179) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.5.1"
- 2. **SHALL** conform to *Problem Section Entries Optional* template (templateId: 2.16.840.1.113883.10.20.22.2.5)
- 3. If section/@nullFlavor is not present, **SHALL** contain at least one [1..*] entry (CONF:9183)
 - a. Contains exactly one [1..1] *Problem Concern Act* (templateId: 2.16.840.1.113883.10.20.22.4.3)
- 4. **SHALL** contain exactly one [1..1] code (CONF:15409)/@code="11450-4" *Problem List* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15410)
- 5. **SHALL** contain exactly one [1..1] text (CONF:9182)
- 6. **SHALL** contain exactly one [1..1] title (CONF:9181)

Problem Section Table

consol::ProblemSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.5]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15410	LOINC 2.16.840.1.113883.6.1LOINC 2.16.840.1.113883.6.1 11450-4
title	title	1..1	SHALL	YES	ST	CONF:9181	
problemConcern	cda:entry/ cda:act[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.3]	1..*	SHALL	YES	ProblemConcernAct	CONF:9183	
problemSection	problemSection	1..1	SHALL	YES	ProblemSection	CONF:9449	
text	text	1..1	SHALL	YES	StrucDocText	CONF:9182	

Problem Section Sample

The following XML snippet is a sample for Problem Section Entries Optional

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.5.1"/>
  <templateId root="2.16.840.1.113883.10.20.22.2.5"/>
  <id root="MDHT" extension="990752756"/>
  <code code="11450-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Problem List"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.3"/>
      <id root="MDHT" extension="501197170"/>
      <code code="CONC" codeSystem="2.16.840.1.113883.5.6"
codeSystemName="HL7ActClass" displayName="Concern"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
          <id root="MDHT" extension="1997544034"/>
          <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
          <text>Text Value</text>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
          </effectiveTime>
          <entryRelationship>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.22.4.31"/>
              <code code="445518008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
              <statusCode code="completed"/>
            </observation>
          </entryRelationship>
        </entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.5"/>
          <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Health status"/>
          <statusCode code="completed"/>
        </observation>
      </entryRelationship>
    </entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.6"/>
      <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
      <statusCode code="completed"/>
    </observation>
  </entryRelationship>
</act>
</entry>
```

</section>

Figure 47: Problem Section Entries Optional example

Procedure Description Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.27]

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.

1. SHALL contain exactly one [1..1] templateId (CONF:8062, CONF:10442) such that it
- a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.27"
2. SHALL contain exactly one [1..1] code (CONF:15411)/@code="29554-3" Procedure Description (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15412)
3. SHALL contain exactly one [1..1] text (CONF:8065)
4. SHALL contain exactly one [1..1] title (CONF:8064)

Procedure Description Section Table

consol::ProcedureDescriptionSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.27]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15412	LOINC 2.16.840.1.113883.6.1 29554-3
title	title	1..1	SHALL	YES	ST	CONF:8064	
procedureDescriptionSection	procedureDescriptionSection	1..1	SHALL	YES	ProcedureDescriptionSection	CONF:80896	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8065	

Procedure Description Section Sample

The following XML snippet is a sample for Procedure Description Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.27"/>
  <id root="MDHT" extension="1316913863"/>
  <code code="29554-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Procedure Description"/>
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 48: Procedure Description Section example

Procedure Disposition Section

[Section: templateId 2.16.840.1.113883.10.20.18.2.12]

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.

- 1. **SHALL** contain exactly one [1..1] templateId (CONF:8070, CONF:10466) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.18.2.12"
- 2. **SHALL** contain exactly one [1..1] code (CONF:15413)/@code="59775-7" Procedure Disposition (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15414)
- 3. **SHALL** contain exactly one [1..1] text (CONF:8073)
- 4. **SHALL** contain exactly one [1..1] title (CONF:8072)

Procedure Disposition Section Table

consol::ProcedureDispositionSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.18.2.12]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15414	LOINC 2.16.840.1.113883.6.1 59775-7
title	title	1..1	SHALL	YES	ST	CONF:8072	
procedureDispositionSection	procedureDispositionSection	1..1	MAY	YES	ProcedureDispositionSection	CONF:8008	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8073	

Procedure Disposition Section Sample

The following XML snippet is a sample for Procedure Disposition Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.18.2.12"/>
  <id root="MDHT" extension="520060296"/>
  <code code="59775-7" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Procedure Disposition"/>
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 49: Procedure Disposition Section example

Procedure Estimated Blood Loss Section

[Section: templateId 2.16.840.1.113883.10.20.18.2.9]

The Estimated Blood Loss section may be a subsection of another section such as the Procedure Description section. The 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".

- 1. **SHALL** contain exactly one [1..1] **templateId** (CONF:8074, CONF:10467) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.18.2.9"
- 2. **SHALL** contain exactly one [1..1] **code** (CONF:15415)/**@code**="59770-8" *Procedure Estimated Blood Loss* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15416)
- 3. **SHALL** contain exactly one [1..1] **text** (CONF:8077)
- 4. **SHALL** contain exactly one [1..1] **title** (CONF:8076)
- 5. 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:8741)

Procedure Estimated Blood Loss Section Table

consol::ProcedureEstimatedBloodLossSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.18.2.9]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15416	LOINC 2.16.840.1.113883.6.1 59770-8
title	title	1..1	SHALL	YES	ST	CONF:8076	
procedureEstimatedBloodLossSection	procedureEstimatedBloodLossSection	1..1	SHALL	YES	ProcedureEstimatedBloodLossSection	CONF:8077	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8077	

Procedure Estimated Blood Loss Section Sample

The following XML snippet is a sample for Procedure Estimated Blood Loss Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.18.2.9"/>
  <id root="MDHT" extension="1179847482"/>
  <code code="59770-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Procedure Estimated Blood Loss"/>
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 50: Procedure Estimated Blood Loss Section example

Procedure Findings Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.28]

The Procedure Findings section records clinically significant observations confirmed or discovered during the procedure or surgery.

- 1. **SHALL** contain exactly one [1..1] **templateId** (CONF:8078) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.28"
- 2. **SHALL** contain exactly one [1..1] **code** (CONF:15417)/**@code**="59776-5" *Procedure Findings* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15418)
- 3. **SHALL** contain exactly one [1..1] **text** (CONF:8081)
- 4. **SHALL** contain exactly one [1..1] **title** (CONF:8080)

5. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:8090, CONF:8091)
- a. Contains exactly one [1..1] *Problem Observation* (templateId: 2.16.840.1.113883.10.20.22.4.4)

Procedure Findings Section Table

consol::ProcedureFindingsSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.28]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15418	LOINC 2.16.840.1.113883.6.1 59776-5
title	title	1..1	SHALL	YES	ST	CONF:8080	
problemObservation	cda:entry/ cda:observation[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.4]	0..*	MAY	YES	ProblemObservation	CONF:8090CONF:8091	
procedureFindingsSection	ProcedureFindingsSection	1..1	SHALL	YES	ProcedureFindingsSection	CONF:9892	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8081	

Procedure Findings Section Sample

The following XML snippet is a sample for Procedure Findings Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.28"/>
  <id root="MDHT" extension="941765354"/>
  <code code="59776-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Procedure Findings"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <id root="MDHT" extension="1658175856"/>
      <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
      <text>Text Value</text>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.31"/>
          <id root="MDHT" extension="972062550"/>
          <code code="445518008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
          <text>Text Value</text>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
          </effectiveTime>
        </observation>
      </entryRelationship>
    </observation>
  </entry>
</section>
```

```

</observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.5"/>
    <id root="MDHT" extension="299683702"/>
    <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Health status"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.6"/>
    <id root="MDHT" extension="363038316"/>
    <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
</observation>
</entry>
</section>

```

Figure 51: Procedure Findings Section example

Procedure Implants Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.40]

The Procedure Implants section records any materials placed during the procedure including stents, tubes, and drains.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:8178, CONF:10444) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.40"
2. **SHALL** contain exactly one [1..1] **code** (CONF:15373)/**@code**="59771-6" *Procedure Implants* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15374)
3. **SHALL** contain exactly one [1..1] **text** (CONF:8181)
4. **SHALL** contain exactly one [1..1] **title** (CONF:8180)
5. The Implants section **SHALL** include a statement providing details of the implants placed, or assert no implants were placed (CONF:8769)

Procedure Implants Section Table

consol::ProcedureImplantsSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.40]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15374	LOINC 2.16.840.1.113883.6.1 59771-6
title	title	1..1	SHALL	YES	ST	CONF:8180	
procedureImplantsSection	procedureImplantsSection	1..1	MAY	YES	ProcedureImplantsSection	CONF:9898	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8181	

Procedure Implants Section Sample

The following XML snippet is a sample for Procedure Implants Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.40" />
  <id root="MDHT" extension="1531483918" />
  <code code="59771-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Procedure Implants" />
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 52: Procedure Implants Section example

Procedure Indications Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.29]

The Procedure Indications section records details about the reason for the procedure or surgery. This section may include the pre-procedure diagnosis or diagnoses as well as one or more symptoms that contribute to the reason the procedure is being performed.

1. SHALL contain exactly one [1..1] templateId (CONF:8058, CONF:10445) such that it
- a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.29"
2. SHALL contain exactly one [1..1] code (CONF:15419)/@code="59768-2" Procedure Indications (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15420)
3. SHALL contain exactly one [1..1] text (CONF:8061)
4. SHALL contain exactly one [1..1] title (CONF:8060)
5. If section/@nullFlavor is not present, MAY contain zero or more [0..*] entry (CONF:8743, CONF:8765)
- a. Contains exactly one [1..1] Indication (templateId: 2.16.840.1.113883.10.20.22.4.19)

Procedure Indications Section Table

consol::ProcedureIndicationsSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.29]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15420	LOINC 2.16.840.1.113883.6.1 59768-2
title	title	1..1	SHALL	YES	ST	CONF:8060	
indication	cda:entry/ cda:observation[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.19]	0..*	MAY	YES	Indication	CONF:8743CONF:8765	
procedureIndicationsSection	procedureIndicationsSection	0..1	MAY	YES	ProcedureIndicationsSection	CONF:9910	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8061	

Procedure Indications Section Sample

The following XML snippet is a sample for Procedure Indications Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.29"/>
  <id root="MDHT" extension="797190779"/>
  <code code="59768-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Procedure Indications"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
      <id root="MDHT" extension="896726814"/>
      <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
      <text>Text Value</text>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </observation>
  </entry>
</section>
```

Figure 53: Procedure Indications Section example

Procedure Specimens Taken Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.31]

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.

- 1. SHALL contain exactly one [1..1] templateId (CONF:8086, CONF:10446) such that it
 - a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.31"
- 2. SHALL contain exactly one [1..1] code (CONF:15421)/@code=" 59773-2" Procedure Specimens Taken (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15422)
- 3. SHALL contain exactly one [1..1] text (CONF:8089)
- 4. SHALL contain exactly one [1..1] title (CONF:8088)
- 5. The Procedure Specimens Taken section SHALL list all specimens removed or SHALL explicitly state that no specimens were taken. (CONF:8742)

Procedure Specimens Taken Section Table

consol::ProcedureSpecimensTakenSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.31]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15422	LOINC 2.16.840.1.113883.6.1 59773-2
title	title	1..1	SHALL	YES	ST	CONF:8088	
procedureSpecimensTakenSection	procedureSpecimensTakenSection	1..1	SHALL	YES	ProcedureSpecimensTakenSection	CONF:8742	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8089	

Procedure Specimens Taken Section Sample

The following XML snippet is a sample for Procedure Specimens Taken Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.31"/>
  <id root="MDHT" extension="1095544638"/>
  <code code="59773-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Procedure Specimens Taken"/>
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 54: Procedure Specimens Taken Section example

Procedures Section

This section defines all interventional, surgical, diagnostic, or therapeutic procedures or treatments pertinent to the patient historically at the time the document is generated. The section is intended to 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 the alter that physical condition of a patient (Splenectomy). Observation act is for procedures that result in new information about a patient but do not cause physical alteration (EEG). Act is for all other types of procedures (dressing change).
The length of an encounter is documented in the documentationOf/encompassingEncounter/effectiveTime and length of service in documentationOf/ServiceEvent/effectiveTime.

This section defines all interventional, surgical, diagnostic, or therapeutic procedures or treatments pertinent to the patient historically at the time the document is generated. The section is intended to 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 (Splenectomy). Observation act is for procedures that result in new information about a patient but do not cause physical alteration (EEG). Act is for all other types of procedures (dressing change).

The length of an encounter is documented in the documentationOf/encompassingEncounter/effectiveTime and length of service in documentationOf/ServiceEvent/effectiveTime.

Optional Entries

[Section: templateId 2.16.840.1.113883.10.20.22.2.7]

The following constraints apply to a Procedures Section in which entries are not required.

1. **SHALL** contain exactly one [1..1] templateId (CONF:6271) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.7"
2. **SHALL** contain exactly one [1..1] **code** (CONF:15423)/@code="47519-4" *History of Procedures* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15424)
3. **SHALL** contain exactly one [1..1] **title** (CONF:17184)
4. **SHALL** contain exactly one [1..1] **text** (CONF:6273)
5. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:6274, CONF:15509)
 - a. Contains exactly one [1..1] *Procedure Activity Procedure* (templateId: 2.16.840.1.113883.10.20.22.4.14)
6. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:6278, CONF:15510)
 - a. Contains exactly one [1..1] *Procedure Activity Observation* (templateId: 2.16.840.1.113883.10.20.22.4.13)
7. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:8533, CONF:15511)
 - a. Contains exactly one [1..1] *Procedure Activity Act* (templateId: 2.16.840.1.113883.10.20.22.4.12)

Required Entries

The following constraints apply to a Procedures Section in which entries are required.

1. **SHALL** contain exactly one [1..1] templateId (CONF:10447) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.7.1"
2. **SHALL** conform to *Procedures Section Entries Optional* template (templateId: 2.16.840.1.113883.10.20.22.2.7)
3. **SHALL** contain exactly one [1..1] **title** (CONF:7893)
4. **SHALL** contain exactly one [1..1] **code** (CONF:15425)/@code="47519-4" *History of procedures* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15426)
5. **SHALL** contain exactly one [1..1] **text** (CONF:7894)
6. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:7895, CONF:7896)
 - a. Contains exactly one [1..1] *Procedure Activity Procedure* (templateId: 2.16.840.1.113883.10.20.22.4.14)
7. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:8017, CONF:8018)
 - a. Contains exactly one [1..1] *Procedure Activity Observation* (templateId: 2.16.840.1.113883.10.20.22.4.13)
8. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:8019, CONF:8020)
 - a. Contains exactly one [1..1] *Procedure Activity Act* (templateId: 2.16.840.1.113883.10.20.22.4.12)

9. If section/@nullFlavor is not present in the Procedure Section, there **SHALL** be at least one procedure, observation or act entry conformant to Procedure Activity Procedure template, Procedure Activity Observation template or Procedure Activity Act template in the Procedure Section. (CONF:8021)

Procedures Section Table

consol::ProceduresSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.7]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15426	LOINC 2.16.840.1.113883.6.1 2.16.840.1.113883.6.1 47519-4
title	title	1..1	SHALL	YES	ST	CONF:7893	
procedureActivity	cda:entry/ cda:act[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.12]	0..*	MAY	YES	ProcedureActivity	CONF:8019CONF:8020	
procedureActivity	cda:entry/ cda:observation[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.13]	0..*	MAY	YES	ProcedureActivity	CONF:8017CONF:8018	
procedureActivity	cda:entry/ cda:procedure[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.14]	0..*	MAY	YES	ProcedureActivity	CONF:7895CONF:7896	
proceduresSection	proceduresSection	1..1	SHALL	YES	ProceduresSection	CONF:9451	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7894	

Procedures Section Sample

The following XML snippet is a sample for Procedures Section Entries Optional

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.7.1"/>
  <templateId root="2.16.840.1.113883.10.20.22.2.7"/>
  <id root="MDHT" extension="1002765751"/>
  <code code="47519-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="History of Procedures"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <procedure classCode="PROC">
      <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
      <id root="MDHT" extension="1691001554"/>
      <code code="1999758289"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </procedure>
  </entry>
</section>
```

```

    <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
    <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <specimen>
    <specimenRole/>
    </specimen>
    <performer>
    <assignedEntity/>
    </performer>
    <entryRelationship typeCode="COMP" inversionInd="true">
    <encounter classCode="ENC" moodCode="EVN"/>
    </entryRelationship>
    <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
    <id root="MDHT" extension="1525438228"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
    </effectiveTime>
    </observation>
    </entryRelationship>
    <entryRelationship>
    <substanceAdministration classCode="SBADM">
    <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
    <id root="MDHT" extension="1375578647"/>
    <code code="398661446"/>
    <text>Text Value</text>
    <effectiveTime value="20140803"/>
    <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
    <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <consumable/>
    <performer/>
    <entryRelationship>
    <supply classCode="SPLY" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
    </supply>
    </entryRelationship>
    <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
    <statusCode code="completed"/>
    </observation>
    </entryRelationship>
    <entryRelationship>
    <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <statusCode code="completed"/>
    </act>
    </entryRelationship>
    <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>

```

```

        <statusCode code="completed"/>
      </observation>
    </entryRelationship>
  <entryRelationship>
    <supply classCode="SPLY" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.18"/>
    </supply>
  </entryRelationship>
  <precondition/>
</substanceAdministration>
</entryRelationship>
<entryRelationship>
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
    <id root="MDHT" extension="842769724"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </act>
</entryRelationship>
</procedure>
</entry>
<entry>
  <observation classCode="OBS">
    <templateId root="2.16.840.1.113883.10.20.22.4.13"/>
    <id root="MDHT" extension="1259361466"/>
    <code code="1757902091"/>
    <text>Text Value</text>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
    <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <performer>
      <assignedEntity/>
    </performer>
    <entryRelationship typeCode="COMP" inversionInd="true">
      <encounter classCode="ENC" moodCode="EVN"/>
    </entryRelationship>
    <entryRelationship>
      <act classCode="ACT" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
        <id root="MDHT" extension="1327003851"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
          <low value="2014"/>
          <high value="2014"/>
        </effectiveTime>
      </act>
    </entryRelationship>
  </entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.19"/>

```

```

        <id root="MDHT" extension="1222932659"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
          <low value="2014"/>
          <high value="2014"/>
        </effectiveTime>
      </observation>
    </entryRelationship>
    <entryRelationship>
      <substanceAdministration classCode="SBADM">
        <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
        <id root="MDHT" extension="2017380836"/>
        <code code="216019563"/>
        <text>Text Value</text>
        <effectiveTime value="20140803"/>
        <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
        <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <consumable/>
        <performer/>
        <entryRelationship>
          <supply classCode="SPLY" moodCode="INT">
            <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
          </supply>
        </entryRelationship>
        <entryRelationship>
          <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
            <statusCode code="completed"/>
          </observation>
        </entryRelationship>
        <entryRelationship>
          <act classCode="ACT" moodCode="INT">
            <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
            <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
            <statusCode code="completed"/>
          </act>
        </entryRelationship>
        <entryRelationship>
          <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
            <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
            <statusCode code="completed"/>
          </observation>
        </entryRelationship>
        <entryRelationship>
          <supply classCode="SPLY" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.18"/>
          </supply>
        </entryRelationship>
        <precondition/>
      </substanceAdministration>
    </entryRelationship>
  </observation>
</entry>
<entry>
  <act classCode="ACT">
    <templateId root="2.16.840.1.113883.10.20.22.4.12"/>

```

```

<id root="MDHT" extension="1294647207"/>
<code code="238153876"/>
<text>Text Value</text>
<effectiveTime>
  <low value="2014"/>
  <high value="2014"/>
</effectiveTime>
<priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
<performer>
  <assignedEntity/>
</performer>
<entryRelationship typeCode="COMP" inversionInd="true">
  <encounter classCode="ENC" moodCode="EVN"/>
</entryRelationship>
<entryRelationship>
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
    <id root="MDHT" extension="339732160"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </act>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
    <id root="MDHT" extension="687705078"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
<entryRelationship>
  <substanceAdministration classCode="SBADM">
    <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
    <id root="MDHT" extension="1490244574"/>
    <code code="1653216243"/>
    <text>Text Value</text>
    <effectiveTime value="20140803"/>
    <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
    <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <consumable/>
    <performer/>
    <entryRelationship>
      <supply classCode="SPLY" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
      </supply>
    </entryRelationship>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.9"/>

```

```

        <statusCode code="completed"/>
      </observation>
    </entryRelationship>
    <entryRelationship>
      <act classCode="ACT" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <statusCode code="completed"/>
      </act>
    </entryRelationship>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <statusCode code="completed"/>
      </observation>
    </entryRelationship>
    <entryRelationship>
      <supply classCode="SPLY" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.18"/>
      </supply>
    </entryRelationship>
    <precondition/>
  </substanceAdministration>
</entryRelationship>
</act>
</entry>
</section>
```

Figure 55: Procedures Section Entries Optional example

Reason For Referral Section

[Section: templateId 1.3.6.1.4.1.19376.1.5.3.1.3.1]

A Reason for Referral section records the reason the patient is being referred for a consultation by a provider. An optional Chief Complaint section may capture the patient's description of the reason for the consultation.

- 1. **SHALL** contain exactly one [1..1] templateId (CONF:10468) such that it
 - a. **SHALL** contain exactly one [1..1] @root="1.3.6.1.4.1.19376.1.5.3.1.3.1"
- 2. **SHALL** contain exactly one [1..1] code (CONF:15427)/@code="42349-1" REASON FOR REFERRAL (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15428)
- 3. **SHALL** contain exactly one [1..1] title (CONF:7846)
- 4. **SHALL** contain exactly one [1..1] text (CONF:7847)

Reason For Referral Section Table

consol::ReasonForReferralSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 1.3.6.1.4.1.19376.1.5.3.1.3.1]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15428	LOINC 2.16.840.1.113883.6.1 42349-1

consol::ReasonForReferralSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 1.3.6.1.4.1.19376.1.5.3.1.3.1]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
title	title	1..1	SHALL	YES	ST	CONF:7846	
reasonForReferralSection	ReasonForReferralSection	1..1	MAY	YES	ReasonForReferralSection	CONF:9498	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7847	

Reason For Referral Section Sample

The following XML snippet is a sample for Reason For Referral Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.1"/>
  <id root="MDHT" extension="885384913"/>
  <code code="42349-1" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="REASON FOR REFERRAL" />
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 56: Reason For Referral Section example

Reason For Visit Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.12]

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.

- 1. **SHALL** contain exactly one [1..1] **templateId** (CONF:7836, CONF:10448) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.12"
- 2. **SHALL** contain exactly one [1..1] **code** (CONF:15429)/**@code**="29299-5" Reason for Visit (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15430)
- 3. **SHALL** contain exactly one [1..1] **text** (CONF:7839)
- 4. **SHALL** contain exactly one [1..1] **title** (CONF:7838)

Reason For Visit Section Table

consol::ReasonForVisitSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.12]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15430	LOINC 2.16.840.1.113883.6.1 29299-5
title	title	1..1	SHALL	YES	ST	CONF:7838	
reasonForVisitSection	ReasonForVisitSection	1..1	MAY	YES	ReasonForVisitSection	CONF:9578	

consol::ReasonForVisitSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.12]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
text	text	1..1	SHALL	YES	StrucDocText	CONF:7839	

Reason For Visit Section Sample

The following XML snippet is a sample for Reason For Visit Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.12" />
  <id root="MDHT" extension="492684964" />
  <code code="29299-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Reason for Visit" />
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 57: Reason For Visit Section example

Results Section

The Results section contains the results of observations generated by laboratories, imaging procedures, and other procedures. 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.

The Results section contains the results of observations generated by laboratories, imaging procedures, and other procedures. 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.

Optional Entries

[Section: templateId 2.16.840.1.113883.10.20.22.2.3]

The following constraints apply to a Results Section in which entries are not required.

- 1. **SHALL** contain exactly one [1..1] templateId (CONF:7116, CONF:9136) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.3"
- 2. **SHALL** contain exactly one [1..1] **code** (CONF:15431)/@code=" 30954-2" *Relevant diagnostic tests and/or laboratory data* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15432)
- 3. **SHALL** contain exactly one [1..1] **title** (CONF:8891)
- 4. **SHALL** contain exactly one [1..1] **text** (CONF:7118)
- 5. If section/@nullFlavor is not present, **SHOULD** contain zero or more [0..*] **entry** (CONF:7119, CONF:7120)
 - a. Contains exactly one [1..1] *Result Organizer* (templateId: 2.16.840.1.113883.10.20.22.4.1)

Required Entries

The following constraints apply to a Results Section in which entries are required.

- 1. **SHALL** contain exactly one [1..1] templateId (CONF:7108, CONF:9137) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.3.1"
- 2. **SHALL** conform to *Results Section Entries Optional* template (templateId: 2.16.840.1.113883.10.20.22.2.3)
- 3. **SHALL** contain exactly one [1..1] **code** (CONF:15433)/@code=" 30954-2" *Relevant diagnostic tests and/or laboratory data* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15434)
- 4. **SHALL** contain exactly one [1..1] **title** (CONF:8892)
- 5. **SHALL** contain exactly one [1..1] **text** (CONF:7111)
- 6. If section/@nullFlavor is not present, **SHALL** contain at least one [1..*] **entry** (CONF:7112, CONF:7113)
 - a. Contains exactly one [1..1] *Result Organizer* (templateId: 2.16.840.1.113883.10.20.22.4.1)

Results Section Table

consol::ResultsSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.3]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15434	LOINC 2.16.840.1.113883.6.1LOINC 2.16.840.1.113883.6.1 30954-2
title	title	1..1	SHALL	YES	ST	CONF:8892	
resultOrganizer	cda:entry/ cda:organizer[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.1]	1..*	SHALL	YES	ResultOrganizer	CONF:7112CONF:7113	
resultsSection	resultsSection	1..1	SHALL	YES	ResultsSection	CONF:9453	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7111	

Results Section Sample

The following XML snippet is a sample for Results Section Entries Optional

```
<section xmlns="urn:hl7-org:v3">
```

```
<templateId root="2.16.840.1.113883.10.20.22.2.3.1"/>
<templateId root="2.16.840.1.113883.10.20.22.2.3"/>
<id root="MDHT" extension="663039661"/>
<code code="30954-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Relevant diagnostic tests and/or
laboratory data"/>
<title>TEXT FOR TITLE</title>
<text/>
<entry>
  <organizer moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.1"/>
    <id root="MDHT" extension="1309922104"/>
    <code code="1641585742"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <component>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.2"/>
        <id root="MDHT" extension="109995818"/>
        <code code="803195094"/>
        <text>Text Value</text>
        <effectiveTime>
          <low value="2014"/>
          <high value="2014"/>
        </effectiveTime>
      </observation>
    </component>
  </organizer>
</entry>
</section>
```

Figure 58: Results Section Entries Optional example

Review Of Systems Section

[Section: templateId 1.3.6.1.4.1.19376.1.5.3.1.3.18]

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.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:10469) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="1.3.6.1.4.1.19376.1.5.3.1.3.18"
2. **SHALL** contain exactly one [1..1] **code** (CONF:15435)/**@code**="10187-3" *REVIEW OF SYSTEMS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15436)
3. **SHALL** contain exactly one [1..1] **title** (CONF:7814)
4. **SHALL** contain exactly one [1..1] **text** (CONF:7815)

Review Of Systems Section Table

consol::ReviewOfSystemsSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 1.3.6.1.4.1.19376.1.5.3.1.3.18]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15436	LOINC 2.16.840.1.113883.6.1 10187-3
title	title	1..1	SHALL	YES	ST	CONF:7814	
reviewOfSystemsSection	reviewOfSystemsSection	1..1	MAY	YES	ReviewOfSystemsSection	CONF:9580	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7815	

Review Of Systems Section Sample

The following XML snippet is a sample for Review Of Systems Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.18"/>
  <id root="MDHT" extension="1288987478"/>
  <code code="10187-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="REVIEW OF SYSTEMS"/>
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 59: Review Of Systems Section example

Social History Section

[Section: templateId 2.16.840.1.113883.10.20.22.2.17]

This section contains data defining the patient's occupational, personal (e.g. lifestyle), social, and environmental history and health risk factors, as well as administrative data such as marital status, race, ethnicity and religious affiliation. Social history can have significant influence on a patient's physical, psychological and emotional health and wellbeing so should be considered in the development of a complete record.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:7936, CONF:10449) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.17"
2. **SHALL** contain exactly one [1..1] **code** (CONF:14819)/**@code**="29762-2" *Social history* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:14820)
3. **SHALL** contain exactly one [1..1] **title** (CONF:7938)
4. **SHALL** contain exactly one [1..1] **text** (CONF:7939)
5. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:7953, CONF:7954)
 - a. Contains exactly one [1..1] *Social History Observation* (templateId: 2.16.840.1.113883.10.20.22.4.38)
6. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:9132, CONF:9133)
 - a. Contains exactly one [1..1] *Pregnancy Observation* (templateId: 2.16.840.1.113883.10.20.15.3.8)
7. If section/@nullFlavor is not present, **SHOULD** contain zero or more [0..*] **entry** (CONF:14823, CONF:14824)

- a. Contains exactly one [1..1] *Smoking Status Observation* (templateId: 2.16.840.1.113883.10.20.22.4.78)
- 8. If section/@nullFlavor is not present, **MAY** contain zero or more [0..*] **entry** (CONF:16816, CONF:16817)
 - a. Contains exactly one [1..1] *Tobacco Use* (templateId: 2.16.840.1.113883.10.20.22.4.85)

Social History Section Table

consol::SocialHistorySection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.17]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:14820	LOINC 2.16.840.1.113883.6.1 29762-2
title	title	1..1	SHALL	YES	ST	CONF:7938	
pregnancyObservation	cda:entry/ cda:observation[cda:templateId/ @root = 2.16.840.1.113883.10.20.15.3.8]	0..*	MAY	YES	PregnancyObservation	CONF:9132CONF:9133	
smokingStatusObservation	cda:entry/ cda:observation[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.85]	0..*	SHOULD	YES	SmokingStatusObservation	CONF:14823CONF:14824	
socialHistoryObservation	cda:entry/ cda:observation[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.38]	0..*	MAY	YES	SocialHistoryObservation	CONF:7953CONF:7954	
socialHistorySection	socialHistorySection	0..1	MAY	YES	SocialHistorySection	CONF:9582	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7939	
tobaccoUse	cda:entry/ cda:observation[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.85]	0..*	MAY	YES	TobaccoUse	CONF:16816CONF:16817	

Social History Section Sample

The following XML snippet is a sample for Social History Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.17"/>
  <id root="MDHT" extension="1990064775"/>
  <code code="29762-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Social history"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.38"/>
      <id root="MDHT" extension="60759699"/>
      <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT" />
```

```

<text>Text Value</text>
<statusCode code="completed"/>
<effectiveTime>
  <low value="2014"/>
  <high value="2014"/>
</effectiveTime>
</observation>
</entry>
<entry>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.15.3.8"/>
    <id root="MDHT" extension="860803350"/>
    <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Assertion"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.15.3.1"/>
        <id root="MDHT" extension="1774057954"/>
        <code code="11778-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
          <low value="2014"/>
          <high value="2014"/>
        </effectiveTime>
      </observation>
    </entryRelationship>
  </observation>
</entry>
<entry>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.78"/>
    <templateId root="2.16.840.1.113883.10.20.22.4.85"/>
    <id root="MDHT" extension="1642223552"/>
    <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Assertion"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entry>
<entry>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.85"/>
    <id root="MDHT" extension="687468479"/>
    <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Assertion"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entry>

```

```
</entry>
</section>
```

Figure 60: Social History Section example

Subjective Section

[Section: templateId 2.16.840.1.113883.10.20.21.2.2]

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.

1. SHALL contain exactly one [1..1] templateId (CONF:7873, CONF:10470) such that it
- a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.21.2.2"
2. SHALL contain exactly one [1..1] code (CONF:15437)/@code="61150-9" Subjective (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15438)
3. SHALL contain exactly one [1..1] text (CONF:7876)
4. SHALL contain exactly one [1..1] title (CONF:7875)
- 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.

Subjective Section Table

consol::SubjectiveSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.21.2.2]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15438	LOINC 2.16.840.1.113883.6.1 61150-9
title	title	1..1	SHALL	YES	ST	CONF:7875	
subjectiveSection	subjectiveSection	0..1	MAY	YES	SubjectiveSection	CONF:8790	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7876	

Subjective Section Sample

The following XML snippet is a sample for Subjective Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.21.2.2"/>
  <id root="MDHT" extension="993442667"/>
  <code code="61150-9" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Subjective"/>
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 61: Subjective Section example

Surgical Drains Section

[Section: templateId 2.16.840.1.113883.10.20.7.13]

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.

- 1. **SHALL** contain exactly one [1..1] templateId (CONF:8038, CONF:10473) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.7.13"
- 2. **SHALL** contain exactly one [1..1] code (CONF:15441)/@code="11537-8" Surgical Drains (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15442)
- 3. **SHALL** contain exactly one [1..1] text (CONF:8041)
- 4. **SHALL** contain exactly one [1..1] title (CONF:8040)
- 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:8056)

Surgical Drains Section Table

consol::SurgicalDrainsSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.7.13]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15442	LOINC 2.16.840.1.113883.6.1 11537-8
title	title	1..1	SHALL	YES	ST	CONF:8040	
surgicalDrainsSection	surgicalDrainsSection	1	MAY	YES	SurgicalDrainsSection	CONF:9912	
text	text	1..1	SHALL	YES	StrucDocText	CONF:8041	

Surgical Drains Section Sample

The following XML snippet is a sample for Surgical Drains Section

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.7.13"/>
  <id root="MDHT" extension="265510318"/>
  <code code="11537-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Surgical Drains"/>
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

Figure 62: Surgical Drains Section example

Vital Signs Section

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, and pulse oximetry. 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.

Optional Entries

[Section: templateId 2.16.840.1.113883.10.20.22.2.4]

The following constraints apply to a Vital Signs Section in which entries are not required.

- 1. **SHALL** contain exactly one [1..1] templateId (CONF:7268, CONF:10451) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.4"
- 2. **SHALL** contain exactly one [1..1] **code** (CONF:15242)/@code=" 8716-3" *Vital Signs* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15243)
- 3. **SHALL** contain exactly one [1..1] **text** (CONF:7270)
- 4. If section/@nullFlavor is not present, **SHOULD** contain zero or more [0..*] **entry** (CONF:7271, CONF:7272)
 - a. Contains exactly one [1..1] *Vital Signs Organizer* (templateId: 2.16.840.1.113883.10.20.22.4.26)
- 5. **SHALL** contain exactly one [1..1] **title** (CONF:9966)

Required Entries

The following constraints apply to a Vital Signs Section in which entries are required.

- 1. **SHALL** contain exactly one [1..1] templateId (CONF:7273, CONF:10452) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.4.1"
- 2. **SHALL** conform to *Vital Signs Section Entries Optional* template (templateId: 2.16.840.1.113883.10.20.22.2.4)
- 3. **SHALL** contain exactly one [1..1] **code** (CONF:15962)/@code=" 8716-3" *Vital Signs* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15963)
- 4. **SHALL** contain exactly one [1..1] **text** (CONF:7275)
- 5. If section/@nullFlavor is not present, **SHALL** contain at least one [1..*] **entry** (CONF:7276, CONF:7277)
 - a. Contains exactly one [1..1] *Vital Signs Organizer* (templateId: 2.16.840.1.113883.10.20.22.4.26)
- 6. **SHALL** contain exactly one [1..1] **title** (CONF:9967)

Vital Signs Section Table

consol::VitalSignsSection							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section[cda:templateId/@root = 2.16.840.1.113883.10.20.22.2.4]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
code	code	1..1	SHALL	YES	CE	CONF:15963	LOINC 2.16.840.1.113883.6.1LOINC 2.16.840.1.113883.6.1 8716-3
title	title	1..1	SHALL	YES	ST	CONF:9967	
text	text	1..1	SHALL	YES	StrucDocText	CONF:7275	
vitalSignsOrganizer	cda:entry/ cda:organizer[cda:templateId/ @root = 2.16.840.1.113883.10.20.22.4.26]	1..*	SHALL	YES	VitalSignsOrganizer	CONF:7276CONF:7277	

Vital Signs Section Sample

The following XML snippet is a sample for Vital Signs Section Entries Optional

```
<section xmlns="urn:hl7-org:v3">
  <templateId root="2.16.840.1.113883.10.20.22.2.4.1"/>
  <templateId root="2.16.840.1.113883.10.20.22.2.4"/>
  <id root="MDHT" extension="1095322399"/>
  <code code="8716-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Vital Signs"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <organizer classCode="CLUSTER" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.26"/>
      <id root="MDHT" extension="317694146"/>
      <code code="46680005" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Vital signs"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <component>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.27"/>
          <id root="MDHT" extension="1318094478"/>
          <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
          <text>Text Value</text>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
          </effectiveTime>
          <author/>
        </observation>
      </component>
    </organizer>
  </entry>
</section>
```

Figure 63: Vital Signs Section Entries Optional example

Chapter

5

ENTRY-LEVEL TEMPLATES

Topics:

- *Admission Medication*
- *Advance Directive Observation*
- *Age Observation*
- *Allergy Observation*
- *Allergy Problem Act*
- *Allergy Status Observation*
- *Authorization Activity*
- *Boundary Observation*
- *Code Observations*
- *Comment Activity*
- *Coverage Activity*
- *Discharge Medication*
- *Encounter Activities*
- *Estimated Date Of Delivery*
- *Family History Death Observation*
- *Family History Observation*
- *Family History Organizer*
- *Health Status Observation*
- *Hospital Admission Diagnosis*
- *Hospital Discharge Diagnosis*
- *Immunization Activity*
- *Immunization Refusal Reason*
- *Indication*
- *Instructions*
- *Medication Activity*
- *Medication Dispense*
- *Medication Supply Order*
- *Non Medicinal Supply Activity*
- *Plan Of Care Activity Act*
- *Plan Of Care Activity Encounter*
- *Plan Of Care Activity Observation*
- *Plan Of Care Activity Procedure*
- *Plan Of Care Activity Substance Administration*

- *Plan Of Care Activity Supply*
- *Policy Activity*
- *Postprocedure Diagnosis*
- *Pregnancy Observation*
- *Preoperative Diagnosis*
- *Problem Concern Act*
- *Problem Observation*
- *Problem Status*
- *Procedure Activity Act*
- *Procedure Activity Observation*
- *Procedure Activity Procedure*
- *Procedure Context*
- *Procedure Encounter*
- *Purposeof Reference Observation*
- *Quantity Measurement Observation*
- *Reaction Observation*
- *Referenced Frames Observation*
- *Result Observation*
- *Result Organizer*
- *SOP Instance Observation*
- *Series Act*
- *Severity Observation*
- *Social History Observation*
- *Study Act*
- *Text Observation*
- *Vital Sign Observation*
- *Vital Signs Organizer*

Admission Medication

[Act: templateId 2.16.840.1.113883.10.20.22.4.36]

The Admission Medications entry codes medications that the patient took prior to admission.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:16758, CONF:16759) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.36"
2. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7698)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:7699)
4. **SHALL** contain exactly one [1..1] **code** (CONF:15518)/**@code**="42346-7" Medications on Admission (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:15519)
5. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:7701, CONF:7702, CONF:15520)
 - a. Contains **@typeCode**="SUBJ" SUBJ
 - b. Contains exactly one [1..1] [Medication Activity](#) (templateId: 2.16.840.1.113883.10.20.22.4.16)

Admission Medication example

```
<act xmlns="urn:hl7-org:v3" classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.36"/>
  <id root="MDHT" extension="1448450475"/>
  <code code="42346-7" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Medications on Admission"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <entryRelationship>
    <substanceAdministration classCode="SBADM">
      <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
      <id root="MDHT" extension="1794944690"/>
      <code code="948786095"/>
      <effectiveTime value="20140803"/>
      <routeCode codeSystem="2.16.840.1.113883.3.26.1.1" codeSystemName="NCI
Thesaurus"/>
      <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
      <consumable>
        <manufacturedProduct/>
      </consumable>
      <performer/>
    </substanceAdministration>
    <entryRelationship>
      <supply classCode="SPLY" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
        <id root="MDHT" extension="1410423537"/>
        <code code="2127317486"/>
        <effectiveTime value="20140803"/>
        <author/>
      </supply>
      <entryRelationship>
        <act classCode="ACT" moodCode="INT">
          <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
          <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
          <statusCode code="completed"/>
        </act>
      </entryRelationship>
    </entryRelationship>
  </entryRelationship>
</act>
```

```

</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
    <id root="MDHT" extension="906875927"/>
    <code code="850437632"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.8"/>
        <code code="SEV" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Severity observation"/>
        <statusCode code="completed"/>
      </observation>
    </entryRelationship>
    <entryRelationship>
      <procedure classCode="PROC">
        <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
        <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
        <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
      </procedure>
    </entryRelationship>
    <entryRelationship>
      <substanceAdministration classCode="SBADM">
        <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
        <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
        <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
      </substanceAdministration>
    </entryRelationship>
  </observation>
</entryRelationship>
<entryRelationship>
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
    <id root="MDHT" extension="1030314100"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </act>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
    <id root="MDHT" extension="1750712539"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>

```



```

</entryRelationship>
<entryRelationship>
  <supply classCode="SPLY" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.18"/>
    <id root="MDHT" extension="1702841566"/>
    <code code="441693011"/>
    <effectiveTime value="20140803"/>
    <performer/>
    <entryRelationship>
      <supply classCode="SPLY" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
      </supply>
    </entryRelationship>
  </supply>
</entryRelationship>
<precondition>
  <criterion/>
</precondition>
</substanceAdministration>
</entryRelationship>
</act>

```

Advance Directive Observation

[Observation: templateId 2.16.840.1.113883.10.20.22.4.48]

Advance Directives Observations assert findings (e.g., "resuscitation status is Full Code") rather than orders, and should not be considered legal documents. A legal document can be referenced using the reference/externalReference construct.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:8655, CONF:10485) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.48"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8648)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:8649)
4. **SHALL** contain at least one [1..*] **id** (CONF:8654)
5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Advance Directive Type Code](#) 2.16.840.1.113883.1.11.20.2 STATIC 1 (CONF:8651)
6. **SHALL** contain exactly one [1..1] **statusCode/@code**="completed" (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:8652)
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:8656)
8. **SHOULD** contain zero or more [0..*] **participant** (CONF:8662)
 - a. Such participants **SHALL** contain exactly one [1..1] **time** (CONF:8665)
 - b. Such participants **SHALL** contain exactly one [1..1] **@typeCode**="VRF" (CONF:8663)
 - c. Such participants **SHALL** contain exactly one [1..1] **participantRole**, where its type is CDA Participant Role (CONF:8666)
 - a. Contains exactly one [1..1] CDA Participant Role
9. **SHOULD** contain zero or one [0..1] **participant** (CONF:8667)
 - a. This participant **SHALL** contain exactly one [1..1] **@typeCode**="CST" (CONF:8668)
 - b. This participant **SHALL** contain exactly one [1..1] **participantRole** (CONF:8669)
 - a. This participantRole **SHOULD** contain zero or one [0..1] **addr** (CONF:8671)
 - b. This participantRole **SHALL** contain exactly one [1..1] **@classCode**="AGNT" (CONF:8670)
 - c. This participantRole **SHOULD** contain zero or one [0..1] **telecom** (CONF:8672)

- d. This participantRole **SHALL** contain exactly one [1..1] **playingEntity** (ii., CONF:8824)
 - a. This playingEntity **SHALL** contain at least one [1..*] **name** (CONF:8673)
 - b. This playingEntity The name of the agent who can provide a copy of the Advance Directive **SHALL** be recorded in the <name> element inside the <playingEntity> element (CONF:8674)
- 10. **SHOULD** contain zero or more [0..*] **reference** (CONF:8692)
 - a. Such references **SHALL** contain exactly one [1..1] **@typeCode/@code= "REFR"** (CodeSystem: 2.16.840.1.113883.5.1002 HL7ActRelationshipType) (CONF:8694)
 - b. Such references **SHALL** contain exactly one [1..1] **externalDocument** (CONF:8693)
 - a. This externalDocument **SHALL** contain at least one [1..*] **id** (CONF:8695)
 - b. This externalDocument **MAY** contain zero or one [0..1] **text** (CONF:8696)
 - c. This externalDocument The text, if present, **MAY** contain zero or one [0..1] **@mediaType** (CONF:8703)
 - d. This externalDocument The text, if present, **MAY** contain zero or one [0..1] reference. a. The URL of a referenced advance directive document **MAY** be present, and **SHALL** be represented in Observation/reference/ExternalDocument/text/reference. b. If a URL is referenced, then it **SHOULD** have a corresponding linkHTML element in narrative block. (CONF:8697, CONF:8698, CONF:8699)
- 11. This effectiveTime **SHALL** contain exactly one [1..1] low i. If the starting time is unknown, the <low> element **SHALL** have the nullFlavor attribute set to UNK (CONF:8657, CONF:8658)
- 12. This effectiveTime **SHALL** contain exactly one [1..1] high. i. If the ending time is unknown, the <high> element **SHALL** have the nullFlavor attribute set to UNK. ii. If the Advance Directive does not have a specified ending time, the <high> element **SHALL** have the nullFlavor attribute set to NA. (CONF:8659, CONF:8660)

Advance Directive Observation example

```
<observation xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.48"/>
  <id root="MDHT" extension="174826836"/>
  <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <participant typeCode="VRF">
    <time>
      <low value="2014"/>
      <high value="2014"/>
    </time>
  </participant>
  <participant typeCode="CST">
    <participantRole classCode="AGNT">
      <addr/>
      <telecom/>
      <playingEntity/>
    </participantRole>
  </participant>
  <reference typeCode="REFR">
    <externalDocument>
      <id root="MDHT" extension="49951880"/>
      <text>Text Value</text>
    </externalDocument>
  </reference>
</observation>
```

Age Observation

[Observation: templateId 2.16.840.1.113883.10.20.22.4.31]

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").

1. **SHALL** contain exactly one [1..1] templateId (CONF:7899) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.31"
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7613)
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:7614)
4. **SHALL** contain exactly one [1..1] code (CONF:7615)/@code="445518008" Age At Onset (CodeSystem: 2.16.840.1.113883.6.96 SNOMEDCT) (CONF:16776)
5. **SHALL** contain exactly one [1..1] statusCode (CONF:15965)/@code="completed" Completed (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:15966)
6. **SHALL** contain exactly one [1..1] value with @xsi:type="PQ" (CONF:7617)
7. This value **SHALL** contain exactly one [1..1] @unit, which **SHALL** be selected from ValueSet AgePQ_UCUM 2.16.840.1.113883.11.20.9.21 DYNAMIC (CONF:7618)

Age Observation example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.31"/>
  <id root="MDHT" extension="1999498727"/>
  <code code="445518008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <value xsi:type="PQ"/>
</observation>
```

Allergy Observation

[Observation: templateId 2.16.840.1.113883.10.20.22.4.7]

This clinical statement represents that an allergy or adverse reaction exists or does not exist. The agent that is the cause of the allergy or adverse reaction is represented as a manufactured material participant playing entity in the allergy - intolerance observation. While the agent is often implicit in the alert observation (e.g. "allergy to penicillin"), it should also be asserted explicitly as an entity. The manufactured material participant is used to represent natural and non-natural occurring substances.

NOTE: 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.

1. **SHALL** contain exactly one [1..1] templateId (CONF:7381, CONF:10488) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.7"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7379)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:7380)
4. **SHALL** contain at least one [1..*] **id** (CONF:7382)
5. **SHALL** contain exactly one [1..1] **code** (CONF:15947)/**@code**="ASSERTION" (CodeSystem: 2.16.840.1.113883.5.4 HL7ActCode) (CONF:15948)
6. **SHALL** contain exactly one [1..1] **statusCode/@code**="completed" (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:7386)
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:7387)
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", which **SHALL** be selected from ValueSet [Allergy/Adverse Event Type](#) 2.16.840.1.113883.3.88.12.3221.6.2 **DYNAMIC** (CONF:7390, CONF:9139)
9. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:7440, CONF:7906, CONF:15954)
 - a. Contains **@typeCode**="SUBJ" *SUBJ*
 - b. Contains exactly one [1..1] [Allergy Status Observation](#) (templateId: 2.16.840.1.113883.10.20.22.4.28)
10. **SHOULD** contain zero or more [0..*] **entryRelationship** (CONF:7447, CONF:7907, CONF:15955)
 - a. Contains **@typeCode**="MFST" *MFST*
 - b. Contains exactly one [1..1] [Reaction Observation](#) (templateId: 2.16.840.1.113883.10.20.22.4.9)
11. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:9961, CONF:9962, CONF:15956)
 - a. Contains **@typeCode**="SUBJ" *SUBJ*
 - b. Contains exactly one [1..1] [Severity Observation](#) (templateId: 2.16.840.1.113883.10.20.22.4.8)
12. **SHOULD** contain zero or one [0..1] **participant** (CONF:7402)
 - a. This participant **SHALL** contain exactly one [1..1] **@typeCode/@code**="CSM" *Consumable* (CodeSystem: 2.16.840.1.113883.5.90 HL7ParticipationType) (CONF:7403)
 - b. This participant **SHALL** contain exactly one [1..1] **participantRole** (CONF:7404)
 - a. This participantRole **SHALL** contain exactly one [1..1] **@classCode/@code**="MANU" *Manufactured Product* (CodeSystem: 2.16.840.1.113883.5.110 HL7RoleClass) (CONF:7405)
 - b. This participantRole **SHALL** contain exactly one [1..1] **playingEntity** (CONF:7406)
 - a. This playingEntity **SHALL** contain exactly one [1..1] **@classCode**="MMAT" (CONF:7407)
 - b. This playingEntity **SHALL** contain exactly one [1..1] **code** with **@xsi:type**="CE" (CONF:7419)
 - c. This playingEntity 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:15953))
 - d. This playingEntity In an allergy to a specific medication the code **SHALL** be selected from the ValueSet 2.16.840.1.113883.3.88.12.80.16 Medication Brand Name DYNAMIC or the ValueSet 2.16.840.1.113883.3.88.12.80.17 Medication Clinical Drug DYNAMIC (CONF:7421)
 - e. This playingEntity In an allergy to a class of medications the code **SHALL** be selected from the ValueSet 2.16.840.1.113883.3.88.12.80.18 Medication Drug Class DYNAMIC (CONF:10083)
 - f. This playingEntity In an allergy to a food or other substance the code **SHALL** be selected from the ValueSet 2.16.840.1.113883.3.88.12.80.20 Ingredient Name DYNAMIC (CONF:10084)
 - g. This playingEntity reference, if present, **SHOULD** contain zero or one [0..1] @value (CONF:15952)
 - h. This playingEntity originalText, if present, **SHOULD** contain zero or one [0..1] reference (CONF:7425)
13. If it is unknown when the allergy began, this effectiveTime **SHALL** contain low/
@nullFlavor="UNK" (CONF:9103)
14. If the allergy is no longer a concern, this effectiveTime **MAY** contain zero or one [0..1] high (CONF:10082)
15. value **SHOULD** contain zero or one [0..1] originalText (CONF:7422)

16. originalText, if present, **MAY** contain zero or one [0..1] reference (CONF:15949)
17. reference, if present, **SHOULD** contain zero or one [0..1] reference/@value (CONF:15950)
18. reference/@value **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (CONF:15951)
19. entryRelationship with target entry AllergyStatusObservation **SHALL** contain exactly one [1..1] @inversionInd="true" True (CONF:7446)
20. entryRelationship with target entry Reaction Observation **SHALL** contain exactly one [1..1] @inversionInd="true" True (CONF:7449)
21. entryRelationship with target entry Severity Observation **SHALL** contain exactly one [1..1] @inversionInd="true" True (CONF:9964)
22. In an allergy to a specific medication the code **SHALL** be selected from the ValueSet
 - 2.16.840.1.113883.3.88.12.80.16 Medication Brand Name DYNAMIC or the ValueSet
 - 2.16.840.1.113883.3.88.12.80.17 Medication Clinical Drug DYNAMIC. In an allergy to a class of medications the code **SHALL** be selected from the ValueSet 2.16.840.1.113883.3.88.12.80.18 Medication Drug Class DYNAMIC. In an allergy to a food or other substance the code **SHALL** be selected from the ValueSet
 - 2.16.840.1.113883.3.88.12.80.20 Ingredient Name DYNAMIC (CONF:7421, CONF:10083, CONF:10084)

Allergy Observation example

```
<observation xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.7"/>
  <id root="MDHT" extension="1943991355"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <participant typeCode="CSM">
    <participantRole classCode="MANU">
      <playingEntity classCode="MMAT"/>
    </participantRole>
  </participant>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
      <id root="MDHT" extension="520649348"/>
      <code code="945562631"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.8"/>
      <id root="MDHT" extension="602288053"/>
      <code code="SEV" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Severity observation"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <procedure classCode="PROC">
      <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
      <id root="MDHT" extension="1321657595"/>
    </procedure>
  </entryRelationship>
</observation>
```

```

<code code="328645559"/>
<effectiveTime>
  <low value="2014"/>
  <high value="2014"/>
</effectiveTime>
<priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
<targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
<specimen/>
<performer/>
<entryRelationship typeCode="COMP" inversionInd="true"/>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <statusCode code="completed"/>
  </observation>
</entryRelationship>
<entryRelationship>
  <substanceAdministration classCode="SBADM">
    <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
    <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
    <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
  </substanceAdministration>
</entryRelationship>
<entryRelationship>
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <statusCode code="completed"/>
  </act>
</entryRelationship>
</procedure>
</entryRelationship>
<entryRelationship>
  <substanceAdministration classCode="SBADM">
    <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
    <id root="MDHT" extension="791240737"/>
    <code code="880069182"/>
    <effectiveTime value="20140803"/>
    <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
    <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <consumable/>
    <performer/>
  </substanceAdministration>
</entryRelationship>
<entryRelationship>
  <supply classCode="SPLY" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
  </supply>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
    <statusCode code="completed"/>
  </observation>
</entryRelationship>
<entryRelationship>
  <act classCode="ACT" moodCode="INT">

```

```

        <templateId root="2.16.840.1.113883.10.20.22.4.20" />
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" />
        <statusCode code="completed" />
    </act>
</entryRelationship>
<entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.19" />
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" />
        <statusCode code="completed" />
    </observation>
</entryRelationship>
<entryRelationship>
    <supply classCode="SPLY" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.18" />
    </supply>
</entryRelationship>
    <precondition/>
</substanceAdministration>
</entryRelationship>
</observation>
</entryRelationship>
<entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.8" />
        <id root="MDHT" extension="1937413432" />
        <code code="SEV" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Severity observation" />
        <statusCode code="completed" />
        <effectiveTime>
            <low value="2014" />
            <high value="2014" />
        </effectiveTime>
    </observation>
</entryRelationship>
<entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.28" />
        <id root="MDHT" extension="817057047" />
        <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status" />
        <statusCode code="completed" />
        <effectiveTime>
            <low value="2014" />
            <high value="2014" />
        </effectiveTime>
    </observation>
</entryRelationship>
</observation>

```

Allergy Problem Act

[Act: templateId 2.16.840.1.113883.10.20.22.4.30]

This clinical statement act represents a concern relating to a patient's allergies or adverse events. A concern is a term used when referring to patient's problems that are related to one another. Observations of problems or other clinical statements captured at a point in time are wrapped in a Allergy Problem Act, or "Concern" act, which represents the ongoing process tracked over time. This outer Allergy Problem Act (representing the "Concern") can contain nested problem observations or other nested clinical statements relevant to the allergy concern.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:7471, CONF:10489) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.30"
2. **SHALL** contain exactly one [1..1] **@classCode**="ACT" *Act* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7469)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:7470)
4. **SHALL** contain at least one [1..*] **id** (CONF:7472)
5. **SHALL** contain exactly one [1..1] **code** with @xsi:type="CD" (CONF:NEW)
6. **SHALL** contain exactly one [1..1] **statusCode**, which **SHALL** be selected from ValueSet [ProblemActStatusCode](#) 2.16.840.1.113883.11.20.9.19 **STATIC** 2011-09-09 (CONF:7485)

•

The statusCode associated with any concern must be one of the following values:

active: A concern that is still being tracked.

suspended: A concern that is active, but which may be set aside. For example, this value might be used to suspend concern about a patient problem after some period of remission, but before assumption that the concern has been resolved.

aborted: A concern that is no longer actively being tracked, but for reasons other than because the problem was resolved. This value might be used to mark a concern as being aborted after a patient leaves care against medical advice.

completed:

The problem, allergy or medical state has been resolved and the concern no longer needs to be tracked except for historical purposes.

7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:7498)
 - The *effectiveTime* element records the starting and ending times during which the concern was active.
8. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:7509, CONF:7915, CONF:14925)
 - a. Contains **@typeCode**="SUBJ" *SUBJ*
 - b. Contains exactly one [1..1] [Allergy Observation](#) (templateId: 2.16.840.1.113883.10.20.22.4.7)
9. If statusCode = "active" Active, then effectiveTime **SHALL** contain [1..1] low (CONF:7504). (CONF:7504)
10. If statusCode = "completed" Completed, then effectiveTime **SHALL** contain high [1..1] (CONF:10085). (CONF:10085)

Allergy Problem Act example

```
<act xmlns="urn:hl7-org:v3" classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.30"/>
  <id root="MDHT" extension="1288299153"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.7"/>
      <id root="MDHT" extension="645374588"/>
      <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
</act>
```



```

</effectiveTime>
<participant typeCode="CSM">
  <participantRole classCode="MANU"/>
</participant>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
    <id root="MDHT" extension="1976845581"/>
    <code code="1642817279"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.8"/>
    <code code="SEV" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Severity observation"/>
    <statusCode code="completed"/>
  </observation>
</entryRelationship>
<entryRelationship>
  <procedure classCode="PROC">
    <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
    <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
    <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
  </procedure>
</entryRelationship>
<entryRelationship>
  <substanceAdministration classCode="SBADM">
    <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
    <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
    <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
  </substanceAdministration>
</entryRelationship>
</observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.8"/>
    <id root="MDHT" extension="108153689"/>
    <code code="SEV" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Severity observation"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.28"/>
    <id root="MDHT" extension="1606590424"/>
    <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>

```

```
<high value="2014"/>
</effectiveTime>
</observation>
</entryRelationship>
</observation>
</entryRelationship>
</act>
```

Allergy Status Observation

[Observation: templateId 2.16.840.1.113883.10.20.22.4.28]

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.

1. **SHALL** contain exactly one [1..1] templateId (CONF:7317, CONF:10490) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.28"
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7318)
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:7319)
4. **SHALL** contain exactly one [1..1] code/@code="33999-4" Status (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:7320)
5. **SHALL** contain exactly one [1..1] statusCode/@code="completed" (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:7321)
6. **SHALL** contain exactly one [1..1] value with @xsi:type="CE", which **SHALL** be selected from ValueSet [HITSP Problem Status](#) 2.16.840.1.113883.3.88.12.80.68 **STATIC** (CONF:7322)

Allergy Status Observation example

```
<observation xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.28"/>
  <id root="MDHT" extension="348663603"/>
  <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
</observation>
```

Authorization Activity

[Act: templateId 2.16.840.1.113883.10.20.1.19]

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.

1. **SHALL** contain exactly one [1..1] templateId (CONF:8946, CONF:10529) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.1.19"

2. **SHALL** contain exactly one [1..1] **@classCode="ACT"** *Act* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8944)
3. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:8945)
4. **SHALL** contain exactly one [1..1] **id** (CONF:8947)
5. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:8948)
 - a. This entryRelationship **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** (CONF:8949)
 - b. This entryRelationship The target of an authorization activity with act/entryRelationship/@typeCode="SUBJ" **SHALL** be a clinical statement with moodCode="PRMS" Promise (CONF:8951).
 - c. This entryRelationship The target of an authorization activity **MAY** contain one or more performer, to indicate the providers that have been authorized to provide treatment. (CONF:8952)

Authorization Activity example

```
<act xmlns="urn:hl7-org:v3" classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.1.19" />
  <id root="MDHT" extension="794385527" />
  <code code="143639868" />
  <effectiveTime>
    <low value="2014" />
    <high value="2014" />
  </effectiveTime>
  <entryRelationship typeCode="SUBJ" />
</act>
```

Boundary Observation

[Observation: templateId 2.16.840.1.113883.10.20.6.2.11]

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.

1. **SHALL** contain exactly one [1..1] **templateId ()** such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.6.2.11"**
2. **SHALL** contain exactly one [1..1] **@classCode="OBS"** *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:9282)
3. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:9283)
4. **SHALL** contain exactly one [1..1] **code/@code="113036"** *Frames for Display* (CodeSystem: 1.2.840.10008.2.16.4 DCM) (CONF:9284)
5. **SHALL** contain at least one [1..*] **value** with @xsi:type="INT" (CONF:9285)
 - Each numbers represents a frame for display

Boundary Observation example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.6.2.11" />
  <id root="MDHT" extension="898774595" />
  <code code="113036" codeSystem="1.2.840.10008.2.16.4" codeSystemName="DCM"
    displayName="Frames for Display" />
  <effectiveTime>
```

```
<low value="2014"/>
<high value="2014"/>
</effectiveTime>
<value xsi:type="INT" value="1"/>
</observation>
```

Code Observations

[Observation: templateId 2.16.840.1.113883.10.20.6.2.13]

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.

1. **SHALL** contain exactly one [1..1] templateId (CONF:15523, CONF:15524) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.6.2.13"
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:9304)
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:9305)
4. **SHALL** contain exactly one [1..1] code (CONF:9307)
5. **SHOULD** contain zero or one [0..1] effectiveTime (CONF:9309)
6. **SHALL** contain exactly one [1..1] value (CONF:9308)
7. **MAY** contain zero or more [0..*] entryRelationship (CONF:9311, CONF:9312, CONF:9313)
 - a. Contains @typeCode="SPRT" SPRT
 - b. Contains exactly one [1..1] [SOP Instance Observation](#) (templateId: 2.16.840.1.113883.10.20.6.2.8)
8. **MAY** contain zero or more [0..*] entryRelationship (CONF:9314, CONF:9315, CONF:9316)
 - a. Contains @typeCode="SPRT" SPRT
 - b. Contains exactly one [1..1] [Quantity Measurement Observation](#) (templateId: 2.16.840.1.113883.10.20.6.2.14)
9. Code Observations **SHALL** be rendered into section/text in separate paragraphs (CONF:9310)

Code Observations example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.6.2.13"/>
  <id root="MDHT" extension="783719090"/>
  <code code="1317607922"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <entryRelationship>
    <observation classCode="DGIMG" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.6.2.8"/>
      <id root="MDHT" extension="546530182"/>
      <code codeSystem="1.2.840.10008.2.6.1" codeSystemName="DCMUID"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
</observation>
```

```

</effectiveTime>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.6.2.9"/>
    <id root="MDHT" extension="321580642"/>
    <code code="1277030943"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <value xsi:type="CD" code="748568716"/>
  </observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="ROIBND" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.6.2.10"/>
    <id root="MDHT" extension="415489473"/>
    <code code="121190" codeSystem="1.2.840.10008.2.16.4"
codeSystemName="DCM" displayName="Referenced Frames"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <entryRelationship>
      <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"
codeSystemName="DCM" displayName="Frames for Display"/>
      </observation>
    </entryRelationship>
  </observation>
</entryRelationship>
</observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.6.2.14"/>
    <id root="MDHT" extension="561163745"/>
    <code code="487960250"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <value xsi:type="PQ"/>
  </observation>
</entryRelationship>
  <observation classCode="DGIMG" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.6.2.8"/>
    <id root="MDHT" extension="54042013"/>
    <code codeSystem="1.2.840.10008.2.6.1" codeSystemName="DCMUID"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.6.2.9"/>
      </observation>
    </entryRelationship>
  </entryRelationship>
  <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"
codeSystemName="DCM" displayName="Referenced Frames"/>
  </observation>

```

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

Comment Activity

[Act: templateId 2.16.840.1.113883.10.20.22.4.64]

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.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:9427, CONF:10491) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.64"
2. **SHALL** contain exactly one [1..1] **@classCode**="ACT" *Act* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:9425)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:9426)
4. **SHALL** contain exactly one [1..1] **code/@code**="48767-8" *Annotation comment* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:9428)
5. **SHALL** contain exactly one [1..1] **text** (CONF:9430)
6. **MAY** contain zero or one [0..1] **author** (CONF:9433)
 - a. This author **SHALL** contain exactly one [1..1] **time** (CONF:9434)
 - b. This author **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:9435)
 - a. This assignedAuthor **SHALL** contain exactly one [1..1] **addr** with @xsi:type="*US Realm Address*" (CONF:9437)
 - b. This assignedAuthor **SHALL** contain exactly one [1..1] **id** (CONF:9436)
 - c. This assignedAuthor **SHALL** satisfy: include assignedPerson/name or representedOrganization/name (CONF:9438)
 - d. This assignedAuthor 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:9439)
7. **text** **SHALL** contain exactly one [1..1] **reference** (CONF:15967)
8. **reference** **SHALL** contain exactly one [1..1] **@value** (CONF:15968)
9. **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:15969)

Comment Activity example

```
<act xmlns="urn:hl7-org:v3" classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.64"/>
  <id root="MDHT" extension="590943928"/>
  <code code="48767-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Annotation comment"/>
  <text>Text Value</text>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <author>
    <time/>
    <assignedAuthor>
      <id root="MDHT" extension="6191840"/>
```

```
</assignedAuthor>
</author>
</act>
```

Coverage Activity

[Act: templateId 2.16.840.1.113883.10.20.22.4.60]

1. **SHALL** contain exactly one [1..1] templateId (CONF:8897, CONF:10492) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.60"
2. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8872)
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:8873)
4. **SHALL** contain exactly one [1..1] code/@code="48768-6" Payment Sources (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:8876)
5. **SHALL** contain at least one [1..*] id (CONF:8874)
6. **SHALL** contain exactly one [1..1] statusCode/@code="completed" (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:8875)
7. **SHALL** contain at least one [1..*] entryRelationship (CONF:8878, CONF:8879, CONF:15528)
 - a. Contains @typeCode="COMP" COMP
 - b. Contains exactly one [1..1] Policy Activity (templateId: 2.16.840.1.113883.10.20.22.4.61)
8. **MAY** contain zero or one [0..1] sequenceNumber/@value (CONF:8973) (CONF:8973)

Coverage Activity example

```
<act xmlns="urn:hl7-org:v3" classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.60"/>
  <id root="MDHT" extension="1576499131"/>
  <code code="48768-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Payment Sources"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <entryRelationship>
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.61"/>
      <id root="MDHT" extension="563857044"/>
      <code codeSystemName="" />
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <performer typeCode="PRF">
        <templateId root="2.16.840.1.113883.10.20.22.4.87"/>
        <assignedEntity>
          <code codeSystem="2.16.840.1.113883.5.110"
codeSystemName="HL7RoleClass"/>
        </assignedEntity>
      </performer>
      <performer typeCode="PRF">
        <templateId root="2.16.840.1.113883.10.20.22.4.88"/>
        <time>
          <low value="2014"/>

```

```

        <high value="2014"/>
      </time>
      <assignedEntity>
        <code code="GUAR" codeSystem="2.16.840.1.113883.5.110"
codeSystemName="HL7RoleClass" displayName="Guarantor"/>
      </assignedEntity>
    </performer>
    <participant typeCode="COV">
      <templateId root="2.16.840.1.113883.10.20.22.4.89"/>
      <time>
        <low value="2014"/>
        <high value="2014"/>
      </time>
      <participantRole>
        <code codeSystem="2.16.840.1.113883.5.111"
codeSystemName="RoleCode"/>
      </participantRole>
    </participant>
    <participant typeCode="HLD">
      <templateId root="2.16.840.1.113883.10.20.22.4.90"/>
      <time>
        <low value="2014"/>
        <high value="2014"/>
      </time>
      <participantRole/>
    </participant>
    <entryRelationship typeCode="REFR"/>
  </act>
</entryRelationship>
</act>

```

Discharge Medication

[Act: templateId 2.16.840.1.113883.10.20.22.4.35]

The Discharge Medications entry codes medications that the patient is intended to take (or stop) after discharge.

1. **SHALL** contain exactly one [1..1] templateId (CONF:16760, CONF:16761) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.35"
2. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7689)
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:7690)
4. **SHALL** contain exactly one [1..1] code/@code="10183-2" Discharge Medication (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:7691)
5. **SHALL** contain at least one [1..*] entryRelationship (CONF:7692, CONF:7693, CONF:15525)
 - a. Contains @typeCode="SUBJ" SUBJ
 - b. Contains exactly one [1..1] [Medication Activity](#) (templateId: 2.16.840.1.113883.10.20.22.4.16)

Discharge Medication example

```

<act xmlns="urn:hl7-org:v3" classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.35"/>
  <id root="MDHT" extension="1169810786"/>
  <code code="10183-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Discharge Medication"/>
  <effectiveTime>
    <low value="2014"/>
  </effectiveTime>
</act>

```



```

    <high value="2014"/>
  </effectiveTime>
  <entryRelationship>
    <substanceAdministration classCode="SBADM">
      <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
      <id root="MDHT" extension="1047553249"/>
      <effectiveTime value="20140803"/>
      <routeCode codeSystem="2.16.840.1.113883.3.26.1.1" codeSystemName="NCI
Thesaurus"/>
      <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
      <consumable>
        <manufacturedProduct/>
      </consumable>
      <performer/>
      <entryRelationship>
        <supply classCode="SPLY" moodCode="INT">
          <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
          <id root="MDHT" extension="926131154"/>
          <effectiveTime value="20140803"/>
          <author/>
          <entryRelationship>
            <act classCode="ACT" moodCode="INT">
              <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
              <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
              <statusCode code="completed"/>
            </act>
          </entryRelationship>
        </supply>
      </entryRelationship>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
          <id root="MDHT" extension="1644275934"/>
          <code code="1085044661"/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
          </effectiveTime>
          <entryRelationship>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.22.4.8"/>
              <code code="SEV" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Severity observation"/>
              <statusCode code="completed"/>
            </observation>
          </entryRelationship>
        </entryRelationship>
        <entryRelationship>
          <procedure classCode="PROC">
            <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
            <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
            <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
          </procedure>
        </entryRelationship>
        <entryRelationship>
          <substanceAdministration classCode="SBADM">
            <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
            <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>

```

```

        <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    </substanceAdministration>
</entryRelationship>
</observation>
</entryRelationship>
<entryRelationship>
    <act classCode="ACT" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
        <id root="MDHT" extension="283474151"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
        </effectiveTime>
    </act>
</entryRelationship>
<entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
        <id root="MDHT" extension="1827240848"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
        </effectiveTime>
    </observation>
</entryRelationship>
<entryRelationship>
    <supply classCode="SPLY" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.18"/>
        <id root="MDHT" extension="2049049917"/>
        <effectiveTime value="20140803"/>
        <performer/>
        <entryRelationship>
            <supply classCode="SPLY" moodCode="INT">
                <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
            </supply>
        </entryRelationship>
    </supply>
</entryRelationship>
<precondition>
    <criteria/>
</precondition>
</substanceAdministration>
</entryRelationship>
</act>

```

Encounter Activities

[Encounter: templateId 2.16.840.1.113883.10.20.22.4.49]

This clinical statement describes the interactions between the patient and clinicians. Interactions include in-person encounters, telephone conversations, and email exchanges.

1. **SHALL** contain exactly one [1..1] templateId (CONF:8712, CONF:26353) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.49"

2. **SHALL** contain exactly one [1..1] **@classCode="ENC"** (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8710)
3. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:8711)
4. **SHALL** contain at least one [1..*] **id** (CONF:8713)
5. **SHOULD** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet [EncounterTypeCode](#) 2.16.840.1.113883.3.88.12.80.32 **DYNAMIC** (CONF:8714)
6. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:8715)
7. **MAY** contain zero or more [0..*] **participant** (CONF:8738, CONF:14903)
 - a. Contains exactly one [1..1] [Service Delivery Location](#) (templateId: 2.16.840.1.113883.10.20.22.4.32)
8. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:8722, CONF:8723, CONF:14899)
 - a. Contains **@typeCode="RSON"** *RSON*
 - b. Contains exactly one [1..1] [Indication](#) (templateId: 2.16.840.1.113883.10.20.22.4.19)
9. **MAY** contain zero or more [0..*] **performer** (CONF:8725)
 - a. Such performers **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:8726)
 - a. This assignedEntity **MAY** contain zero or one [0..1] **code** (CONF:8727)
10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:15492, CONF:15973)
 - a. Contains exactly one [1..1] [Encounter Diagnosis](#) (templateId: 2.16.840.1.113883.10.20.22.4.80)
11. **MAY** contain zero or one [0..1] **sdtcDischargeDispositionCode**, which **SHALL** be selected from ValueSet [NUBC UB-04 FL17-Patient Status](#) 2.16.840.1.113883.6.301.5 **STATIC** (CONF:9929)
 - *The prefix sdtc: SHALL be bound to the namespace "urn:hl7-org:sdtc". The use of the namespace provides a necessary extension to CDA R2 for the use of the dischargeDispositionCode element.*
12. **code**, if present, **SHOULD** contain zero or one [0..1] **originalText** (CONF:8719)
13. **originalText**, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:15970)
14. **reference**, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:15971)
15. **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:15972)
16. **EncounterActivities** with target entry **Service Delivery Location** **SHALL** contain exactly one [1..1] **@typeCode="LOC"** *Location* (CodeSystem: 2.16.840.1.113883.5.1002 HL7ActRelationshipType) **STATIC** (CONF:8740)

Encounter Activities example

```
<encounter xmlns="urn:hl7-org:v3" xmlns:sdtc="urn:hl7-org:sdtc"
classCode="ENC" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.49"/>
  <id root="MDHT" extension="20074799996"/>
  <code codeSystem="2.16.840.1.113883.6.12" codeSystemName="CPT-4"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <performer>
    <assignedEntity>
      <id root="MDHT" extension="1198025384"/>
      <code code="1994538620"/>
    </assignedEntity>
  </performer>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
```

```

<id root="MDHT" extension="1611879836"/>
<code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
<statusCode code="completed"/>
<effectiveTime>
  <low value="2014"/>
  <high value="2014"/>
</effectiveTime>
</observation>
</entryRelationship>
<entryRelationship>
  <act classCode="ACT" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.80"/>
    <id root="MDHT" extension="2143183703"/>
    <code code="29308-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Diagnosis"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
        <id root="MDHT" extension="39576844"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <statusCode code="completed"/>
        <effectiveTime>
          <low value="2014"/>
          <high value="2014"/>
        </effectiveTime>
        <entryRelationship>
          <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.31"/>
            <code code="445518008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
            <statusCode code="completed"/>
          </observation>
        </entryRelationship>
        <entryRelationship>
          <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.5"/>
            <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Health status"/>
            <statusCode code="completed"/>
          </observation>
        </entryRelationship>
        <entryRelationship>
          <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.6"/>
            <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
            <statusCode code="completed"/>
          </observation>
        </entryRelationship>
      </observation>
    </entryRelationship>
  </act>
</entryRelationship>
<sdtc:dischargeDispositionCode codeSystem="2.16.840.1.113883.12.112"
codeSystemName="HL7DischargeDisposition"/>
</encounter>

```

Estimated Date Of Delivery

[Observation: templateId 2.16.840.1.113883.10.20.15.3.1]

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

1. **SHALL** contain exactly one [1..1] templateId (CONF:16762, CONF:16763) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.15.3.1"
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:444)
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:445)
4. **SHALL** contain exactly one [1..1] code/@code="11778-8" (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:446)
5. **SHALL** contain exactly one [1..1] statusCode/@code="completed" (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:448)
6. **SHALL** contain exactly one [1..1] value with @xsi:type="TS" (CONF:450)

Estimated Date Of Delivery example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.15.3.1"/>
  <id root="MDHT" extension="1873814333"/>
  <code code="11778-8" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <value xsi:type="TS"/>
</observation>
```

Family History Death Observation

[Observation: templateId 2.16.840.1.113883.10.20.22.4.47]

This clinical statement records whether the family member is deceased

1. **SHALL** contain exactly one [1..1] templateId (CONF:8623, CONF:10495) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.47"
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8621)
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:8622)
4. **SHALL** contain exactly one [1..1] code/@code="ASSERTION" Assertion (CodeSystem: 2.16.840.1.113883.5.4 HL7ActCode) (CONF:16889)
5. **SHALL** contain exactly one [1..1] statusCode/@code="completed" (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:8625)
6. **SHALL** contain exactly one [1..1] value with @xsi:type="CD" (CONF:8626)/@code="419099009" Dead (CodeSystem: 2.16.840.1.113883.6.96 SNOMEDCT) (CONF:Pending)

Family History Death Observation example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.47"/>
  <id root="MDHT" extension="1836809619"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
    codeSystemName="HL7ActCode" displayName="Assertion"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <value xsi:type="CD" code="1088463543"/>
</observation>
```

Family History Observation

[Observation: templateId 2.16.840.1.113883.10.20.22.4.46]

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).

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:10496) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.46"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8586)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:8587)
4. **SHALL** contain at least one [1..*] **id** (CONF:8592)
5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Problem Type](#) 2.16.840.1.113883.3.88.12.3221.7.2 **STATIC** 2008-12-18 (CONF:8589)
6. **SHALL** contain exactly one [1..1] **statusCode/@code**="completed" (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:8590)
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:8593)
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", which **SHALL** be selected from ValueSet [Problem](#) 2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:8591)
9. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:8675, CONF:8676, CONF:15526)
 - a. Contains **@typeCode**="SUBJ" *SUBJ*
 - b. Contains exactly one [1..1] [Age Observation](#) (templateId: 2.16.840.1.113883.10.20.22.4.31)
10. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:8678, CONF:8679, CONF:15527)
 - a. Contains **@typeCode**="CAUS" *CAUS*
 - b. Contains exactly one [1..1] [Family History Death Observation](#) (templateId: 2.16.840.1.113883.10.20.22.4.47)
11. **entryRelationship** with target entry *Age Observation* **SHALL** contain exactly one [1..1] **@inversionInd**="true" True (CONF:8677)

Family History Observation example

```
<observation xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.46"/>
  <id root="MDHT" extension="1637014326"/>
```

```
<code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT" />
<statusCode code="completed"/>
<effectiveTime>
  <low value="2014"/>
  <high value="2014"/>
</effectiveTime>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.31"/>
    <id root="MDHT" extension="709780696"/>
    <code code="445518008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.47"/>
    <id root="MDHT" extension="624338580"/>
    <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Assertion"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
</observation>
```

Family History Organizer

[Organizer: templateId 2.16.840.1.113883.10.20.22.4.45]

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.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:10497) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.45"
2. **SHALL** contain exactly one [1..1] **@classCode**="CLUSTER" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8600)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:8601)
4. Contains exactly one [1..1] **statusCode**
5. **SHALL** contain at least one [1..*] **component** (CONF:8607, CONF:16888)
 - a. Contains exactly one [1..1] *Family History Observation* (templateId: 2.16.840.1.113883.10.20.22.4.46)
6. **SHALL** contain exactly one [1..1] **subject** (CONF:8609)
 - a. This subject **SHALL** contain exactly one [1..1] **relatedSubject** (CONF:15244)
 - a. This relatedSubject **SHALL** contain exactly one [1..1] **@classCode**="PRS" (CONF:15245)

- b. This relatedSubject **SHALL** contain exactly one [1..1] **code** (CONF:15246), which **SHOULD** be selected from ValueSet *FamilyHistoryRelatedSubjectCode* 2.16.840.1.113883.1.11.19579 **DYNAMIC** (CONF:15247)
- c. This relatedSubject **SHOULD** contain zero or one [0..1] **subject** (CONF:15248)
 - a. This subject **SHALL** contain exactly one [1..1] **administrativeGenderCode** (CONF:15974), which **SHALL** be selected from ValueSet *Administrative Gender (HL7 V3)* 2.16.840.1.113883.1.11.1 **DYNAMIC** (CONF:15975)
 - b. This subject **SHOULD** contain zero or one [0..1] **birthTime** (CONF:15976)
 - c. This subject **MAY** contain zero or one [0..1] **sDTCDeceasedInd** (CONF:15981)

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.
 - d. This subject **MAY** contain zero or one [0..1] **sDTCDeceasedTime** (CONF:15982)

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.
 - e. This subject **SHOULD** contain zero or more [0..*] **sDTCId** (CONF:15249)

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.
 - f. This subject age of a relative at the time of a family history observation **SHOULD** be inferred by comparing RelatedSubject/subject/birthTime with Observation/effectiveTime (CONF:15983)
 - g. This subject age of a relative at the time of death **MAY** be inferred by comparing RelatedSubject/subject/birthTime with RelatedSubject/subject/sdwg:deceasedTime (CONF:8632)

Family History Organizer example

```
<organizer xmlns="urn:hl7-org:v3" classCode="CLUSTER" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.45" />
  <id root="MDHT" extension="1581537261" />
  <statusCode code="completed" />
  <effectiveTime>
    <low value="2014" />
    <high value="2014" />
  </effectiveTime>
  <subject>
    <relatedSubject classCode="PRS">
      <code codeSystem="2.16.840.1.113883.5.111" codeSystemName="RoleCode" />
      <subject>
        <administrativeGenderCode codeSystem="2.16.840.1.113883.5.1"
codeSystemName="AdministrativeGenderCode" />
      </subject>
    </relatedSubject>
  </subject>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.46" />
      <id root="MDHT" extension="641791722" />
      <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT" />
      <statusCode code="completed" />
      <effectiveTime>
        <low value="2014" />
        <high value="2014" />
      </effectiveTime>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.31" />
          <id root="MDHT" extension="592940954" />
```



```
<code code="445518008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
<statusCode code="completed"/>
<effectiveTime>
  <low value="2014"/>
  <high value="2014"/>
</effectiveTime>
</observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.47"/>
    <id root="MDHT" extension="407050694"/>
    <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Assertion"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
</observation>
</component>
</organizer>
```

Health Status Observation

[Observation: templateId 2.16.840.1.113883.10.20.22.4.5]

The Health Status Observation records information about the current health status of the patient.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:16756, CONF:16757) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.5"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:9057)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:9072)
4. **SHALL** contain exactly one [1..1] **code/@code**="11323-3" *Health status* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:9073)
5. **SHOULD** contain zero or one [0..1] **text** (CONF:9270)
6. **SHALL** contain exactly one [1..1] **statusCode/@code**="completed" *Completed* (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:9074)
7. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD", which **SHALL** be selected from ValueSet [HealthStatus](#) 2.16.840.1.113883.1.11.20.12 **DYNAMIC** (CONF:9075)
8. text, if present, **SHOULD** contain zero or one [0..1] reference (CONF:9271)
9. reference, if present, **SHOULD** contain zero or one [0..1] @value (CONF:15530)
10. 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:9272)

Health Status Observation example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.5"/>
  <id root="MDHT" extension="37692221"/>
```

```
<code code="11323-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Health status"/>
<text>Text Value</text>
<statusCode code="completed"/>
<effectiveTime>
  <low value="2014"/>
  <high value="2014"/>
</effectiveTime>
<value xsi:type="CD" code="403845368"/>
</observation>
```

Hospital Admission Diagnosis

[Act: templateId 2.16.840.1.113883.10.20.22.4.34]

The Hospital Admission Diagnosis entry describes the relevant problems or diagnoses at the time of admission.

1. **SHALL** contain exactly one [1..1] templateId (CONF:16747, CONF:16748) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.34"
2. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass)
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] code/@code="46241-6" Admission diagnosis (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:7673)
5. **SHALL** contain at least one [1..*] entryRelationship (CONF:7674, CONF:7675, CONF:15535)
 - a. Contains @typeCode="SUBJ" SUBJ
 - b. Contains exactly one [1..1] *Problem Observation* (templateId: 2.16.840.1.113883.10.20.22.4.4)

Hospital Admission Diagnosis example

```
<act xmlns="urn:hl7-org:v3" classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.34"/>
  <id root="MDHT" extension="1792147482"/>
  <code code="46241-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Admission diagnosis"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <id root="MDHT" extension="652017275"/>
      <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.31"/>
      <id root="MDHT" extension="907836212"/>
      <code code="445518008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
      <statusCode code="completed"/>
      <effectiveTime>
```

```

        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.5"/>
      <id root="MDHT" extension="1853225713"/>
      <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Health status"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.6"/>
      <id root="MDHT" extension="289331"/>
      <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
</observation>
</entryRelationship>
</act>

```

Hospital Discharge Diagnosis

[Act: templateId 2.16.840.1.113883.10.20.22.4.33]

The Hospital Discharge Diagnosis act wraps relevant problems or diagnoses at the time of discharge that occurred during the hospitalization or that need to be followed after hospitalization. This entry requires at least one Problem Observation entry.

1. **SHALL** contain exactly one [1..1] templateId (CONF:16764, CONF:16765) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.33"
2. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7663)
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:7664)
4. **SHALL** contain exactly one [1..1] code/@code="11535-2" Hospital Discharge Diagnosis (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:7665)
5. **SHALL** contain at least one [1..*] entryRelationship (CONF:7666, CONF:7667, CONF:15536)
 - a. Contains @typeCode="SUBJ" SUBJ
 - b. Contains exactly one [1..1] *Problem Observation* (templateId: 2.16.840.1.113883.10.20.22.4.4)

Hospital Discharge Diagnosis example

```
<act xmlns="urn:hl7-org:v3" classCode="ACT" moodCode="EVN">
```

```

<templateId root="2.16.840.1.113883.10.20.22.4.33"/>
<id root="MDHT" extension="2087234445"/>
<code code="11535-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Hospital Discharge Diagnosis"/>
<effectiveTime>
  <low value="2014"/>
  <high value="2014"/>
</effectiveTime>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
    <id root="MDHT" extension="1077880719"/>
    <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.31"/>
    <id root="MDHT" extension="1792471023"/>
    <code code="445518008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.5"/>
    <id root="MDHT" extension="1090795609"/>
    <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Health status"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.6"/>
    <id root="MDHT" extension="475097087"/>
    <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
</entryRelationship>
</act>

```

Immunization Activity

[SubstanceAdministration: templateId 2.16.840.1.113883.10.20.22.4.52]

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.
1. **SHALL** contain exactly one [1..1] templateId (CONF:10498) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.52"
 2. **SHALL** contain exactly one [1..1] @classCode="SBADM" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8826)
 3. **SHALL** contain exactly one [1..1] @moodCode, which **SHALL** be selected from ValueSet [MoodCodeEvnInt](#) 2.16.840.1.113883.11.20.9.18 **STATIC** 2011-04-03 (CONF:8827)
 4. **SHALL** contain exactly one [1..1] @negationInd (CONF:8985)
 - Use negationInd="true" to indicate that the immunization was not given.
 5. **SHALL** contain at least one [1..*] id (CONF:8829)
 6. **MAY** contain zero or one [0..1] code (CONF:8830)
 7. **SHALL** contain exactly one [1..1] statusCode (CONF:8833)
 8. **SHALL** contain exactly one [1..1] effectiveTime (CONF:8834)
 9. **MAY** contain zero or one [0..1] routeCode, which **SHALL** be selected from ValueSet [Medication Route FDA Value Set](#) 2.16.840.1.113883.3.88.12.3221.8.7 **STATIC** 1 (CONF:8839)
 10. **MAY** contain zero or one [0..1] approachSiteCode, which **SHALL** be selected from ValueSet [Body Site Value Set](#) 2.16.840.1.113883.3.88.12.3221.8.9 **STATIC** 2 (CONF:8840)
 11. **SHOULD** contain zero or one [0..1] doseQuantity (CONF:8841)
 12. **MAY** contain zero or one [0..1] participant (CONF:8850, CONF:8851, CONF:15547)
 - a. Contains exactly one [1..1] [Drug Vehicle](#) (templateId: 2.16.840.1.113883.10.20.22.4.24)
 13. **MAY** contain zero or one [0..1] entryRelationship (CONF:8853, CONF:8854, CONF:15537)
 - a. Contains @typeCode="RSON" *RSON*
 - b. Contains exactly one [1..1] [Indication](#) (templateId: 2.16.840.1.113883.10.20.22.4.19)
 14. **MAY** contain zero or one [0..1] entryRelationship (CONF:8856, CONF:8857, CONF:15538)
 - a. Contains @typeCode="SUBJ" *SUBJ*
 - b. Contains exactly one [1..1] [Instructions](#) (templateId: 2.16.840.1.113883.10.20.22.4.20)
 15. **MAY** contain zero or one [0..1] entryRelationship (CONF:8863, CONF:8864, CONF:15540)
 - a. Contains @typeCode="REFR" *REFR*
 - b. Contains exactly one [1..1] [Medication Dispense](#) (templateId: 2.16.840.1.113883.10.20.22.4.18)

- 16. MAY** contain zero or one [0..1] **entryRelationship** (CONF:8866, CONF:8867, CONF:15541)
- Contains **@typeCode="CAUS"** *CAUS*
 - Contains exactly one [1..1] *Reaction Observation* (templateId: 2.16.840.1.113883.10.20.22.4.9)
- 17. MAY** contain zero or one [0..1] **precondition** (CONF:8869, CONF:8870, CONF:15548)
- Contains exactly one [1..1] *Precondition For Substance Administration* (templateId: 2.16.840.1.113883.10.20.22.4.25)
- 18. MAY** contain zero or one [0..1] **entryRelationship** (CONF:8988, CONF:8989, CONF:15542)
- Contains **@typeCode="RSON"** *RSON*
 - Contains exactly one [1..1] *Immunization Refusal Reason* (templateId: 2.16.840.1.113883.10.20.22.4.53)
- 19. SHALL** contain exactly one [1..1] **consumable** (CONF:8847)
- This consumable **SHALL** contain exactly one [1..1] **manufacturedProduct**, where its type is *Immunization Medication Information* (CONF:15546)
 - Contains exactly one [1..1] *Immunization Medication Information* (templateId: 2.16.840.1.113883.10.20.22.4.54)
- 20. SHOULD** contain zero or one [0..1] **text** (CONF:8831)
- 21. MAY** contain zero or one [0..1] **repeatNumber** (CONF:8838)
- 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 dispense act means that the current dispensation is the 3rd. A repeatNumber of "3" in a substance administration event means that the current administration is the 3rd in a series. (CONF:8987).*
- 22. MAY** contain zero or one [0..1] **administrationUnitCode** (CONF:8846), which **SHALL** be selected from ValueSet *Medication Product Form Value Set* 2.16.840.1.113883.3.88.12.3221.8.11 **STATIC 1**
- 23. SHOULD** contain zero or one [0..1] **performer** (CONF:8849)
- Contains exactly one [1..1] CDA Performer2
- 24. MAY** contain zero or one [0..1] **entryRelationship** (CONF:8860, CONF:8861, CONF:15539)
- Contains **@typeCode="REFR"** *REFR*
 - Contains exactly one [1..1] *Medication Supply Order* (templateId: 2.16.840.1.113883.10.20.22.4.17)
- 25.** This text, if present, **SHOULD** contain zero or one [0..1] reference (CONF:15543)
- 26.** reference, if present, **SHOULD** contain zero or one [0..1] @value (CONF:15544)
- 27.** 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:15545)
- 28.** doseQuantity, if present, **SHOULD** contain zero or one [0..1] @unit, which **SHALL** be selected from ValueSet UCUM Units of Measure (case sensitive) 2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:8842)
- 29.** entryRelationship with target entry Instructions **SHALL** contain exactly one [1..1] @inversionInd="true" **True** (CONF:8858)
- 30.** participant with target entry Drug Vehicle **SHALL** contain exactly one [1..1] @typeCode="CSM" (CodeSystem: HL7ParticipationType 2.16.840.1.113883.5.90) (CONF:8851)
- 31.** Precondition for Substance Administration **SHALL** contain exactly one [1..1] @typeCode="PRCN" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:8870)

Immunization Activity example

```
<substanceadministration xmlns="urn:hl7-org:v3" classCode="SBADM">
  <templateId root="2.16.840.1.113883.10.20.22.4.52"/>
  <id root="MDHT" extension="1671264624"/>
  <code code="320189714"/>
```

```

<text>Text Value</text>
<statusCode code="completed"/>
<effectiveTime value="20140803"/>
<repeatNumber value="1"/>
<routeCode codeSystem="2.16.840.1.113883.3.26.1.1" codeSystemName="NCI
Thesaurus"/>
<approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
<doseQuantity/>
<administrationUnitCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
<consumable>
  <manufacturedProduct>
    <id root="MDHT" extension="1685503499"/>
    <manufacturedMaterial>
      <code codeSystem="2.16.840.1.113883.12.292" codeSystemName="Vaccines
administered (CVX)"/>
    </manufacturedMaterial>
    <manufacturerOrganization/>
  </manufacturedProduct>
</consumable>
<performer/>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
    <id root="MDHT" extension="1645085529"/>
    <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <repeatNumber value="1"/>
  </observation>
</entryRelationship>
<entryRelationship>
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
    <id root="MDHT" extension="1931933526"/>
    <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </act>
</entryRelationship>
<entryRelationship>
  <supply classCode="SPLY" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.18"/>
    <id root="MDHT" extension="1292125571"/>
    <code code="476270427"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime value="20140803"/>
    <repeatNumber value="1"/>
    <performer>
      <assignedEntity/>
    </performer>
  </entryRelationship>
  <supply classCode="SPLY" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.17"/>

```

```

<id root="MDHT" extension="874668521"/>
<code code="368915801"/>
<text>Text Value</text>
<statusCode code="completed"/>
<effectiveTime value="20140803"/>
<repeatNumber value="1"/>
<author/>
<entryRelationship>
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <statusCode code="completed"/>
  </act>
</entryRelationship>
</supply>
</entryRelationship>
</supply>
<entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
      <id root="MDHT" extension="1185335898"/>
      <code code="2124726237"/>
      <text>Text Value</text>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <repeatNumber value="1"/>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.8"/>
          <id root="MDHT" extension="1984848661"/>
          <code code="SEV" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Severity observation"/>
          <text>Text Value</text>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
          </effectiveTime>
          <repeatNumber value="1"/>
        </observation>
      </entryRelationship>
    </entryRelationship>
    <entryRelationship>
      <procedure classCode="PROC">
        <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
        <id root="MDHT" extension="1739073142"/>
        <code code="2085820129"/>
        <text>Text Value</text>
        <statusCode code="completed"/>
        <effectiveTime>
          <low value="2014"/>
          <high value="2014"/>
        </effectiveTime>
        <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
        <approachSiteCode code="2063999617"/>
        <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <specimen/>
        <performer/>

```



```

    <entryRelationship typeCode="COMP" inversionInd="true"/>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <statusCode code="completed"/>
      </observation>
    </entryRelationship>
    <entryRelationship>
      <substanceAdministration classCode="SBADM">
        <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
        <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
        <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
      </substanceAdministration>
    </entryRelationship>
    <entryRelationship>
      <act classCode="ACT" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <statusCode code="completed"/>
      </act>
    </entryRelationship>
  </procedure>
</entryRelationship>
<entryRelationship>
  <substanceAdministration classCode="SBADM">
    <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
    <id root="MDHT" extension="1667310760"/>
    <code code="1712963333"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime value="20140803"/>
    <repeatNumber value="1"/>
    <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
    <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <doseQuantity/>
    <administrationUnitCode code="243312190"/>
    <consumable/>
    <performer/>
  <entryRelationship>
    <supply classCode="SPLY" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
    </supply>
  </entryRelationship>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
    <statusCode code="completed"/>
  </observation>
</entryRelationship>
<entryRelationship>
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <statusCode code="completed"/>
  </act>
</entryRelationship>

```

```

        <entryRelationship>
          <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
            <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
            <statusCode code="completed"/>
          </observation>
        </entryRelationship>
        <entryRelationship>
          <supply classCode="SPLY" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.18"/>
          </supply>
        </entryRelationship>
        <precondition/>
      </substanceAdministration>
    </entryRelationship>
  </observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.53"/>
    <id root="MDHT" extension="149217831"/>
    <code codeSystem="2.16.840.1.113883.5.8" codeSystemName="ActReason"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <repeatNumber value="1"/>
  </observation>
</entryRelationship>
<entryRelationship>
  <supply classCode="SPLY" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
    <id root="MDHT" extension="23089214"/>
    <code code="1657662687"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime value="20140803"/>
    <repeatNumber value="1"/>
    <author/>
  </entryRelationship>
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
    <id root="MDHT" extension="1694298784"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </act>
</entryRelationship>
</supply>
</entryRelationship>
<precondition>
  <criteria/>
</precondition>
</substanceAdministration>

```

Immunization Refusal Reason

[Observation: templateId 2.16.840.1.113883.10.20.22.4.53]

1. **SHALL** contain exactly one [1..1] templateId (CONF:8993, CONF:10500) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.53"
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8991)
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:8992)
4. **SHALL** contain exactly one [1..1] code, which **SHALL** be selected from ValueSet [No Immunization Reason Value Set](#) 2.16.840.1.113883.1.11.19717 **DYNAMIC** (CONF:8995)
5. **SHALL** contain at least one [1..*] id (CONF:8994)
6. **SHALL** contain exactly one [1..1] statusCode/@code="completed" (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:8996)

Immunization Refusal Reason example

```
<observation xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.53"/>
  <id root="MDHT" extension="901839392"/>
  <code codeSystem="2.16.840.1.113883.5.8" codeSystemName="ActReason"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
</observation>
```

Indication

[Observation: templateId 2.16.840.1.113883.10.20.22.4.19]

The Indication Observation documents the rationale for an activity. It can do this with the id element to reference a problem recorded elsewhere in the document or with a code and value to record the problem type and problem within the Indication. For example, the indication for a prescription of a painkiller might be a headache that is documented in the Problems Section

1. **SHALL** contain exactly one [1..1] templateId (CONF:7482, CONF:10502) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.19"
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7480)
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:7481)
4. **SHALL** contain exactly one [1..1] id (CONF:7483)
5. **SHALL** contain exactly one [1..1] code, which **SHOULD** be selected from ValueSet [Problem Type](#) 2.16.840.1.113883.3.88.12.3221.7.2 **STATIC** 2008-12-18 (CONF:16886)
6. **SHALL** contain exactly one [1..1] statusCode/@code="completed" (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:7487)
7. **SHOULD** contain zero or one [0..1] effectiveTime (CONF:7488)
8. **SHOULD** contain zero or one [0..1] value with @xsi:type="CD" (CONF:7489), which **SHOULD** be selected from ValueSet [Problem](#) 2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:15985)

9. **MAY** satisfy: Set the observation/id equal to an ID on the problem list to signify that problem as an indication (CONF:16885)
10. The value element **MAY** contain @nullFlavor (CONF:15990)
11. If the diagnosis is unknown or the SNOMED code is unknown, @nullFlavor **SHOULD** be "UNK". If the code is something other than SNOMED, @nullFlavor **SHOULD** be "OTH" and the other code **SHOULD** be placed in the translation element. (CONF:15991)

Indication example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
  <id root="MDHT" extension="351879319"/>
  <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <value xsi:type="CD" code="432900011"/>
</observation>
```

Instructions

[Act: templateId 2.16.840.1.113883.10.20.22.4.20]

The Instructions 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 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.

1. **SHALL** contain exactly one [1..1] templateId (CONF:7393, CONF:10503) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.20"
2. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7391)
3. **SHALL** contain exactly one [1..1] @moodCode="INT" (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:7392)
4. **SHALL** contain exactly one [1..1] code, which **SHOULD** be selected from ValueSet [PatientEducation](#) 2.16.840.1.113883.11.20.9.34 DYNAMIC (CONF:7394)
5. **SHOULD** contain zero or one [0..1] text (CONF:7395)
6. **SHALL** contain exactly one [1..1] statusCode/@code="completed" Completed (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:7396)
7. This text, if present, **SHOULD** contain zero or one [0..1] reference (CONF:15577)
8. reference **SHOULD** contain exactly one [1..1] @value (CONF:15578)
9. 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:15579)

Instructions example

```
<act xmlns="urn:hl7-org:v3" classCode="ACT" moodCode="INT">
  <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
  <id root="MDHT" extension="943141433"/>
  <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
  <text>Text Value</text>
  <statusCode code="completed"/>
</act>
```

```
<effectiveTime>
  <low value="2014"/>
  <high value="2014"/>
</effectiveTime>
</act>
```

Medication Activity

[SubstanceAdministration: templateId 2.16.840.1.113883.10.20.22.4.16]

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. Medication activities in "EVN" mood reflect actual use.

Medication timing is complex. This template requires that there be a substanceAdministration/effectiveTime valued with a time interval, representing the start and stop dates. Additional effectiveTime elements are optional, and can be used to represent frequency and other aspects of more detailed dosing regimens.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:7499, CONF:10504) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.16"
2. **SHALL** contain exactly one [1..1] **@classCode**="SBADM" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7496)
3. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [MoodCodeEvnInt](#) 2.16.840.1.113883.11.20.9.18 **STATIC** 2011-04-03 (CONF:7497)
4. **SHALL** contain at least one [1..*] **id** (CONF:7500)
5. **MAY** contain zero or one [0..1] **code** (CONF:7506)
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:7507)
7. **MAY** contain zero or one [0..1] **routeCode**, which **SHALL** be selected from ValueSet [Medication Route FDA Value Set](#) 2.16.840.1.113883.3.88.12.3221.8.7 **STATIC** 1 (CONF:7514)
8. **MAY** contain zero or one [0..1] **approachSiteCode**, which **SHALL** be selected from ValueSet [Body Site Value Set](#) 2.16.840.1.113883.3.88.12.3221.8.9 **STATIC** 2 (CONF:7515)
9. **SHOULD** contain zero or one [0..1] **doseQuantity** (CONF:7516)
 - *Pre-coordinated consumable: If the consumable code is a precoordinated 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)*
 - *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*
10. **MAY** contain zero or one [0..1] **rateQuantity** (CONF:7517)
11. **MAY** contain zero or one [0..1] **maxDoseQuantity** (CONF:7518)
12. **MAY** contain zero or one [0..1] **administrationUnitCode**, which **MAY** be selected from ValueSet [Medication Product Form Value Set](#) 2.16.840.1.113883.3.88.12.3221.8.11 **STATIC** 1 (CONF:7519)
13. **MAY** contain zero or one [0..1] **performer** (CONF:7522)
 - a. Contains exactly one [1..1] CDA Performer2
14. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:7539, CONF:7540, CONF:16088)
 - a. Contains **@typeCode**="SUBJ" *SUBJ*
 - b. Contains exactly one [1..1] [Instructions](#) (templateId: 2.16.840.1.113883.10.20.22.4.20)
15. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:7543, CONF:7547, CONF:16089)
 - a. Contains **@typeCode**="REFR" *REFR*

- b. Contains exactly one [1..1] [Medication Supply Order](#) (templateId: 2.16.840.1.113883.10.20.22.4.17)
- 16. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:7552, CONF:7544, CONF:16091)
 - a. Contains **@typeCode="CAUS"** *CAUS*
 - b. Contains exactly one [1..1] [Reaction Observation](#) (templateId: 2.16.840.1.113883.10.20.22.4.9)
- 17. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:7536, CONF:7537, CONF:16087)
 - a. Contains **@typeCode="RSON"** *RSON*
 - b. Contains exactly one [1..1] [Indication](#) (templateId: 2.16.840.1.113883.10.20.22.4.19)
- 18. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:7549, CONF:7553, CONF:16090)
 - a. Contains **@typeCode="REFR"** *REFR*
 - b. Contains exactly one [1..1] [Medication Dispense](#) (templateId: 2.16.840.1.113883.10.20.22.4.18)
- 19. **MAY** contain zero or more [0..*] **precondition** (CONF:7546, CONF:16092)
 - a. Contains exactly one [1..1] [Precondition For Substance Administration](#) (templateId: 2.16.840.1.113883.10.20.22.4.25)
- 20. **MAY** contain zero or more [0..*] **participant** (CONF:7523, CONF:7524, CONF:16086)
 - a. Contains exactly one [1..1] [Drug Vehicle](#) (templateId: 2.16.840.1.113883.10.20.22.4.24)
- 21. **SHOULD** contain zero or one [0..1] **text** (CONF:7501)
- 22. **MAY** contain zero or one [0..1] **repeatNumber** (CONF:7555)
 - *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
- 23. **SHALL** contain exactly one [1..1] **consumable** (CONF:7520)
 - a. This consumable **SHALL** contain exactly one [1..1] **manufacturedProduct**, where its type is [Medication Information](#) (CONF:16085)
 - a. Contains exactly one [1..1] [Medication Information](#) (templateId: 2.16.840.1.113883.10.20.22.4.23)
- 24. Medication Activity **SHOULD** include doseQuantity OR rateQuantity (CONF:7529)
- 25. text, if present, **SHOULD** contain zero or one [0..1] reference (CONF:15977)
- 26. reference, if present, **SHOULD** contain zero or one [0..1] @value (CONF:15978)
- 27. 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:15979)
- 28. **SHALL** contain exactly one [1..1] effectiveTime such that it **SHALL** contain exactly one [1..1] @xsi:type="IVL_TS" or contain exactly one [1..1] @xsi:type="TS" (CONF:7508)
- 29. If effectiveTime @xsi:type="IVL_TS", **SHALL** contain exactly one [1..1] low (CONF:7511)
- 30. If effectiveTime @xsi:type="IVL_TS", **SHALL** contain exactly one [1..1] high (CONF:7512)
- 31. If effectiveTime @xsi:type="TS", **SHALL** contain exactly one [1..1] @value (CONF:NEW)
- 32. **SHOULD** contain zero or one [0..1] effectiveTime such that it **SHALL** contain exactly one [1..1] @xsi:type="PIVL_TS" or "EIVL_TS" (CONF:7513, CONF:9105)
- 33. effectiveTime with @xsi:type="PIVL_TS" or "EIVL_TS" **SHALL** contain exactly one [1..1] @operator="A" (CONF:7513, CONF:9106)
- 34. doseQuantity, if present, **SHOULD** contain zero or one [0..1] @unit, which **SHALL** be selected from ValueSet UCUM Units of Measure (case sensitive) 2.16.840.1.113883.1.11.12839 DYNAMIC (CONF:7526)
- 35. participant with target entry Drug Vehicle **SHALL** contain exactly one [1..1] @typeCode="CSM" (CodeSystem: HL7ParticipationType 2.16.840.1.113883.5.90) (CONF:7524)
- 36. entryRelationship with target entry Instructions **SHALL** contain exactly one [1..1] @inversionInd="true" True (CONF:7542)
- 37. Precondition for Substance Administration **SHALL** contain exactly one [1..1] @typeCode="PRCN" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:7550)

38. rateQuantity, if present, **SHALL** contain exactly one [1..1] @unit, which **SHALL** be selected from ValueSet UnitsOfMeasureCaseSensitive 2.16.840.1.113883.1.11.12839 DYNAMIC (CONF:7525)

Medication Activity example

```
<substanceadministration xmlns="urn:hl7-org:v3" classCode="SBADM">
  <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
  <id root="MDHT" extension="888180969"/>
  <code code="1051275254"/>
  <text>Text Value</text>
  <statusCode code="completed"/>
  <effectiveTime value="20140803"/>
  <repeatNumber value="1"/>
  <routeCode codeSystem="2.16.840.1.113883.3.26.1.1" codeSystemName="NCI
Thesaurus"/>
  <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
  <doseQuantity/>
  <rateQuantity/>
  <maxDoseQuantity/>
  <consumable>
    <manufacturedProduct>
      <id root="MDHT" extension="743730199"/>
      <manufacturedMaterial>
        <code codeSystem="2.16.840.1.113883.6.88" codeSystemName="RxNorm"/>
      </manufacturedMaterial>
      <manufacturerOrganization/>
    </manufacturedProduct>
  </consumable>
  <performer/>
  <entryRelationship>
    <supply classCode="SPLY" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
      <id root="MDHT" extension="2093423686"/>
      <code code="1276240497"/>
      <text>Text Value</text>
      <statusCode code="completed"/>
      <effectiveTime value="20140803"/>
      <repeatNumber value="1"/>
      <author/>
      <entryRelationship>
        <act classCode="ACT" moodCode="INT">
          <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
          <id root="MDHT" extension="2044742628"/>
          <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
          <text>Text Value</text>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
          </effectiveTime>
        </act>
      </entryRelationship>
    </supply>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
      <id root="MDHT" extension="44494639"/>
      <code code="813928198"/>
      <text>Text Value</text>
      <statusCode code="completed"/>
    </observation>
  </entryRelationship>
</substanceadministration>
```

```

<effectiveTime>
  <low value="2014"/>
  <high value="2014"/>
</effectiveTime>
<repeatNumber value="1"/>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.8"/>
    <id root="MDHT" extension="1226033785"/>
    <code code="SEV" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Severity observation"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <repeatNumber value="1"/>
  </observation>
</entryRelationship>
<entryRelationship>
  <procedure classCode="PROC">
    <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
    <id root="MDHT" extension="1748209558"/>
    <code code="1725064155"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
    <approachSiteCode code="1864647178"/>
    <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <specimen/>
    <performer/>
    <entryRelationship typeCode="COMP" inversionInd="true"/>
  </entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <statusCode code="completed"/>
  </observation>
</entryRelationship>
<entryRelationship>
  <substanceAdministration classCode="SBADM">
    <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
    <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
    <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    </substanceAdministration>
  </entryRelationship>
<entryRelationship>
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <statusCode code="completed"/>
  </act>
</entryRelationship>

```



```

</procedure>
</entryRelationship>
<entryRelationship>
  <substanceAdministration classCode="SBADM">
    <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
    <id root="MDHT" extension="660527990"/>
    <code code="1560250402"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime value="20140803"/>
    <repeatNumber value="1"/>
    <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
    <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <doseQuantity/>
    <rateQuantity/>
    <maxDoseQuantity/>
    <consumable/>
    <performer/>
    <entryRelationship>
      <supply classCode="SPLY" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
      </supply>
    </entryRelationship>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
        <statusCode code="completed"/>
      </observation>
    </entryRelationship>
    <entryRelationship>
      <act classCode="ACT" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <statusCode code="completed"/>
      </act>
    </entryRelationship>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <statusCode code="completed"/>
      </observation>
    </entryRelationship>
    <entryRelationship>
      <supply classCode="SPLY" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.18"/>
      </supply>
    </entryRelationship>
    <precondition/>
  </substanceAdministration>
</entryRelationship>
</observation>
</entryRelationship>
<entryRelationship>
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
    <id root="MDHT" extension="1536529245"/>
    <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
  </act>
</entryRelationship>

```

```

    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </act>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
    <id root="MDHT" extension="2013757757"/>
    <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <repeatNumber value="1"/>
  </observation>
</entryRelationship>
<entryRelationship>
  <supply classCode="SPLY" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.18"/>
    <id root="MDHT" extension="948730533"/>
    <code code="1875496340"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime value="20140803"/>
    <repeatNumber value="1"/>
    <performer>
      <assignedEntity/>
    </performer>
  </entryRelationship>
  <supply classCode="SPLY" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
    <id root="MDHT" extension="629948301"/>
    <code code="1369399753"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime value="20140803"/>
    <repeatNumber value="1"/>
    <author/>
  </entryRelationship>
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <statusCode code="completed"/>
  </act>
</entryRelationship>
</supply>
</entryRelationship>
</supply>
</entryRelationship>
<precondition>
  <criteria/>
</precondition>
</substanceadministration>

```

Medication Dispense

[Supply: templateId 2.16.840.1.113883.10.20.22.4.18]

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:7453, CONF:10505) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.18"
2. **SHALL** contain exactly one [1..1] **@classCode**="SPLY" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7451)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:7452)
4. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:7456)
5. **SHALL** contain at least one [1..*] **id** (CONF:7454)
6. **SHOULD** contain zero or one [0..1] **repeatNumber** (CONF:7457)
 - *In "EVN" (event) mood, the repeatNumber is the number of occurrences. For example, a repeatNumber of "3" in a dispense act means that the current dispensation is the 3rd (CONF: 16876)*
7. **SHALL** contain exactly one [1..1] **statusCode**, which **SHALL** be selected from ValueSet [Medication Fill Status](#) 2.16.840.1.113883.3.88.12.80.64 **STATIC** 1 (CONF:7455)
8. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:7473, CONF:7474, CONF:15606)
 - a. Contains **@typeCode**="REFR" *REFR*
 - b. Contains exactly one [1..1] [Medication Supply Order](#) (templateId: 2.16.840.1.113883.10.20.22.4.17)
9. **SHOULD** contain zero or one [0..1] **quantity** (CONF:7458)
10. **MAY** contain zero or one [0..1] **performer** (CONF:7461)
 - a. This performer **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:7467)
 - a. This assignedEntity **SHOULD** contain zero or one [0..1] **addr** with @xsi:type="[US Realm Address](#)" (CONF:7468)
11. supply act **SHALL** contain one product/Medication Information or one product/Immunization Medication Information template (CONF:15607, CONF:15608, CONF:9333)

Medication Dispense example

```
<supply xmlns="urn:hl7-org:v3" classCode="SPLY" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.18"/>
  <id root="MDHT" extension="516861402"/>
  <effectiveTime value="20140803"/>
  <repeatNumber value="1"/>
  <quantity/>
  <performer>
    <assignedEntity>
      <id root="MDHT" extension="700190473"/>
    </assignedEntity>
  </performer>
  <entryRelationship>
    <supply classCode="SPLY" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
      <id root="MDHT" extension="1108778985"/>
      <effectiveTime value="20140803"/>
      <repeatNumber value="1"/>
      <quantity/>
      <author/>
    </entryRelationship>
    <act classCode="ACT" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
      <id root="MDHT" extension="1603537272"/>
    </act>
  </entryRelationship>
</supply>
```

```
<code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
<statusCode code="completed"/>
<effectiveTime>
  <low value="2014"/>
  <high value="2014"/>
</effectiveTime>
</act>
</entryRelationship>
</supply>
</entryRelationship>
</supply>
```

Medication Supply Order

[Supply: templateId 2.16.840.1.113883.10.20.22.4.17]

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:7429, CONF:10507) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.17"
2. **SHALL** contain exactly one [1..1] **@classCode**="SPLY" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7427)
3. **SHALL** contain exactly one [1..1] **@moodCode**="INT" (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:7428)
4. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:15143)
5. **SHOULD** contain zero or one [0..1] **quantity** (CONF:7436)
6. **SHOULD** contain zero or one [0..1] **repeatNumber** (CONF:7434)
 - In "INT" (intent) mood, the repeatNumber defines the number of allowed fills. For example, a repeatNumber of "3" means that the substance can be supplied up to 3 times (or, can be dispensed, with 2 refills) (CONF:16869)
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:7432)
8. **SHALL** contain at least one [1..*] **id** (CONF:7430)
9. **MAY** contain zero or one [0..1] **author** (CONF:7438)
 - a. Contains exactly one [1..1] CDA Author
10. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:7442, CONF:7444, CONF:16095)
 - a. Contains **@typeCode**="SUBJ" *SUBJ*
 - b. Contains exactly one [1..1] *Instructions* (templateId: 2.16.840.1.113883.10.20.22.4.20)
11. **entryRelationship** with target entry *Instructions* if present, **SHALL** contain exactly one [1..1] **@inversionInd**="true" True (CONF:7445)
12. **effectiveTime** **SHALL** contain exactly one [1..1] **high** (CONF:15144)
13. **supply act** **SHALL** contain one product/Medication Information or one product/Immunization Medication Information template (CONF:16870)

Medication Supply Order example

```
<supply xmlns="urn:hl7-org:v3" classCode="SPLY" moodCode="INT">
  <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
  <id root="MDHT" extension="1350404254"/>
  <statusCode code="completed"/>
  <effectiveTime value="20140803"/>
  <repeatNumber value="1"/>
  <quantity/>
  <author/>
  <entryRelationship>
    <act classCode="ACT" moodCode="INT">
```

```
<templateId root="2.16.840.1.113883.10.20.22.4.20" />
<id root="MDHT" extension="1131744539" />
<code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT" />
<statusCode code="completed" />
<effectiveTime>
  <low value="2014" />
  <high value="2014" />
</effectiveTime>
</act>
</entryRelationship>
</supply>
```

Non Medicinal Supply Activity

[Supply: templateId 2.16.840.1.113883.10.20.22.4.50]

This template records non-medicinal supplies provided, such as medical equipment

1. **SHALL** contain exactly one [1..1] templateId (CONF:8747, CONF:10509) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.50"
2. **SHALL** contain exactly one [1..1] @classCode="SPLY" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8745)
3. **SHALL** contain exactly one [1..1] @moodCode, which **SHALL** be selected from ValueSet [MoodCodeEvnInt](#) 2.16.840.1.113883.11.20.9.18 **STATIC** 2011-04-03 (CONF:8746)
4. **SHALL** contain at least one [1..*] id (CONF:8748)
5. **SHALL** contain exactly one [1..1] statusCode (CONF:8749)
6. **SHOULD** contain zero or one [0..1] effectiveTime (CONF:15498)
7. **SHOULD** contain zero or one [0..1] quantity (CONF:8751)
8. **SHALL** contain exactly one [1..1] participant (CONF:8752, CONF:15900)
 - a. Contains exactly one [1..1] [Product Instance](#) (templateId: 2.16.840.1.113883.10.20.22.4.37)
9. **SHOULD** contain zero or one [0..1] effectiveTime/high (CONF:16867)
10. participant with target entry Product Instance **SHALL** contain exactly one [1..1] @typeCode="PRD" Product (CodeSystem: HL7ParticipationType 2.16.840.1.113883.5.90) (CONF:8754)

Non Medicinal Supply Activity example

```
<supply xmlns="urn:hl7-org:v3" classCode="SPLY">
  <templateId root="2.16.840.1.113883.10.20.22.4.50" />
  <id root="MDHT" extension="820573838" />
  <statusCode code="completed" />
  <effectiveTime value="20140803" />
  <quantity/>
</supply>
```

Plan Of Care Activity Act

[Act: templateId 2.16.840.1.113883.10.20.22.4.39]

1. **SHALL** contain exactly one [1..1] templateId (CONF:8544, CONF:10510) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.39"
2. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass)

3. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [Plan of Care moodCode \(Act/Encounter/Procedure\)](#) 2.16.840.1.113883.11.20.9.23 **STATIC** (CONF:8539)
4. **SHALL** contain at least one [1..*] **id** (CONF:8539)

Plan Of Care Activity Act example

```
<act xmlns="urn:hl7-org:v3" classCode="ACT">
  <templateId root="2.16.840.1.113883.10.20.22.4.39" />
  <id root="MDHT" extension="2095059687" />
  <code code="875392061" />
  <effectiveTime>
    <low value="2014" />
    <high value="2014" />
  </effectiveTime>
</act>
```

Plan Of Care Activity Encounter

[Encounter: templateId 2.16.840.1.113883.10.20.22.4.40]

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:8566, CONF:10511) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.40"
2. **SHALL** contain exactly one [1..1] **@classCode**="ENC" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8564)
3. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [Plan of Care moodCode \(Act/Encounter/Procedure\)](#) 2.16.840.1.113883.11.20.9.23 **STATIC** (CONF:8565)
4. **SHALL** contain at least one [1..*] **id** (CONF:8567)

Plan Of Care Activity Encounter example

```
<encounter xmlns="urn:hl7-org:v3" classCode="ENC">
  <templateId root="2.16.840.1.113883.10.20.22.4.40" />
  <id root="MDHT" extension="1172512060" />
  <effectiveTime>
    <low value="2014" />
    <high value="2014" />
  </effectiveTime>
</encounter>
```

Plan Of Care Activity Observation

[Observation: templateId 2.16.840.1.113883.10.20.22.4.44]

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:8583, CONF:10512) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.44"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8581)
3. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [Plan of Care moodCode \(Observation\)](#) 2.16.840.1.113883.11.20.9.25 **STATIC** (CONF:8582)
4. **SHALL** contain at least one [1..*] **id** (CONF:8584)

Plan Of Care Activity Observation example

```
<observation xmlns="urn:hl7-org:v3" classCode="OBS">
  <templateId root="2.16.840.1.113883.10.20.22.4.44"/>
  <id root="MDHT" extension="1488458841"/>
  <code code="2027095274"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
</observation>
```

Plan Of Care Activity Procedure

[Procedure: templateId 2.16.840.1.113883.10.20.22.4.41]

1. **SHALL** contain exactly one [1..1] templateId (CONF:8570, CONF:10513) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.41"
2. **SHALL** contain exactly one [1..1] @classCode="PROC" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8568)
3. **SHALL** contain exactly one [1..1] @moodCode, which **SHALL** be selected from ValueSet [Plan of Care moodCode \(Act/Encounter/Procedure\)](#) 2.16.840.1.113883.11.20.9.23 **STATIC** (CONF:8569)
4. **SHALL** contain at least one [1..*] id (CONF:8571)

Plan Of Care Activity Procedure example

```
<procedure xmlns="urn:hl7-org:v3" classCode="PROC">
  <templateId root="2.16.840.1.113883.10.20.22.4.41"/>
  <id root="MDHT" extension="2069471265"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
</procedure>
```

Plan Of Care Activity Substance Administration

[SubstanceAdministration: templateId 2.16.840.1.113883.10.20.22.4.42]

1. **SHALL** contain exactly one [1..1] templateId (CONF:8574, CONF:10514) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.42"
2. **SHALL** contain exactly one [1..1] @classCode="SBADM" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8572)
3. **SHALL** contain exactly one [1..1] @moodCode, which **SHALL** be selected from ValueSet [Plan of Care moodCode \(SubstanceAdministration/Supply\)](#) 2.16.840.1.113883.11.20.9.24 **STATIC** (CONF:8573)
4. **SHALL** contain at least one [1..*] id (CONF:8575)

Plan Of Care Activity Substance Administration example

```
<substanceadministration xmlns="urn:hl7-org:v3" classCode="SBADM">
  <templateId root="2.16.840.1.113883.10.20.22.4.42"/>
  <id root="MDHT" extension="1863489870"/>
```

```
<effectiveTime value="20140803"/>
<consumable/>
</substanceadministration>
```

Plan Of Care Activity Supply

[Supply: templateId 2.16.840.1.113883.10.20.22.4.43]

1. **SHALL** contain exactly one [1..1] templateId (CONF:8579, CONF:10515) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.43"
2. **SHALL** contain exactly one [1..1] @classCode="SPLY" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8577)
3. **SHALL** contain exactly one [1..1] @moodCode, which **SHALL** be selected from ValueSet [Plan of Care moodCode \(SubstanceAdministration/Supply\)](#) 2.16.840.1.113883.11.20.9.24 **STATIC** (CONF:8578)
4. **SHALL** contain at least one [1..*] id (CONF:8580)

Plan Of Care Activity Supply example

```
<supply xmlns="urn:hl7-org:v3" classCode="SPLY">
  <templateId root="2.16.840.1.113883.10.20.22.4.43"/>
  <id root="MDHT" extension="1218804186"/>
  <effectiveTime value="20140803"/>
</supply>
```

Policy Activity

[Act: templateId 2.16.840.1.113883.10.20.22.4.61]

A policy activity represents the policy or program providing the coverage.

1. **SHALL** contain exactly one [1..1] templateId (CONF:8900, CONF:10516) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.61"
2. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8898)
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:8899)
4. **SHALL** contain exactly one [1..1] code (CONF:8903), which **SHOULD** be selected from ValueSet [Health Insurance Type Value Set](#) 2.16.840.1.113883.3.88.12.3221.5.2 **DYNAMIC** (CONF:19185)
5. **SHALL** contain at least one [1..*] id (CONF:8901)
 - *This id is a unique identifier for the policy or program providing the coverage*
6. **SHALL** contain exactly one [1..1] statusCode/@code="completed" Completed (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:8902)
7. **SHALL** contain exactly one [1..1] performer (CONF:8906)
 - a. This performer **SHALL** contain exactly one [1..1] @typeCode="PRF" (CONF:8907)
 - b. This performer **SHALL** contain exactly one [1..1] assignedEntity (CONF:8908)
 - a. This assignedEntity **MAY** contain zero or one [0..1] addr with @xsi:type="US Realm Address" (CONF:8910, CONF:10481)

- b. This assignedEntity **SHOULD** contain zero or one [0..1] **code** (CONF:8914), which **SHOULD** be selected from ValueSet *Financially Responsible Party Type Value Set* 2.16.840.1.113883.1.11.10416 **DYNAMIC** (CONF:15992)
 - c. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:8909)
 - d. This assignedEntity **MAY** contain zero or one [0..1] **telecom** (CONF:8910)
 - e. This assignedEntity **SHOULD** contain zero or one [0..1] **representedOrganization** (CONF:8912)
 - a. This representedOrganization **SHOULD** contain zero or one [0..1] **name** (CONF:8913)
 - f. This assignedEntity The content of addr **SHALL** be a conformant US Realm Address (AD.US.FIELDED) (2.16.840.1.113883.10.20.22.5.2) (CONF:10481)
8. **SHOULD** contain zero or one [0..1] **performer** (CONF:8961)
- a. This performer **SHOULD** contain zero or one [0..1] **time** (CONF:8963)
 - b. This performer **SHOULD** contain zero or one [0..1] **@typeCode= "PRF"** (CONF:8961)
 - c. This performer **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:8962)
 - a. This assignedEntity **SHOULD** contain zero or one [0..1] **addr** with @xsi:type="US Realm Address" (CONF:8964, CONF:10482)

The content of addr SHALL be a conformant US Realm Address (AD.US.FIELDED) (2.16.840.1.113883.10.20.22.5.2) (CONF:10482)
 - b. This assignedEntity **SHALL** contain exactly one [1..1] **code** (CONF:8968)/**@code= "GUAR"** *Guarantor* (CodeSystem: 2.16.840.1.113883.5.110 HL7RoleClass) (CONF:16096)
 - c. This assignedEntity **SHOULD** contain zero or one [0..1] **telecom** (CONF:8965)
 - d. This assignedEntity **SHOULD** include assignedEntity/assignedPerson/name AND/OR assignedEntity/representedOrganization/name (CONF:8967)
 - e. This assignedEntity The content of addr **SHALL** be a conformant US Realm Address (AD.US.FIELDED) (2.16.840.1.113883.10.20.22.5.2) (CONF:10482)
9. **SHALL** contain exactly one [1..1] **participant** (CONF:8916)
- a. This participant **SHOULD** contain zero or one [0..1] **time** (CONF:8918)
 - b. This participant **SHALL** contain exactly one [1..1] **@typeCode= "COV"** (CONF:8917)
 - c. This participant **SHALL** contain exactly one [1..1] **participantRole** (CONF:8921)
 - a. This participantRole **SHOULD** contain zero or one [0..1] **addr** with @xsi:type="US Realm Address" (CONF:8956)
 - b. This participantRole **SHALL** contain exactly one [1..1] **code** (CONF:8923), which **SHOULD** be selected from ValueSet *Coverage Role Type Value Set* 2.16.840.1.113883.1.11.18877 **DYNAMIC** (CONF:16078)
 - c. This participantRole **SHALL** contain at least one [1..*] **id** (CONF:8922)
 - d. This participantRole **SHOULD** contain zero or one [0..1] **playingEntity** (CONF:8932)
 - a. This playingEntity **SHALL** contain exactly one [1..1] **name** (CONF:8930)
 - b. This playingEntity If the member date of birth as recorded by the health plan differs from the patient date of birth as recorded in the registration/medication summary, then the member date of birth **SHALL** be recorded in sdte:birthTime. (CONF:8933)
 - d. This participant The time, if present, **SHOULD** contain zero or one [0..1] **low** (CONF:8919)
 - e. This participant The time, if present, **SHOULD** contain zero or one [0..1] **high** (CONF:8920)
10. **SHOULD** contain zero or one [0..1] **participant** (CONF:8934)
- a. This participant **MAY** contain zero or one [0..1] **time** (CONF:8938)
 - b. This participant **SHALL** contain exactly one [1..1] **@typeCode= "HLD"** (CONF:8935)
 - c. This participant **SHALL** contain exactly one [1..1] **participantRole** (CONF:8936)
 - a. This participantRole **SHOULD** contain zero or one [0..1] **addr** with @xsi:type="US Realm Address" (CONF:8925)
 - b. This participantRole **SHALL** contain at least one [1..*] **id** (CONF:8937)

This id is a unique identifier for the subscriber of the coverage (CONF:10120)

11.SHALL contain at least one [1..*] **entryRelationship** (CONF:8939)

- a. Such entryRelationships **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CONF:8940)
- b. Such entryRelationships 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:8942)
- c. Such entryRelationships 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:8943)

Policy Activity example

```
<act xmlns="urn:hl7-org:v3" classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.61"/>
  <id root="MDHT" extension="1207083307"/>
  <code codeSystemName="" />
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <performer typeCode="PRF">
    <templateId root="2.16.840.1.113883.10.20.22.4.87"/>
    <assignedEntity>
      <id root="MDHT" extension="1094917947"/>
      <code codeSystem="2.16.840.1.113883.5.110"
codeSystemName="HL7RoleClass"/>
      <telecom/>
      <representedOrganization/>
    </assignedEntity>
  </performer>
  <performer typeCode="PRF">
    <templateId root="2.16.840.1.113883.10.20.22.4.88"/>
    <time>
      <low value="2014"/>
      <high value="2014"/>
    </time>
    <assignedEntity>
      <id root="MDHT" extension="410802394"/>
      <code code="GUAR" codeSystem="2.16.840.1.113883.5.110"
codeSystemName="HL7RoleClass" displayName="Guarantor"/>
      <telecom/>
    </assignedEntity>
  </performer>
  <participant typeCode="COV">
    <templateId root="2.16.840.1.113883.10.20.22.4.89"/>
    <time>
      <low value="2014"/>
      <high value="2014"/>
    </time>
    <participantRole>
      <id root="MDHT" extension="1086659115"/>
      <code codeSystem="2.16.840.1.113883.5.111" codeSystemName="RoleCode"/>
      <playingEntity/>
    </participantRole>
  </participant>
  <participant typeCode="HLD">
    <templateId root="2.16.840.1.113883.10.20.22.4.90"/>
    <time>
      <low value="2014"/>
```

```
<high value="2014"/>
</time>
<participantRole>
  <id root="MDHT" extension="2060219299"/>
</participantRole>
</participant>
<entryRelationship typeCode="REFR"/>
</act>
```

Postprocedure Diagnosis

[Act: templateId 2.16.840.1.113883.10.20.22.4.51]

The Postprocedure Diagnosis entry encodes the diagnosis or diagnoses discovered or confirmed during the procedure. Often it is the same as the pre-procedure diagnosis or indication.

1. **SHALL** contain exactly one [1..1] templateId (CONF:16766, CONF:16767) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.51"
2. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8756)
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:8757)
4. **SHALL** contain exactly one [1..1] code/@code="59769-0" Postprocedure Diagnosis (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:8758)
5. **SHALL** contain at least one [1..*] entryRelationship (CONF:8759, CONF:8760, CONF:15583)
 - a. Contains @typeCode="SUBJ" SUBJ
 - b. Contains exactly one [1..1] *Problem Observation* (templateId: 2.16.840.1.113883.10.20.22.4.4)

Postprocedure Diagnosis example

```
<act xmlns="urn:hl7-org:v3" classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.51"/>
  <id root="MDHT" extension="1401518586"/>
  <code code="59769-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Postprocedure Diagnosis"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <id root="MDHT" extension="272621507"/>
      <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.31"/>
          <id root="MDHT" extension="120786098"/>
          <code code="445518008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2014"/>
```

```

        <high value="2014"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.5"/>
      <id root="MDHT" extension="815748631"/>
      <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Health status"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.6"/>
      <id root="MDHT" extension="1048215851"/>
      <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
</observation>
</entryRelationship>
</act>

```

Pregnancy Observation

[Observation: templateId 2.16.840.1.113883.10.20.15.3.8]

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.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:16768, CONF:16868) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.15.3.8"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:451)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:452)
4. **SHALL** contain exactly one [1..1] **code** (CONF:454)/**@code**="ASSERTION" *Assertion* (CodeSystem: 2.16.840.1.113883.5.4 HL7ActCode)
5. **SHALL** contain exactly one [1..1] **statusCode**/**@code**="completed" (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:455)
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:457)/**@code**="77386006" *Pregnant* (CodeSystem: 2.16.840.1.113883.6.96 SNOMEDCT) (CONF:Pending)
 - *The value of the observation shall be recording using a data type appropriate to the coded observation according to the table provided by IHE PCC specification.*
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:2018)
8. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:458, CONF:459, CONF:15584)

- a. Contains @typeCode="REFR" *REFR*
- b. Contains exactly one [1..1] *Estimated Date Of Delivery* (templateId: 2.16.840.1.113883.10.20.15.3.1)

Pregnancy Observation example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.15.3.8"/>
  <id root="MDHT" extension="794114871"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Assertion"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <value xsi:type="CD" code="1133351053"/>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.15.3.1"/>
      <id root="MDHT" extension="424717108"/>
      <code code="11778-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <value xsi:type="TS"/>
    </observation>
  </entryRelationship>
</observation>
```

Preoperative Diagnosis

[Act: templateId 2.16.840.1.113883.10.20.22.4.65]

1. **SHALL** contain exactly one [1..1] templateId (CONF:16770, CONF:16771) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.65"
2. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:10090)
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:10091)
4. **SHALL** contain exactly one [1..1] code/@code="10219-4" (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10092)
5. **SHALL** contain at least one [1..*] entryRelationship (CONF:10093, CONF:10094, CONF:15605)
 - a. Contains @typeCode="SUBJ" *SUBJ*
 - b. Contains exactly one [1..1] *Problem Observation* (templateId: 2.16.840.1.113883.10.20.22.4.4)

Preoperative Diagnosis example

```
<act xmlns="urn:hl7-org:v3" classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.65"/>
  <id root="MDHT" extension="381911690"/>
```

```

<code code="10219-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
<effectiveTime>
  <low value="2014"/>
  <high value="2014"/>
</effectiveTime>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
    <id root="MDHT" extension="359305232"/>
    <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.31"/>
        <id root="MDHT" extension="666526808"/>
        <code code="445518008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
        <statusCode code="completed"/>
        <effectiveTime>
          <low value="2014"/>
          <high value="2014"/>
        </effectiveTime>
      </observation>
    </entryRelationship>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.5"/>
      <id root="MDHT" extension="782308105"/>
      <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Health status"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.6"/>
      <id root="MDHT" extension="1220043180"/>
      <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
</entryRelationship>
</act>

```

Problem Concern Act

[Act: templateId 2.16.840.1.113883.10.20.22.4.3]

Observations of problems or other clinical statements captured at a point in time are wrapped in a "Concern" act, which represents the ongoing process tracked over time. This allows for binding related observations of problems. For example, the observation of "Acute MI" in 2004 can be related to the observation of "History of MI" in 2006 because they are the same concern. The conformance statements in this section define an outer "problem act" (representing the "Concern") that can contain a nested "problem observation" or other nested clinical statements.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:16772, CONF:16773) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.3"
2. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:9024)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:9025)
4. **SHALL** contain at least one [1..*] **id** (CONF:9026)
5. **SHALL** contain exactly one [1..1] **code** (CONF:9027)/**@code**="CONC" Concern (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:9440)
6. **SHALL** contain exactly one [1..1] **statusCode**, which **SHALL** be selected from ValueSet [ProblemActStatusCode](#) 2.16.840.1.113883.11.20.9.19 **STATIC** 2011-09-09 (CONF:9029)

•

The statusCode associated with any concern must be one of the following values:

active: A concern that is still being tracked.

suspended: A concern that is active, but which may be set aside. For example, this value might be used to suspend concern about a patient problem after some period of remission, but before assumption that the concern has been resolved.

aborted: A concern that is no longer actively being tracked, but for reasons other than because the problem was resolved. This value might be used to mark a concern as being aborted after a patient leaves care against medical advice.

completed:

The problem, allergy or medical state has been resolved and the concern no longer needs to be tracked except for historical purposes.

7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:9030)
 - The *effectiveTime* element records the starting and ending times during which the concern was active on the Problem List.
8. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:15980)
 - a. Contains **@typeCode**="SUBJ" SUBJ
 - b. Contains exactly one [1..1] [Problem Observation](#) (templateId: 2.16.840.1.113883.10.20.22.4.4)
9. **effectiveTime** **SHALL** contain exactly one [1..1] low (CONF:9032)
10. **effectiveTime** **SHOULD** contain zero or one [0..1] high (CONF:9033)

Problem Concern Act example

```
<act xmlns="urn:hl7-org:v3" classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.3"/>
  <id root="MDHT" extension="548662203"/>
```

```
<code code="CONC" codeSystem="2.16.840.1.113883.5.6"
codeSystemName="HL7ActClass" displayName="Concern"/>
<effectiveTime>
  <low value="2014"/>
  <high value="2014"/>
</effectiveTime>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
    <id root="MDHT" extension="1368399241"/>
    <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.31"/>
    <id root="MDHT" extension="423352915"/>
    <code code="445518008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.5"/>
    <id root="MDHT" extension="1574675731"/>
    <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Health status"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.6"/>
    <id root="MDHT" extension="687038030"/>
    <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
</observation>
</entryRelationship>
</act>
```


Problem Observation

[Observation: templateId 2.16.840.1.113883.10.20.22.4.4]

A problem is a clinical statement that a clinician has noted. In health care it is a condition that requires monitoring or diagnostic, therapeutic, or educational action. It also refers to any unmet or partially met basic human need.

A Problem Observation is required to be wrapped in an act wrapper in locations such as the Problem Section, Allergies Section, and Hospital Discharge Diagnosis Section, where the type of problem needs to be identified or the condition tracked. A Problem Observation can be a valid "standalone" template instance in cases where a simple problem observation is to be sent.

The negationInd attribute, if true, specifies that the problem indicated was observed to not have occurred (which is subtly but importantly different from having not been observed). NegationInd='true' is an acceptable way to make a clinical assertion that something did not occur, for example, "no diabetes".

1. **SHALL** contain exactly one [1..1] templateId (CONF:14926, CONF:14927) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4"
2. **SHALL** contain exactly one [1..1] @classCode="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:9041)
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:9042)
4. **MAY** contain zero or one [0..1] @negationInd (CONF:10139)
 - Use negationInd="true" to indicate that the problem was not observed (CONF:16880)
5. **SHALL** contain at least one [1..*] id (CONF:9043)
6. **SHALL** contain exactly one [1..1] code, which **SHOULD** be selected from ValueSet [Problem Type](#) 2.16.840.1.113883.3.88.12.3221.7.2 **STATIC** 2008-12-18 (CONF:9045)
7. **SHOULD** contain zero or one [0..1] text (CONF:9185)
8. **SHALL** contain exactly one [1..1] statusCode/@code="completed" *Completed* (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:9049)
9. **SHOULD** contain zero or one [0..1] effectiveTime (CONF:9050)
10. **SHALL** contain exactly one [1..1] value with @xsi:type="CD", which **SHOULD** be selected from ValueSet [Problem](#) 2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:9058)
11. **MAY** contain zero or one [0..1] entryRelationship (CONF:9059, CONF:9060, CONF:15590)
 - a. Contains @typeCode="SUBJ" *SUBJ*
 - b. Contains exactly one [1..1] [Age Observation](#) (templateId: 2.16.840.1.113883.10.20.22.4.31)
12. **MAY** contain zero or one [0..1] entryRelationship (CONF:9063, CONF:9068, CONF:15591)
 - a. Contains @typeCode="REFR" *REFR*
 - b. Contains exactly one [1..1] [Problem Status](#) (templateId: 2.16.840.1.113883.10.20.22.4.6)
13. **MAY** contain zero or one [0..1] entryRelationship (CONF:9067, CONF:9064, CONF:15592)
 - a. Contains @typeCode="REFR" *REFR*
 - b. Contains exactly one [1..1] [Health Status Observation](#) (templateId: 2.16.840.1.113883.10.20.22.4.5)
14. The text, if present, **SHOULD** contain zero or one [0..1] reference (CONF:15587)
15. reference, if present, **SHALL** contain exactly one [1..1] @value (CONF:15588)
16. 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:15589)
17. The effectiveTime element , if present, **SHALL** contain exactly one [1..1] low (CONF:15603)
18. effectiveTime, if present, **MAY** contain zero or one [0..1] high (CONF:15604)
19. value **MAY** contain zero or one [0..1] @nullFlavor (CONF:10141)

20. If the diagnosis is unknown or the SNOMED code is unknown, @nullFlavor **SHOULD** be UNK. If the code is something other than SNOMED, @nullFlavor **SHOULD** be OTH and the other code **SHOULD** be placed in the translation element (CONF:10142)
21. entryRelationship with target entry Age Observation **SHALL** contain exactly one [1..1] @inversionInd="true" True (CONF:9069)
22. value **MAY** contain zero or more [0..*] translation (CONF:16749)
23. translation, if present, **MAY** contain zero or one [0..1] @code (CodeSystem: ICD10CM 2.16.840.1.113883.6.90 STATIC) (CONF:16750)

Problem Observation example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <id root="MDHT" extension="2054517430"/>
  <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
  <text>Text Value</text>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <value xsi:type="CD" code="1988536502"/>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.31"/>
      <id root="MDHT" extension="1690177485"/>
      <code code="445518008" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Age At Onset"/>
      <text>Text Value</text>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <value xsi:type="PQ"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.5"/>
      <id root="MDHT" extension="990394143"/>
      <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Health status"/>
      <text>Text Value</text>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <value xsi:type="CD" code="957001228"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.6"/>
      <id root="MDHT" extension="1017711943"/>
      <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
      <text>Text Value</text>
      <statusCode code="completed"/>
      <effectiveTime>
```

```
<low value="2014"/>
<high value="2014"/>
</effectiveTime>
<value xsi:type="CD" code="268252507"/>
</observation>
</entryRelationship>
</observation>
```

Problem Status

[Observation: templateId 2.16.840.1.113883.10.20.22.4.6]

The Problem Status records whether the indicated problem is active, inactive, or resolved.

1. **SHALL** contain exactly one [1..1] templateId (CONF:7359) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.6"
2. **SHALL** contain exactly one [1..1] @classCode="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7357)
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:7358)
4. **SHALL** contain exactly one [1..1] code/@code="33999-4" *Status* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:7361)
5. **SHOULD** contain zero or one [0..1] text (CONF:7362)
6. **SHALL** contain exactly one [1..1] statusCode/@code="completed" *Completed* (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:7364)
7. **SHALL** contain exactly one [1..1] value with @xsi:type="CD", which **SHALL** be selected from ValueSet [HITSP Problem Status](#) 2.16.840.1.113883.3.88.12.80.68 **STATIC** (CONF:7365)
8. text, if present, **SHOULD** contain zero or one [0..1] reference (CONF:15593)
9. reference, if present, **SHALL** contain exactly one [1..1] @value (CONF:15594)
10. 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:15595)

Problem Status example

```
<observation xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.6"/>
  <id root="MDHT" extension="273201182"/>
  <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Status"/>
  <text>Text Value</text>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
</observation>
```

Procedure Activity Act

[Act: templateId 2.16.840.1.113883.10.20.22.4.12]

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 clinical statement represents any procedure that cannot be classified as an observation or a procedure according to the HL7 RIM. Examples of these procedures are a dressing change, teaching or feeding a patient or providing comfort measures.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:10519) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.12"
2. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8289)
3. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [MoodCodeEvnInt](#) 2.16.840.1.113883.11.20.9.18 **STATIC** 2011-04-03 (CONF:8290)
4. **SHALL** contain at least one [1..*] **id** (CONF:8292)
5. **SHALL** contain exactly one [1..1] **code** (CONF:8293)
6. **SHALL** contain zero or one [0..1] **statusCode**, which **SHALL** be selected from ValueSet [ProcedureActStatusCode](#) 2.16.840.1.113883.11.20.9.22 **DYNAMIC** (CONF:8298)
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:8299)
8. **MAY** contain zero or one [0..1] **priorityCode**, which **SHALL** be selected from ValueSet [ActPriority](#) 2.16.840.1.113883.1.11.16866 **STATIC** (CONF:8300)
9. **SHOULD** contain zero or more [0..*] **performer** (CONF:8301)
 - a. Such performers **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:8302)
 - a. This assignedEntity **SHALL** contain exactly one [1..1] **addr** (CONF:8304)
 - b. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:8303)
 - c. This assignedEntity **SHALL** contain exactly one [1..1] **telecom** (CONF:8305)
 - d. This assignedEntity **SHOULD** contain zero or one [0..1] **representedOrganization** (CONF:8306)
 - a. This representedOrganization **SHALL** contain exactly one [1..1] **addr** (CONF:8309)
 - b. This representedOrganization **SHOULD** contain zero or more [0..*] **id** (CONF:8307)
 - c. This representedOrganization **MAY** contain zero or more [0..*] **name** (CONF:8308)
 - d. This representedOrganization **SHALL** contain exactly one [1..1] **telecom** (CONF:8310)
10. **MAY** contain zero or more [0..*] **participant** (CONF:8311, CONF:8312, CONF:15599)
 - a. Contains exactly one [1..1] [Service Delivery Location](#) (templateId: 2.16.840.1.113883.10.20.22.4.32)
11. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:8325)
 - a. Contains **@typeCode**="SUBJ" *SUBJ*
 - b. Contains exactly one [1..1] [Instructions](#) (templateId: 2.16.840.1.113883.10.20.22.4.20)
12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:8328)
 - a. Contains **@typeCode**="RSON" *RSON*
 - b. Contains exactly one [1..1] [Indication](#) (templateId: 2.16.840.1.113883.10.20.22.4.19)
13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:8329, CONF:8330, CONF:15602)
 - a. Contains **@typeCode**="COMP" *COMP*
 - b. Contains exactly one [1..1] [Medication Activity](#) (templateId: 2.16.840.1.113883.10.20.22.4.16)
14. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:8314)
 - a. Such entryRelationships **SHALL** contain exactly one [1..1] **@inversionInd**="true" (CONF:8316)
 - b. Such entryRelationships **SHALL** contain exactly one [1..1] **@typeCode**="COMP" (CONF:8315)
 - c. Such entryRelationships **SHALL** contain exactly one [1..1] **encounter** (CONF:8317)
 - a. This encounter **SHALL** contain exactly one [1..1] **@classCode**="ENC" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8318)
 - b. This encounter **SHALL** contain exactly one [1..1] **id** (CONF:8320)
 - c. This encounter **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:8319)

- d. This encounter **MAY** satisfy: Set the encounter ID to the ID of an encounter in another section to signify they are the same encounter. (CONF:16849)
- 15. code in a procedure activity 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:19190)
- 16. code **SHOULD** contain zero or one [0..1] originalText (CONF:15596)
- 17. originalText, if present, **SHOULD** contain zero or one [0..1] reference (CONF:15596)
- 18. reference, if present, **MAY** contain zero or one [0..1] @value (CONF:15597)
- 19. 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:15598)
- 20. entryRelationship with target class encounter **SHALL** contain exactly one [1..1] @inversionInd="true" (CONF:8316)
- 21. participant with target class Service Delivery Location **SHALL** contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: 2.16.840.1.113883.5.1002 HL7ActRelationshipType) STATIC (CONF:8312)
- 22. entryRelationship with target class Instructions **SHALL** contain exactly one [1..1] @inversionInd="true" (CONF:8324)

Procedure Activity Act example

```
<act xmlns="urn:hl7-org:v3" classCode="ACT">
  <templateId root="2.16.840.1.113883.10.20.22.4.12"/>
  <id root="MDHT" extension="1057967124"/>
  <code code="659860115"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
  <performer>
    <assignedEntity>
      <id root="MDHT" extension="1376457828"/>
      <addr/>
      <telecom/>
      <representedOrganization/>
    </assignedEntity>
  </performer>
  <entryRelationship typeCode="COMP" inversionInd="true">
    <encounter classCode="ENC" moodCode="EVN">
      <id root="MDHT" extension="1347707056"/>
    </encounter>
  </entryRelationship>
  <entryRelationship>
    <act classCode="ACT" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
      <id root="MDHT" extension="804396866"/>
      <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <priorityCode code="1196253167"/>
    </act>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
      <id root="MDHT" extension="1858714731"/>
      <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
      <statusCode code="completed"/>
    </observation>
  </entryRelationship>
</act>
```

```

    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <priorityCode code="895972213"/>
  </observation>
</entryRelationship>
<entryRelationship>
  <substanceAdministration classCode="SBADM">
    <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
    <id root="MDHT" extension="1744277839"/>
    <code code="72748468"/>
    <effectiveTime value="20140803"/>
    <priorityCode code="1344069777"/>
    <routeCode codeSystem="2.16.840.1.113883.3.26.1.1" codeSystemName="NCI
Thesaurus"/>
    <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <consumable>
      <manufacturedProduct/>
    </consumable>
    <performer/>
  </entryRelationship>
  <supply classCode="SPLY" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
    <id root="MDHT" extension="1541785632"/>
    <code code="960673694"/>
    <effectiveTime value="20140803"/>
    <priorityCode code="118570744"/>
    <author/>
  </entryRelationship>
    <act classCode="ACT" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
      <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
      <statusCode code="completed"/>
    </act>
  </entryRelationship>
</supply>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
    <id root="MDHT" extension="277668520"/>
    <code code="565857538"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <priorityCode code="280673979"/>
  </entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.8"/>
      <code code="SEV" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Severity observation"/>
      <statusCode code="completed"/>
    </observation>
  </entryRelationship>
</entryRelationship>
  <procedure classCode="PROC">
    <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
    <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>

```

```

        <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    </procedure>
</entryRelationship>
<entryRelationship>
    <substanceAdministration classCode="SBADM">
        <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
        <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
        <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    </substanceAdministration>
</entryRelationship>
</observation>
</entryRelationship>
<entryRelationship>
    <act classCode="ACT" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
        <id root="MDHT" extension="1173212204"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
        </effectiveTime>
        <priorityCode code="343519865"/>
    </act>
</entryRelationship>
<entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
        <id root="MDHT" extension="2012301914"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
        </effectiveTime>
        <priorityCode code="32464054"/>
    </observation>
</entryRelationship>
<entryRelationship>
    <supply classCode="SPLY" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.18"/>
        <id root="MDHT" extension="808653771"/>
        <code code="640889520"/>
        <effectiveTime value="20140803"/>
        <priorityCode code="821194935"/>
        <performer/>
    </entryRelationship>
    <supply classCode="SPLY" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
    </supply>
</entryRelationship>
</supply>
</entryRelationship>
<precondition>
    <criteria/>
</precondition>
</substanceAdministration>
</entryRelationship>

```

</act>

Procedure Activity Observation

[Observation: templateId 2.16.840.1.113883.10.20.22.4.13]

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 clinical statement 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.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:10520) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.13"
2. **SHALL** contain exactly one [1..1] **@classCode**= "OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8282)
3. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [MoodCodeEvnInt](#) 2.16.840.1.113883.11.20.9.18 **STATIC** 2011-04-03 (CONF:8237)
4. **SHALL** contain at least one [1..*] **id** (CONF:8239)
5. **SHALL** contain exactly one [1..1] **code** (CONF:8240)
6. **SHALL** contain exactly one [1..1] **statusCode**, which **SHALL** be selected from ValueSet [ProcedureActStatusCode](#) 2.16.840.1.113883.11.20.9.22 **DYNAMIC** (CONF:8245)
7. **SHALL** contain exactly one [1..1] **value** (CONF:16846)
8. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:8246)
9. **MAY** contain zero or one [0..1] **priorityCode**, which **SHALL** be selected from ValueSet [ActPriority](#) 2.16.840.1.113883.1.11.16866 **STATIC** (CONF:8247)
10. **MAY** contain zero or one [0..1] **methodCode** (CONF:8248)
11. **SHOULD** contain zero or more [0..*] **targetSiteCode** (CONF:8250), which **SHALL** be selected from ValueSet [Body Site Value Set](#) 2.16.840.1.113883.3.88.12.3221.8.9 **STATIC** 2 (CONF:10121)
12. **SHOULD** contain zero or more [0..*] **performer** (CONF:8251)
 - a. Such performers **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:8252)
 - a. This assignedEntity **SHALL** contain exactly one [1..1] **addr** (CONF:8254)
 - b. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:8253)
 - c. This assignedEntity **SHALL** contain exactly one [1..1] **telecom** (CONF:8255)
 - d. This assignedEntity **SHOULD** contain zero or one [0..1] **representedOrganization** (CONF:8256)
 - a. This representedOrganization **SHALL** contain exactly one [1..1] **addr** (CONF:8259)
 - b. This representedOrganization **SHOULD** contain zero or more [0..*] **id** (CONF:8257)
 - c. This representedOrganization **MAY** contain zero or more [0..*] **name** (CONF:8258)
 - d. This representedOrganization **SHALL** contain exactly one [1..1] **telecom** (CONF:8260)
13. **MAY** contain zero or more [0..*] **participant** (CONF:8261, CONF:8262, CONF:15904)
 - a. Contains exactly one [1..1] [Service Delivery Location](#) (templateId: 2.16.840.1.113883.10.20.22.4.32)
14. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:8272, CONF:8273, CONF:15905)
 - a. Contains **@typeCode**="SUBJ" *SUBJ*
 - b. Contains exactly one [1..1] [Instructions](#) (templateId: 2.16.840.1.113883.10.20.22.4.20)
15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:8276, CONF:8277, CONF:15906)
 - a. Contains **@typeCode**="RSON" *RSON*

- b. Contains exactly one [1..1] *Indication* (templateId: 2.16.840.1.113883.10.20.22.4.19)
- 16. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:8279, CONF:8280, CONF:15907)
 - a. Contains **@typeCode="COMP"** *COMP*
 - b. Contains exactly one [1..1] *Medication Activity* (templateId: 2.16.840.1.113883.10.20.22.4.16)
- 17. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:8264)
 - a. Such entryRelationships **SHALL** contain exactly one [1..1] **@inversionInd="true"** (CONF:8266)
 - b. Such entryRelationships **SHALL** contain exactly one [1..1] **@typeCode="COMP"** (CONF:8265)
 - c. Such entryRelationships **SHALL** contain exactly one [1..1] **encounter** (CONF:8267)
 - a. This encounter **SHALL** contain exactly one [1..1] **@classCode="ENC"** (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8268)
 - b. This encounter **SHALL** contain exactly one [1..1] **id** (CONF:8270)
 - c. This encounter **SHALL** contain exactly one [1..1] **@moodCode="EVN"** *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:8269)
 - d. This encounter **MAY** satisfy: Set the encounter ID to the ID of an encounter in another section to signify they are the same encounter. (CONF:16847)
- 18. **@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), ICD10 PCS (CodeSystem: 2.16.840.1.113883.6.4) (CONF:19202)
- 19. **code** **SHOULD** contain zero or one [0..1] **originalText** (CONF:8242)
- 20. **originalText**, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:15901)
- 21. **reference**, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:15902)
- 22. **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:15903)
- 23. **methodCode** **SHALL NOT** conflict with the method inherent in Procedure / code (CONF:8249)
- 24. **entryRelationship** with target class encounter **SHALL** contain exactly one [1..1] **@inversionInd="true"** (CONF:8266)
- 25. **participant** with target class Service Delivery Location **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: 2.16.840.1.113883.5.1002 HL7ActRelationshipType) STATIC (CONF:8262)
- 26. **entryRelationship** with target class Instructions **SHALL** contain exactly one [1..1] **@inversionInd="true"** (CONF:8274)

Procedure Activity Observation example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3" classCode="OBS">
  <templateId root="2.16.840.1.113883.10.20.22.4.13"/>
  <id root="MDHT" extension="849135104"/>
  <code code="2024439190"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
  <methodCode code="667139134"/>
  <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
  <performer>
    <assignedEntity>
      <id root="MDHT" extension="1385389472"/>
      <addr/>
      <telecom/>
      <representedOrganization/>
    </assignedEntity>
  </performer>
```

```

<entryRelationship typeCode="COMP" inversionInd="true">
  <encounter classCode="ENC" moodCode="EVN">
    <id root="MDHT" extension="1258720456"/>
  </encounter>
</entryRelationship>
<entryRelationship>
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
    <id root="MDHT" extension="471519478"/>
    <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <priorityCode code="799467672"/>
  </act>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
    <id root="MDHT" extension="2092167323"/>
    <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <priorityCode code="1797373143"/>
    <value xsi:type="CD" code="1215424237"/>
    <methodCode code="1015888762"/>
    <targetSiteCode code="1887177358"/>
  </observation>
</entryRelationship>
<entryRelationship>
  <substanceAdministration classCode="SBADM">
    <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
    <id root="MDHT" extension="1630920501"/>
    <code code="1083861193"/>
    <effectiveTime value="20140803"/>
    <priorityCode code="305227671"/>
    <routeCode codeSystem="2.16.840.1.113883.3.26.1.1" codeSystemName="NCI
Thesaurus"/>
    <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <consumable>
      <manufacturedProduct/>
    </consumable>
    <performer/>
  </substanceAdministration>
</entryRelationship>
<entryRelationship>
  <supply classCode="SPLY" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
    <id root="MDHT" extension="1421551438"/>
    <code code="1262384462"/>
    <effectiveTime value="20140803"/>
    <priorityCode code="1402786404"/>
    <author/>
  </supply>
  <entryRelationship>
    <act classCode="ACT" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
      <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
      <statusCode code="completed"/>
    </act>
  </entryRelationship>
</entryRelationship>

```

```

    </entryRelationship>
  </supply>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
    <id root="MDHT" extension="2061274188"/>
    <code code="1316863435"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <priorityCode code="616876437"/>
    <value xsi:type="CD" code="1307042146"/>
    <methodCode code="1923987542"/>
    <targetSiteCode code="855020453"/>
  </entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.8"/>
    <code code="SEV" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Severity observation"/>
    <statusCode code="completed"/>
  </observation>
</entryRelationship>
<entryRelationship>
  <procedure classCode="PROC">
    <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
    <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
    <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
  </procedure>
</entryRelationship>
<entryRelationship>
  <substanceAdministration classCode="SBADM">
    <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
    <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
    <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
  </substanceAdministration>
</entryRelationship>
</observation>
</entryRelationship>
<entryRelationship>
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
    <id root="MDHT" extension="1583925720"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <priorityCode code="1516741556"/>
  </act>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
    <id root="MDHT" extension="1114234413"/>

```

```

        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
        </effectiveTime>
        <priorityCode code="7080163"/>
        <value xsi:type="CD" code="531824933"/>
        <methodCode code="628326490"/>
        <targetSiteCode code="1042503979"/>
    </observation>
</entryRelationship>
<entryRelationship>
    <supply classCode="SPLY" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.18"/>
        <id root="MDHT" extension="1138606205"/>
        <code code="873208327"/>
        <effectiveTime value="20140803"/>
        <priorityCode code="2003700051"/>
        <performer/>
        <entryRelationship>
            <supply classCode="SPLY" moodCode="INT">
                <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
            </supply>
        </entryRelationship>
    </supply>
</entryRelationship>
<precondition>
    <criteria/>
</precondition>
</substanceAdministration>
</entryRelationship>
</observation>

```

Procedure Activity Procedure

[Procedure: templateId 2.16.840.1.113883.10.20.22.4.14]

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 clinical statement 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.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:7654) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.14"
2. **SHALL** contain exactly one [1..1] **@classCode**="PROC" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7652)
3. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [MoodCodeEvnInt](#) 2.16.840.1.113883.11.20.9.18 **STATIC** 2011-04-03 (CONF:7653)
4. **SHALL** contain at least one [1..*] **id** (CONF:7655)
5. **SHALL** contain exactly one [1..1] **code** (CONF:7656)
6. **SHALL** contain exactly one [1..1] **statusCode**, which **SHALL** be selected from ValueSet [ProcedureActStatusCode](#) 2.16.840.1.113883.11.20.9.22 **DYNAMIC** (CONF:7661)
7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:7662)
8. **MAY** contain zero or more [0..*] **specimen** (CONF:7697)

This specimen is for representing specimens obtained from a procedure.

- a. Such specimens **SHALL** contain exactly one [1..1] **specimenRole** (CONF:7704)
- b. Such specimens **specimenRole** **SHOULD** contain zero or more [0..*] **id** (CONF:7716)
- c. Such specimens 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:7717)
9. **MAY** contain zero or more [0..*] **participant** (CONF:7765, CONF:7752, CONF:15912)
 - a. Contains exactly one [1..1] *Service Delivery Location* (templateId: 2.16.840.1.113883.10.20.22.4.32)
10. **SHOULD** contain zero or more [0..*] **performer** (CONF:7718)
 - a. Such performers **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:7720)
 - a. This assignedEntity **SHALL** contain exactly one [1..1] **addr** (CONF:7731)
 - b. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:7722)
 - c. This assignedEntity **SHALL** contain exactly one [1..1] **telecom** (CONF:7732)
 - d. This assignedEntity **SHOULD** contain zero or one [0..1] **representedOrganization** (CONF:7733)
 - a. This representedOrganization **SHALL** contain exactly one [1..1] **addr** (CONF:7736)
 - b. This representedOrganization **SHOULD** contain zero or more [0..*] **id** (CONF:7734)
 - c. This representedOrganization **MAY** contain zero or more [0..*] **name** (CONF:7735)
 - d. This representedOrganization **SHALL** contain exactly one [1..1] **telecom** (CONF:7737)
11. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:7886, CONF:7887, CONF:15915)
 - a. Contains **@typeCode="COMP"** *COMP*
 - b. Contains exactly one [1..1] *Medication Activity* (templateId: 2.16.840.1.113883.10.20.22.4.16)
12. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:7775, CONF:7776, CONF:15913)
 - a. Contains **@typeCode="SUBJ"** *SUBJ*
 - b. Contains exactly one [1..1] *Instructions* (templateId: 2.16.840.1.113883.10.20.22.4.20)
13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:7779, CONF:7780, CONF:15914)
 - a. Contains **@typeCode="RSON"** *RSON*
 - b. Contains exactly one [1..1] *Indication* (templateId: 2.16.840.1.113883.10.20.22.4.19)
14. **MAY** contain zero or one [0..1] **priorityCode**, which **SHALL** be selected from ValueSet *ActPriority* 2.16.840.1.113883.1.11.16866 **STATIC** (CONF:7668)
15. **MAY** contain zero or one [0..1] **methodCode** (CONF:7670)
16. **SHOULD** contain zero or more [0..*] **targetSiteCode** (CONF:7683), which **SHALL** be selected from ValueSet *Body Site Value Set* 2.16.840.1.113883.3.88.12.3221.8.9 **STATIC** 2 (CONF:16082)
17. **MAY** contain zero or more [0..*] **participant** (CONF:7751, CONF:7752, CONF:15911)
 - a. Contains exactly one [1..1] *Product Instance* (templateId: 2.16.840.1.113883.10.20.22.4.37)
18. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:7768)
 - a. Such entryRelationships **SHALL** contain exactly one [1..1] **@inversionInd="true"** (CONF:8009)
 - b. Such entryRelationships **SHALL** contain exactly one [1..1] **@typeCode="COMP"** (CONF:7769)
 - c. Such entryRelationships **SHALL** contain exactly one [1..1] **encounter** (CONF:7770)
 - a. This encounter **SHALL** contain exactly one [1..1] **@classCode="ENC"** (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7771)
 - b. This encounter **SHALL** contain exactly one [1..1] **id** (CONF:7773)
 - c. This encounter **SHALL** contain exactly one [1..1] **@moodCode="EVN"** *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:7772)

- d. This encounter **MAY** satisfy: Set the encounter ID to the ID of an encounter in another section to signify they are the same encounter. (CONF:16843)
- 19. code in a procedure activity **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:19207)
- 20. code **SHOULD** contain zero or one [0..1] originalText (CONF:7658)
- 21. originalText, if present, **SHOULD** contain zero or one [0..1] reference (CONF:15908)
- 22. reference, if present, **SHOULD** contain zero or one [0..1] @value (CONF:15909)
- 23. 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:15910)
- 24. methodCode **SHALL NOT** conflict with the method inherent in Procedure / code (CONF:7890)
- 25. entryRelationship with target entry encounter **SHALL** contain exactly one [1..1] @inversionInd="true" (CONF:8009)
- 26. participant with target entry Product Instance **SHALL** contain exactly one [1..1] @typeCode="DEV" Device (CodeSystem: 2.16.840.1.113883.5.1002 HL7ActRelationshipType) STATIC (CONF:7752)
- 27. participant with target entry Service Delivery Location **SHALL** contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: 2.16.840.1.113883.5.1002 HL7ActRelationshipType) STATIC (CONF:7766)
- 28. entryRelationship with target entry Instructions **SHALL** contain exactly one [1..1] @inversionInd="true" (CONF:7777)

Procedure Activity Procedure example

```
<procedure xmlns="urn:hl7-org:v3" classCode="PROC">
  <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
  <id root="MDHT" extension="1978037557"/>
  <code code="1350060695"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
  <methodCode code="1086823510"/>
  <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
  <specimen>
    <specimenRole/>
  </specimen>
  <performer>
    <assignedEntity>
      <id root="MDHT" extension="94424564"/>
      <addr/>
      <telecom/>
      <representedOrganization/>
    </assignedEntity>
  </performer>
  <entryRelationship typeCode="COMP" inversionInd="true">
    <encounter classCode="ENC" moodCode="EVN">
      <id root="MDHT" extension="600043168"/>
    </encounter>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
      <id root="MDHT" extension="458335777"/>
      <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
</procedure>
```

```

    <high value="2014"/>
  </effectiveTime>
  <priorityCode code="1189643836"/>
  <methodCode code="8394561"/>
  <targetSiteCode code="258059119"/>
</observation>
</entryRelationship>
<entryRelationship>
  <substanceAdministration classCode="SBADM">
    <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
    <id root="MDHT" extension="973972427"/>
    <code code="334026993"/>
    <effectiveTime value="20140803"/>
    <priorityCode code="986112017"/>
    <routeCode codeSystem="2.16.840.1.113883.3.26.1.1" codeSystemName="NCI
Thesaurus"/>
    <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <consumable>
      <manufacturedProduct/>
    </consumable>
    <performer/>
  </entryRelationship>
  <supply classCode="SPLY" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
    <id root="MDHT" extension="917655035"/>
    <code code="1548744087"/>
    <effectiveTime value="20140803"/>
    <priorityCode code="1835425413"/>
    <author/>
  </entryRelationship>
    <act classCode="ACT" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
      <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
      <statusCode code="completed"/>
    </act>
  </entryRelationship>
</supply>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
    <id root="MDHT" extension="860322312"/>
    <code code="906645692"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <priorityCode code="1168799356"/>
    <methodCode code="222609934"/>
    <targetSiteCode code="334719013"/>
  </entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.8"/>
      <code code="SEV" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Severity observation"/>
      <statusCode code="completed"/>
    </observation>
  </entryRelationship>
</entryRelationship>
  <procedure classCode="PROC">
    <templateId root="2.16.840.1.113883.10.20.22.4.14"/>

```

```

        <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
        <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    </procedure>
</entryRelationship>
<entryRelationship>
    <substanceAdministration classCode="SBADM">
        <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
        <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
        <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    </substanceAdministration>
</entryRelationship>
</observation>
</entryRelationship>
<entryRelationship>
    <act classCode="ACT" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
        <id root="MDHT" extension="656359512"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
        </effectiveTime>
        <priorityCode code="1712360561"/>
    </act>
</entryRelationship>
<entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
        <id root="MDHT" extension="1958501943"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <statusCode code="completed"/>
        <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
        </effectiveTime>
        <priorityCode code="14000567"/>
        <methodCode code="666560838"/>
        <targetSiteCode code="1379520814"/>
    </observation>
</entryRelationship>
<entryRelationship>
    <supply classCode="SPLY" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.18"/>
        <id root="MDHT" extension="1503040647"/>
        <code code="522394851"/>
        <effectiveTime value="20140803"/>
        <priorityCode code="1161673842"/>
        <performer/>
    </supply>
    <entryRelationship>
        <supply classCode="SPLY" moodCode="INT">
            <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
        </supply>
    </entryRelationship>
</supply>
</entryRelationship>
<precondition>
    <criteria/>

```



```

    </precondition>
  </substanceAdministration>
</entryRelationship>
<entryRelationship>
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
    <id root="MDHT" extension="1960930585"/>
    <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <priorityCode code="780077691"/>
  </act>
</entryRelationship>
</procedure>

```

Procedure Context

[Act: templateId 2.16.840.1.113883.10.20.6.2.5]

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 minimal invasive imaging services, whereas the Act entry shall be used for diagnostic imaging services.

1. **SHALL** contain exactly one [1..1] templateId (CONF:9200, CONF:10530) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.6.2.5"
2. **SHALL** contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:Pending)
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:Pending)
4. **SHALL** contain exactly one [1..1] code (CONF:9201)
5. **SHOULD** contain zero or one [0..1] effectiveTime (CONF:9203)
 - a. effectiveTime, if present, **SHALL** contain exactly one [1..1] @value (CONF:17173)

Procedure Context example

```

<act xmlns="urn:hl7-org:v3" classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.6.2.5"/>
  <id root="MDHT" extension="56168467"/>
  <code code="1127710990"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
</act>

```

Procedure Encounter

[Encounter: templateId null]

1. **SHALL** contain exactly one [1..1] **@classCode**="ENC" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7771)
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:7772)
3. **SHALL** contain exactly one [1..1] **id** (CONF:7773)
4. **MAY** satisfy: Set the encounter ID to the ID of an encounter in another section to signify they are the same encounter. (CONF:7774)

Procedure Encounter example

```
<?xml version="1.0" encoding="UTF-8"?>
<encounter xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd"
  classCode="ENC" moodCode="EVN">
  <id root="167950709"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
</encounter>
```

Purpose of Reference Observation

[Observation: templateId 2.16.840.1.113883.10.20.6.2.9]

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.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:9266, CONF:10531) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.6.2.9"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:9264)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:9265)
4. **SHALL** contain exactly one [1..1] **code** (CONF:9267)
5. **SHOULD** contain zero or more [0..*] **value** with **@xsi:type**="CD", which **SHOULD** be selected from ValueSet [DICOMPurposeOfReference](#) 2.16.840.1.113883.11.20.9.28 **DYNAMIC** (CONF:9273)
 - *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 will need to be aware of this difference and apply appropriate transformations*
6. **code SHOULD** contain zero or one [0..1] **code**="ASSERTION" (CodeSystem: ActCode 2.16.840.1.113883.5.4) (CONF:9268)

Purpose of Reference Observation example

```
<observation xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.6.2.9"/>
  <id root="MDHT" extension="104434777"/>
  <code code="1498894494"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
</observation>
```

```
</effectiveTime>
</observation>
```

Quantity Measurement Observation

[Observation: templateId 2.16.840.1.113883.10.20.6.2.14]

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.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:9319, CONF:10532) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.6.2.14"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:9317)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:9318)
4. **SHALL** contain exactly one [1..1] **code** (CONF:9320)
 - a. code **SHOULD** contain zero or one [0..1] code, which **SHALL** be selected from ValueSet *DIRQuantityMeasurementTypeCodes* 2.16.840.1.113883.11.20.9.29 DYNAMIC (CONF:9322)
 - a. code **SHOULD** contain zero or one [0..1] code, which **SHALL** be selected from ValueSet *DICOMQuantityMeasurementTypeCodes* 2.16.840.1.113883.11.20.9.30 DYNAMIC (CONF:9323)
 - a. **SHOULD** satisfy: 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) (CONF:9330).
5. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:9326)
6. **SHALL** contain exactly one [1..1] **value** with @xsi:type="PQ" (CONF:9324, CONF:932)
7. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:9327, CONF:9328, CONF:9329)
 - a. Contains **@typeCode**="SPRT" *SPRT*
 - b. Contains exactly one [1..1] *SOP Instance Observation* (templateId: 2.16.840.1.113883.10.20.6.2.8)

Quantity Measurement Observation example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.6.2.14"/>
  <id root="MDHT" extension="725957400"/>
  <code code="1092372830"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <value xsi:type="PQ"/>
  <entryRelationship>
    <observation classCode="DGIMG" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.6.2.8"/>
      <id root="MDHT" extension="755898595"/>
      <code codeSystem="1.2.840.10008.2.6.1" codeSystemName="DCMUID"/>
      <effectiveTime>
```

```
<low value="2014"/>
<high value="2014"/>
</effectiveTime>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.6.2.9"/>
    <id root="MDHT" extension="617766220"/>
    <code code="1622082256"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <value xsi:type="CD" code="657750855"/>
  </observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="ROIBND" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.6.2.10"/>
    <id root="MDHT" extension="1140830878"/>
    <code code="121190" codeSystem="1.2.840.10008.2.16.4"
codeSystemName="DCM" displayName="Referenced Frames"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <entryRelationship>
      <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"
codeSystemName="DCM" displayName="Frames for Display"/>
      </observation>
    </entryRelationship>
  </observation>
</entryRelationship>
</observation>
</entryRelationship>
</observation>
```

Reaction Observation

[Observation: templateId 2.16.840.1.113883.10.20.22.4.9]

This clinical statement represents an undesired symptom, finding, etc., due to an administered or exposed substance. A reaction can be defined with respect to its severity, and can have been treated by one or more interventions.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:7323, CONF:10523) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.9"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7325)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:7326)
4. **SHALL** contain exactly one [1..1] **id** (CONF:7329)
5. **SHALL** contain exactly one [1..1] **code** (CONF:16851)
6. **SHOULD** contain zero or one [0..1] **text** (CONF:7330)
7. **SHALL** contain exactly one [1..1] **statusCode/@code**="completed" (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:7328)
8. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:7332)

9. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD", which **SHALL** be selected from ValueSet [Problem](#) 2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:7335)
10. **SHOULD** contain zero or one [0..1] **entryRelationship** (CONF:7580, CONF:7581, CONF:15922)
 - a. Contains @typeCode="SUBJ" *SUBJ*
 - b. Contains exactly one [1..1] [Severity Observation](#) (templateId: 2.16.840.1.113883.10.20.22.4.8)
11. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:7337, CONF:7338, CONF:15920)
 - *This procedure activity is intended to contain information about procedures that were performed in response to an allergy reaction (CONF:16853).*
 - a. Contains @typeCode="RSON" *RSON*
 - b. Contains exactly one [1..1] [Procedure Activity Procedure](#) (templateId: 2.16.840.1.113883.10.20.22.4.14)
12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:7340, CONF:7341, CONF:15921)
 - *This medication activity is intended to contain information about medications that were administered in response to an allergy reaction (CONF:16840)*
 - a. Contains @typeCode="RSON" *RSON*
 - b. Contains exactly one [1..1] [Medication Activity](#) (templateId: 2.16.840.1.113883.10.20.22.4.16)
13. **SHALL** satisfy: The value set for this code element has not been specified. Implementers are allowed to use any code system, such as SNOMED CT, a locally determined code, or a nullFlavor (CONF:16852)
14. text, if present, **SHOULD** contain zero or one [0..1] reference (CONF:15917)
15. reference, if present, **SHOULD** contain zero or one [0..1] @value (CONF:15918)
16. 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:15919)
17. effectiveTime, if present, **SHOULD** contain zero or one [0..1] low (CONF:7333)
18. effectiveTime, if present, **SHOULD** contain zero or one [0..1] high (CONF:7334)
19. entryRelationship with target entry Severity Observation **SHALL** contain exactly one [1..1] @inversionInd="true" TRUE (CONF:10375)
20. entryRelationship with target entry ProcedureActivityProcedure **SHALL** contain exactly one [1..1] @inversionInd="true" True (CONF:7343). (CONF:7343)
21. entryRelationship with target entry MedicationActivity **SHALL** contain exactly one [1..1] @inversionInd="true" True. (CONF:7344)

Reaction Observation example

```
<observation xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
  <id root="MDHT" extension="1931090481"/>
  <code code="1962374719"/>
  <text>Text Value</text>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.8"/>
      <id root="MDHT" extension="92564113"/>
      <code code="SEV" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Severity observation"/>
      <text>Text Value</text>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
</observation>
```

```

    </effectiveTime>
  </observation>
</entryRelationship>
<entryRelationship>
  <procedure classCode="PROC">
    <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
    <id root="MDHT" extension="1549728547"/>
    <code code="2033398774"/>
    <text>Text Value</text>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
    <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <specimen>
      <specimenRole/>
    </specimen>
    <performer>
      <assignedEntity/>
    </performer>
    <entryRelationship typeCode="COMP" inversionInd="true">
      <encounter classCode="ENC" moodCode="EVN"/>
    </entryRelationship>
  </entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
    <id root="MDHT" extension="1118268082"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
<entryRelationship>
  <substanceAdministration classCode="SBADM">
    <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
    <id root="MDHT" extension="1012019823"/>
    <code code="1526913108"/>
    <text>Text Value</text>
    <effectiveTime value="20140803"/>
    <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
    <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <consumable/>
    <performer/>
    <entryRelationship>
      <supply classCode="SPLY" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
      </supply>
    </entryRelationship>
  </entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
    <statusCode code="completed"/>
  </observation>
</entryRelationship>

```

```

    <entryRelationship>
      <act classCode="ACT" moodCode="INT">
        <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <statusCode code="completed"/>
      </act>
    </entryRelationship>
    <entryRelationship>
      <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
        <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        <statusCode code="completed"/>
      </observation>
    </entryRelationship>
    <entryRelationship>
      <supply classCode="SPLY" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.22.4.18"/>
      </supply>
    </entryRelationship>
    <precondition/>
  </substanceAdministration>
</entryRelationship>
<entryRelationship>
  <act classCode="ACT" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
    <id root="MDHT" extension="148195295"/>
    <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <text>Text Value</text>
    <statusCode code="completed"/>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </act>
</entryRelationship>
</procedure>
</entryRelationship>
<entryRelationship>
  <substanceAdministration classCode="SBADM">
    <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
    <id root="MDHT" extension="986797999"/>
    <code code="851216467"/>
    <text>Text Value</text>
    <effectiveTime value="20140803"/>
    <routeCode codeSystem="2.16.840.1.113883.3.26.1.1" codeSystemName="NCI
Thesaurus"/>
    <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
    <consumable>
      <manufacturedProduct/>
    </consumable>
    <performer/>
  <entryRelationship>
    <supply classCode="SPLY" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.17"/>
      <id root="MDHT" extension="2002340661"/>
      <code code="1425511935"/>
      <text>Text Value</text>
      <effectiveTime value="20140803"/>
      <author/>
    </entryRelationship>
  </substanceAdministration>
</entryRelationship>

```

```

        <act classCode="ACT" moodCode="INT">
          <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
          <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
          <statusCode code="completed"/>
        </act>
      </entryRelationship>
    </supply>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.9"/>
      <id root="MDHT" extension="99463147"/>
      <code code="693833670"/>
      <text>Text Value</text>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.22.4.8"/>
          <code code="SEV" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Severity observation"/>
          <statusCode code="completed"/>
        </observation>
      </entryRelationship>
      <entryRelationship>
        <procedure classCode="PROC">
          <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
          <priorityCode codeSystem="2.16.840.1.113883.5.7"
codeSystemName="ActPriority"/>
          <targetSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        </procedure>
      </entryRelationship>
      <entryRelationship>
        <substanceAdministration classCode="SBADM">
          <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
          <routeCode codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="NCI Thesaurus"/>
          <approachSiteCode codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
        </substanceAdministration>
      </entryRelationship>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <act classCode="ACT" moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.22.4.20"/>
      <id root="MDHT" extension="1142738219"/>
      <code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
      <text>Text Value</text>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </act>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">

```



```

<templateId root="2.16.840.1.113883.10.20.22.4.19"/>
<id root="MDHT" extension="470113971"/>
<code codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT"/>
<text>Text Value</text>
<statusCode code="completed"/>
<effectiveTime>
<low value="2014"/>
<high value="2014"/>
</effectiveTime>
</observation>
</entryRelationship>
<entryRelationship>
<supply classCode="SPLY" moodCode="EVN">
<templateId root="2.16.840.1.113883.10.20.22.4.18"/>
<id root="MDHT" extension="84793297"/>
<code code="495180577"/>
<text>Text Value</text>
<effectiveTime value="20140803"/>
<performer/>
<entryRelationship>
<supply classCode="SPLY" moodCode="INT">
<templateId root="2.16.840.1.113883.10.20.22.4.17"/>
</supply>
</entryRelationship>
</supply>
</entryRelationship>
<precondition>
<criteria/>
</precondition>
</substanceAdministration>
</entryRelationship>
</observation>

```

Referenced Frames Observation

[Observation: templateId 2.16.840.1.113883.10.20.6.2.10]

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.

1. **SHALL** contain exactly one [1..1] **templateId** () such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.6.2.10"
2. **SHALL** contain exactly one [1..1] **@classCode**="ROIBND" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:9276)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:9277)
4. **SHALL** contain exactly one [1..1] **code/@code**="121190" *Referenced Frames* (CodeSystem: 1.2.840.10008.2.16.4 DCM) (CONF:9278)
5. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:9279, CONF:9280, CONF:9281)
 - a. Contains **@typeCode**="COMP" *COMP*
 - b. Contains exactly one [1..1] *Boundary Observation* (templateId: 2.16.840.1.113883.10.20.6.2.11)

Referenced Frames Observation example

```

<observation xmlns="urn:hl7-org:v3" classCode="ROIBND" moodCode="EVN">
<templateId root="2.16.840.1.113883.10.20.6.2.10"/>

```

```
<id root="MDHT" extension="481138415" />
<code code="121190" codeSystem="1.2.840.10008.2.16.4" codeSystemName="DCM"
displayName="Referenced Frames" />
<effectiveTime>
  <low value="2014" />
  <high value="2014" />
</effectiveTime>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.6.2.11" />
    <id root="MDHT" extension="373648046" />
    <code code="113036" codeSystem="1.2.840.10008.2.16.4"
codeSystemName="DCM" displayName="Frames for Display" />
    <effectiveTime>
      <low value="2014" />
      <high value="2014" />
    </effectiveTime>
  </observation>
</entryRelationship>
</observation>
```

Result Observation

[Observation: templateId 2.16.840.1.113883.10.20.22.4.2]

This clinical statement represents details of a lab, radiology, or other study performed on a patient.

The result observation includes a statusCode to allow recording the status of an observation. If a Results Observation is not completed, the Result Organizer must include corresponding statusCode. "Pending" results (e.g., a test has been run but results have not been reported yet) should be represented as "active" ActStatus.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:9138) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.2"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7130)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:7131)
4. **SHALL** contain at least one [1..*] **id** (CONF:7137)
5. **SHALL** contain exactly one [1..1] **code** (CONF:7133)
6. **SHOULD** contain zero or one [0..1] **text** (CONF:7138)
 - a. text, if present, **SHOULD** contain zero or one [0..1] reference (CONF:15924)
 - a. reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:15925)
 - b. 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:15926)
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:7134), which **SHALL** be selected from ValueSet [Result Status](#) 2.16.840.1.113883.11.20.9.39 **STATIC** 2012-04-27 (CONF:14849)
8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:7140, CONF:7141)
 - *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)*
CONF:16838
9. **SHALL** contain exactly one [1..1] **value** (CONF:7143)
10. **SHOULD** contain zero or more [0..*] **interpretationCode** (CONF:7147)
11. **MAY** contain zero or one [0..1] **methodCode** (CONF:7148)

12. **MAY** contain zero or one [0..1] **targetSiteCode** with @xsi:type="CE" (CONF:7153)
13. The value for 'code' in a result observation **SHOULD** be selected from LOINC (codeSystem 2.16.840.1.113883.6.1) or SNOMED CT (codeSystem 2.16.840.1.113883.6.96) 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. Local and/or regional codes for laboratory results are allowed. The Local and/or regional codes **SHOULD** be sent in the translation element. (CONF:7166)
14. **SHOULD** contain zero or more [0..*] referenceRange. Such referenceRanges, if present, **SHALL** contain exactly one [1..1] observationRange. This observationRange **SHALL NOT** contain [0..0] code (CONF:7152)
15. **MAY** contain zero or one [0..1] author (CONF:7149)

Result Observation example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.2"/>
  <id root="MDHT" extension="783880020"/>
  <code code="296025256"/>
  <text>Text Value</text>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <interpretationCode code="1022609502"/>
  <methodCode code="1311600075"/>
  <targetSiteCode xsi:type="CE" code="966572378"/>
</observation>
```

Result Organizer

[Organizer: templateId 2.16.840.1.113883.10.20.22.4.1]

This clinical statement identifies set of result observations. It contains information applicable to all of the contained result observations. Result type codes categorize a result into one of several commonly accepted values (e.g., "Hematology", "Chemistry", "Nuclear Medicine"). These values are often implicit in the Organizer/code (e.g., an Organizer/code of "complete blood count" implies a ResultTypeCode of "Hematology"). This template requires Organizer/code to include a ResultTypeCode either directly or as a translation of a code from some other code system.

An appropriate nullFlavor can be used when the organizer/code or organizer/id is unknown.

If any Results Observation within the organizer has a statusCode of 'active', the Result Organizer must also have as statusCode of 'active'.

1. **SHALL** contain exactly one [1..1] templateId (CONF:7126, CONF:9134) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.1"
2. **SHALL** contain exactly one [1..1] @classCode (CONF:7121)
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:7122)
4. **SHALL** contain at least one [1..*] id (CONF:7127)
5. **SHALL** contain exactly one [1..1] statusCode (CONF:7123), which **SHALL** be selected from ValueSet [Result Status](#) 2.16.840.1.113883.11.20.9.39 **STATIC** 2012-04-27 (CONF:14848)
6. **SHALL** contain at least one [1..*] component (CONF:7124, CONF:14850)
 - a. Contains exactly one [1..1] [Result Observation](#) (templateId: 2.16.840.1.113883.10.20.22.4.2)
7. **SHALL** contain exactly one [1..1] code (CONF:7128)

8. The value for 'code' in a result organizer **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). 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. Local and/or regional codes for laboratory results **SHOULD** also be allowed. (CONF:7164)
9. **SHOULD** contain zero or one [0..1] @classCode="CLUSTER" Cluster (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) OR **SHOULD** contain zero or one [0..1] @classCode="BATTERY" Battery (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7165)

Result Organizer example

```
<organizer xmlns="urn:hl7-org:v3" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.1" />
  <id root="MDHT" extension="138223748" />
  <code code="45774418" />
  <statusCode code="completed" />
  <effectiveTime>
    <low value="2014" />
    <high value="2014" />
  </effectiveTime>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.2" />
      <id root="MDHT" extension="608663293" />
      <code code="1056367464" />
      <statusCode code="completed" />
      <effectiveTime>
        <low value="2014" />
        <high value="2014" />
      </effectiveTime>
    </observation>
  </component>
</organizer>
```

SOP Instance Observation

[Observation: templateId 2.16.840.1.113883.10.20.6.2.8]

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.

1. **SHALL** contain exactly one [1..1] templateId () such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.6.2.8"
2. **SHALL** contain exactly one [1..1] @classCode="DGIMG" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:9240)
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHOULD** contain zero or one [0..1] effectiveTime (CONF:9250)
5. **SHALL** contain at least one [1..*] id (CONF:9242)
 - The @root contains an OID representing the DICOM SOP Instance UID
6. **SHOULD** contain zero or one [0..1] text (CONF:9246)
7. **MAY** contain zero or more [0..*] entryRelationship (CONF:9254, CONF:9255, CONF:9256)
 - a. Contains @typeCode="SUBJ" SUBJ

- b. Contains exactly one [1..1] [SOP Instance Observation](#) (templateId: 2.16.840.1.113883.10.20.6.2.8)
- 8. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:9257, CONF:9258, CONF:15935)
 - a. Contains **@typeCode="RSON"** *RSON*
 - b. Contains exactly one [1..1] [Purpose of Reference Observation](#) (templateId: 2.16.840.1.113883.10.20.6.2.9)
- 9. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:9260, CONF:9261, CONF:15936)
 - *This entryRelationship SHALL be present if the referenced DICOM object is a multiframe object and the reference does not apply to all frames*
 - a. Contains **@typeCode="COMP"** *COMP*
 - b. Contains exactly one [1..1] [Referenced Frames Observation](#) (templateId: 2.16.840.1.113883.10.20.6.2.10)
- 10. **SHALL** contain exactly one [1..1] **code** (CONF:9244), which **SHALL** be selected from (CodeSystem: 1.2.840.10008.2.6.1 DCMUID)
- 11. The effectiveTime, if present, **SHALL** contain exactly one [1..1] @value (CONF:9251)
- 12. The effectiveTime, if present, **SHALL NOT** contain [0..0] low (CONF:9252)
- 13. The effectiveTime, if present, **SHALL NOT** contain [0..0] high (CONF:9253)
- 14. code **SHALL** contain codeSystem 1.2.840.10008.2.6.1 DCMUID and @code is an OID for a valid SOP class name UID (CONF:9245)
- 15. text, if present, **SHALL** contain exactly one [1..1] @mediaType="application/dicom" (CONF:9247)
- 16. The text, if present, **SHALL** contain exactly one [1..1] reference (CONF:9248)
- 17. text/reference **SHALL** contain a @value which contains a WADO reference as a URI (CONF:9249)

SOP Instance Observation example

```
<observation xmlns="urn:hl7-org:v3" classCode="DGIMG" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.6.2.8"/>
  <id root="MDHT" extension="242435028"/>
  <code codeSystem="1.2.840.10008.2.6.1" codeSystemName="DCMUID"/>
  <text>Text Value</text>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.6.2.9"/>
      <id root="MDHT" extension="1538205551"/>
      <code code="1331499116"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="ROIBND" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.6.2.10"/>
      <id root="MDHT" extension="1345445786"/>
      <code code="121190" codeSystem="1.2.840.10008.2.16.4"
codeSystemName="DCM" displayName="Referenced Frames"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
</observation>
```

```
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.6.2.11"/>
    <id root="MDHT" extension="541286533"/>
    <code code="113036" codeSystem="1.2.840.10008.2.16.4"
codeSystemName="DCM" displayName="Frames for Display"/>
    <text>Text Value</text>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
  </observation>
</entryRelationship>
</observation>
</entryRelationship>
</observation>
```

Series Act

[Act: templateId 2.16.840.1.113883.10.20.22.4.63]

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.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:10918, CONF:10919) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.63"
2. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:9222)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:9223)
4. **SHALL** contain exactly one [1..1] **code/@code**="113015" (CodeSystem: 1.2.840.10008.2.16.4 DCM) (CONF:9228)
5. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:9235)
 - If present, the effectiveTime contains the time the series was started
6. **SHALL** contain at least one [1..*] **id** (CONF:9224)
7. **MAY** contain zero or one [0..1] **text** (CONF:9233)
 - If present, the text element contains the description of the series
8. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:9237, CONF:9238, CONF:15927)
 - a. Contains **@typeCode**="COMP" COMP
 - b. Contains exactly one [1..1] [SOP Instance Observation](#) (templateId: 2.16.840.1.113883.10.20.6.2.8)
9. **ids SHALL** contain exactly one [1..1] **@root** (CONF:9225)
10. **ids SHALL NOT** contain [0..0] **@extension** (CONF:9226)
11. **code SHALL** contain exactly one [1..1] **qualifier** (CONF:9229)
12. This **qualifier SHALL** contain exactly one [1..1] **name**="121139" Modality (CodeSystem: DCM 1.2.840.10008.2.16.4) (CONF:9230)
13. This **qualifier SHALL** contain exactly one [1..1] **value** (CONF:9231)
14. **SHALL** satisfy: The value element code contains a modality code and codeSystem is 1.2.840.10008.2.16.4 (CONF:9232)

Series Act example

```
<act xmlns="urn:hl7-org:v3" classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.63"/>
  <id root="MDHT" extension="2053369481"/>
  <code code="113015" codeSystem="1.2.840.10008.2.16.4"
codeSystemName="DCM"/>
  <text>Text Value</text>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <entryRelationship>
    <observation classCode="DGIMG" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.6.2.8"/>
      <id root="MDHT" extension="282755285"/>
      <code codeSystem="1.2.840.10008.2.6.1" codeSystemName="DCMUID"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.6.2.9"/>
          <id root="MDHT" extension="869858421"/>
          <code code="1012884057"/>
          <text>Text Value</text>
          <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
          </effectiveTime>
        </observation>
      </entryRelationship>
    </entryRelationship>
    <entryRelationship>
      <observation classCode="ROIBND" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.6.2.10"/>
        <id root="MDHT" extension="1908202502"/>
        <code code="121190" codeSystem="1.2.840.10008.2.16.4"
codeSystemName="DCM" displayName="Referenced Frames"/>
        <text>Text Value</text>
        <effectiveTime>
          <low value="2014"/>
          <high value="2014"/>
        </effectiveTime>
      </entryRelationship>
      <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"
codeSystemName="DCM" displayName="Frames for Display"/>
      </observation>
    </entryRelationship>
  </entryRelationship>
</act>
```


Severity Observation

[Observation: templateId 2.16.840.1.113883.10.20.22.4.8]

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 Observation, Reaction Observation or both. 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

1. **SHALL** contain exactly one [1..1] templateId (CONF:7347, CONF:10525) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.8"
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7345)
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:7346)
4. **SHALL** contain exactly one [1..1] code/@code="SEV" Severity observation (CodeSystem: 2.16.840.1.113883.5.4 HL7ActCode) (CONF:7349)
5. **SHOULD** contain zero or one [0..1] text (CONF:7350)
6. **SHALL** contain exactly one [1..1] statusCode/@code="completed" (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:7352)
7. **SHALL** contain exactly one [1..1] value with @xsi:type="CD", which **SHALL** be selected from ValueSet [Problem Severity](#) 2.16.840.1.113883.3.88.12.3221.6.8 **DYNAMIC** (CONF:7356)
8. text, if present, **SHOULD** contain zero or one [0..1] reference (CONF:15928)
9. reference, if present, **SHOULD** contain zero or one [0..1] @value (CONF:15929)
10. 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:15930)

Severity Observation example

```
<observation xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.8"/>
  <id root="MDHT" extension="561884564"/>
  <code code="SEV" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="Severity observation"/>
  <text>Text Value</text>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
</observation>
```

Social History Observation

[Observation: templateId 2.16.840.1.113883.10.20.22.4.38]

This Social History Observation defines the patient's occupational, personal (e.g., lifestyle), social, and environmental history and health risk factors, as well as administrative data such as marital status, race, ethnicity, and religious affiliation.

1. **SHALL** contain exactly one [1..1] templateId (CONF:8550) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.38"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:8548)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:8549)
4. **SHALL** contain at least one [1..*] **id** (CONF:8551)
5. **SHOULD** contain zero or one [0..1] **code** (CONF:8558), which **SHOULD** be selected from ValueSet [Social History Type Set Definition](#) 2.16.840.1.113883.3.88.12.80.60 **STATIC** 1 (CONF:8896)
6. **SHALL** contain exactly one [1..1] **statusCode/@code**="completed" (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:8553)
7. **SHOULD** contain zero or one [0..1] **value** (CONF:8559)
 - *Observation/value can be any data type. Where Observation/value is a physical quantity, the unit of measure SHALL be expressed using a valid Unified Code for Units of Measure (UCUM) expression.*
8. **code**, if present, **SHOULD** contain zero or one [0..1] **originalText** (CONF:8893)
9. **originalText**, if present, **SHOULD** contain zero or one [0..1] **reference/@value**. (CONF:8894)
10. **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:8895). (CONF:8895)

Social History Observation example

```
<observation xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.38" />
  <id root="MDHT" extension="960989154" />
  <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT" />
  <statusCode code="completed" />
  <effectiveTime>
    <low value="2014" />
    <high value="2014" />
  </effectiveTime>
</observation>
```

Study Act

[Act: templateId 2.16.840.1.113883.10.20.6.2.6]

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.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:10533) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.6.2.6"
2. **SHALL** contain exactly one [1..1] **@classCode**="ACT" *Act* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:9207)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:9208)
4. **SHALL** contain at least one [1..*] **id** (CONF:9210)
5. **SHALL** contain exactly one [1..1] **code/@code**="113014" (CodeSystem: 1.2.840.10008.2.16.4 DCM) (CONF:9214)

6. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:9216)

- *If present, the effectiveTime contains the time the study was started*

7. **MAY** contain zero or one [0..1] **text** (CONF:9215)

- *If present, the text element contains the description of the study*

a. text, if present, **SHOULD** contain zero or one [0..1] reference (CONF:15995)

a. reference, if present, **SHOULD** contain zero or one [0..1] @value (CONF:15996)

- a. 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:15997)

8. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:9219, CONF:9220, CONF:15937)

a. Contains **@typeCode="COMP"** *COMP*

b. Contains exactly one [1..1] *Series Act* (templateId: 2.16.840.1.113883.10.20.22.4.63)

9. ids **SHALL** contain exactly one [1..1] @root (CONF:9213)

10. Such ids **SHALL NOT** contain [0..0] @extension (CONF:9211)

Study Act example

```
<act xmlns="urn:hl7-org:v3" classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.6.2.6"/>
  <id root="MDHT" extension="1641703157"/>
  <code code="113014" codeSystem="1.2.840.10008.2.16.4"
codeSystemName="DCM"/>
  <text>Text Value</text>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <entryRelationship>
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.63"/>
      <id root="MDHT" extension="1536144753"/>
      <code code="113015" codeSystem="1.2.840.10008.2.16.4"
codeSystemName="DCM"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <entryRelationship>
        <observation classCode="DGIMG" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.6.2.8"/>
          <id root="MDHT" extension="1543690865"/>
          <code code="113015" codeSystem="1.2.840.10008.2.6.1" codeSystemName="DCMUID"/>
          <text>Text Value</text>
          <effectiveTime>
            <low value="2014"/>
            <high value="2014"/>
          </effectiveTime>
          <entryRelationship>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.6.2.9"/>
            </observation>
          </entryRelationship>
          <entryRelationship>
            <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"
codeSystemName="DCM" displayName="Referenced Frames"/>
            </observation>
          </entryRelationship>
        </observation>
      </entryRelationship>
    </act>
  </entryRelationship>
</act>
```

```

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

```

Text Observation

[Observation: templateId 2.16.840.1.113883.10.20.6.2.12]

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.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:9290, CONF:10534) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.6.2.12"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:9288)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:9289)
4. **SHALL** contain exactly one [1..1] **code** (CONF:9291)
5. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:9294)
6. **MAY** contain zero or one [0..1] **text** (CONF:9295)
 - a. text, if present, **SHOULD** contain zero or one [0..1] reference (CONF:15938)
 - a. reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:15939)
 - a. 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:15940)
7. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="ED" (CONF:9292)
8. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:9298, CONF:9299, CONF:15941)
 - a. Contains **@typeCode**="SPRT" *SPRT*
 - b. Contains exactly one [1..1] *SOP Instance Observation* (templateId: 2.16.840.1.113883.10.20.6.2.8)
9. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:9301, CONF:9302, CONF:15942)
 - a. Contains **@typeCode**="SPRT" *SPRT*
 - b. Contains exactly one [1..1] *Quantity Measurement Observation* (templateId: 2.16.840.1.113883.10.20.6.2.14)

Text Observation example

```

<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.6.2.12"/>
  <id root="MDHT" extension="754004029"/>
  <code code="482784077"/>
  <text>Text Value</text>
  <effectiveTime>

```

```

    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <value xsi:type="ED">Text Value</value>
  <entryRelationship>
    <observation classCode="DGIMG" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.6.2.8"/>
      <id root="MDHT" extension="1933938731"/>
      <code codeSystem="1.2.840.10008.2.6.1" codeSystemName="DCMUID"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.6.2.9"/>
      <id root="MDHT" extension="568849813"/>
      <code code="1220514279"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <value xsi:type="CD" code="306131167"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="ROIBND" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.6.2.10"/>
      <id root="MDHT" extension="77394085"/>
      <code code="121190" codeSystem="1.2.840.10008.2.16.4"
codeSystemName="DCM" displayName="Referenced Frames"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <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"
codeSystemName="DCM" displayName="Frames for Display"/>
    </observation>
  </entryRelationship>
  </observation>
</entryRelationship>
</observation>
</entryRelationship>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.6.2.14"/>
    <id root="MDHT" extension="1381251539"/>
    <code code="283710962"/>
    <text>Text Value</text>
    <effectiveTime>
      <low value="2014"/>
      <high value="2014"/>
    </effectiveTime>
    <value xsi:type="PQ"/>
  </observation>
</entryRelationship>
  <observation classCode="DGIMG" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.6.2.8"/>
    <id root="MDHT" extension="1190089447"/>

```

```
<code codeSystem="1.2.840.10008.2.6.1" codeSystemName="DCMUID" />
<text>Text Value</text>
<effectiveTime>
  <low value="2014" />
  <high value="2014" />
</effectiveTime>
<entryRelationship>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.6.2.9" />
  </observation>
</entryRelationship>
<entryRelationship>
  <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"
codeSystemName="DCM" displayName="Referenced Frames" />
  </observation>
</entryRelationship>
</observation>
</entryRelationship>
</observation>
</entryRelationship>
</observation>
```

Vital Sign Observation

[Observation: templateId 2.16.840.1.113883.10.20.22.4.27]

Vital signs are represented as are other results, with additional vocabulary constraints.

1. **SHALL** contain exactly one [1..1] **templateId** ((CONF:7299, CONF:10527)) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.27"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7297)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:7298)
4. **SHALL** contain at least one [1..*] **id** (CONF:7300)
5. **SHALL** contain exactly one [1..1] **code** (CONF:7301), which **SHOULD** be selected from ValueSet [HITSP Vital Sign Result Type](#) 2.16.840.1.113883.3.88.12.80.62 **DYNAMIC** (CONF:7301)
6. **SHALL** contain exactly one [1..1] **statusCode/@code**="completed" (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:7303)
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:7304)
 - *Represents the biologically relevant time (e.g. time the specimen was obtained from the patient).*
8. **SHALL** contain exactly one [1..1] **value** with @xsi:type="PQ" (CONF:7305)
9. **MAY** contain zero or one [0..1] **interpretationCode** (CONF:7307)
 - *The interpretation code may be present to provide an interpretation of the vital signs measure (e.g., High, Normal, Low, et cetera).*
10. **MAY** contain zero or one [0..1] **methodCode** (CONF:7308)
 - *The method code element may be present to indicate the method used to obtain the measure. Note that method used is distinct from, but possibly related to the target site.*
11. **MAY** contain zero or one [0..1] **targetSiteCode** (CONF:7309)
 - *The target site of the measure may be identified in the targetSiteCode element (e.g., Left arm [blood pressure], oral [temperature], et cetera).*
12. **SHOULD** contain zero or one [0..1] **text** (CONF:7302)

13. MAY contain zero or one [0..1] **author** (CONF:7310)

a. Contains exactly one [1..1] CDA Author

14. text, if present, **SHOULD** contain zero or one [0..1] reference (CONF:15943)

15. reference, if present, **SHOULD** contain zero or one [0..1] @value (CONF:15944)

16. 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:15945)

Vital Sign Observation example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.27"/>
  <id root="MDHT" extension="844164722"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <text>Text Value</text>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <value xsi:type="PQ"/>
  <interpretationCode code="1313031538"/>
  <methodCode code="1683652934"/>
  <targetSiteCode code="373072148"/>
  <author/>
</observation>
```

Vital Signs Organizer

[Organizer: templateId 2.16.840.1.113883.10.20.22.4.26]

The Vital Signs Organizer groups vital signs, which is similar to the Result Organizer, but with further constraints.

An appropriate nullFlavor can be used when organizer/code or organizer/id is unknown.

1. SHALL contain exactly one [1..1] templateId (CONF:7281, CONF:10528) such that it

a. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.26"

2. SHALL contain exactly one [1..1] @classCode="CLUSTER" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:7279)

•

The vital signs organizer is a cluster of vital signs observations.

3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:7280)

4. SHALL contain at least one [1..*] id (CONF:7282)

• *The organizer shall have an <id> element.*

5. SHALL contain exactly one [1..1] code/@code="46680005" Vital signs (CodeSystem: 2.16.840.1.113883.6.96 SNOMEDCT) (CONF:7283)

6. SHALL contain exactly one [1..1] statusCode/@code="completed" (CodeSystem: 2.16.840.1.113883.5.14 ActStatus) (CONF:7284)

• *The observations have all been completed.*

7. SHALL contain exactly one [1..1] effectiveTime (CONF:7288)

• *represents clinically effective time of the measurement, which is most likely when the measurement was performed (e.g., a BP measurement). (CONF:7289).*

8. SHALL contain at least one [1..*] component (CONF:7285, CONF:15946)

- a. Contains exactly one [1..1] *Vital Sign Observation* (templateId: 2.16.840.1.113883.10.20.22.4.27)

Vital Signs Organizer example

```
<organizer xmlns="urn:hl7-org:v3" classCode="CLUSTER" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.22.4.26"/>
  <id root="MDHT" extension="666480230"/>
  <code code="46680005" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Vital signs"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2014"/>
    <high value="2014"/>
  </effectiveTime>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.22.4.27"/>
      <id root="MDHT" extension="452383660"/>
      <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2014"/>
        <high value="2014"/>
      </effectiveTime>
      <author/>
    </observation>
  </component>
</organizer>
```

Chapter

6

REFERENCES

Topics:

- *Act Priority*
- *Administrative Gender (HL7 V3)*
- *Advance Directive Type Code*
- *Age PQ UCUM*
- *Allergy/Adverse Event Type*
- *Body Site Value Set*
- *Consult Document Type*
- *Country Value Set*
- *Coverage Role Type Value Set*
- *DICOMPurposeOfReference*
- *DICOM Quantity Measurement Type Codes*
- *DIR Document Type Codes*
- *DIR Quantity Measurement Type Codes*
- *Discharge Summary Document Type Code*
- *Encounter Type Code*
- *Entity Name Use*
- *Entity Person Name Part Qualifier*
- *Family History Related Subject Code*
- *Financially Responsible Party Type*
- *HITSP Ethnicity Value Set*
- *HITSP Problem Status*
- *HITSP Vital Sign Result Type*
- *HL7 BasicConfidentialityKind*
- *HL7 LanguageAbilityMode*
- *HL7 Marital Status*
- *HL7 Religious Affiliation*
- *HP Document Type*
- *Health Insurance Type Value Set*
- *Healthcare Provider Taxonomy (NUCC - HIPAA)*

- *Healthcare Service Location*
- *IND Roleclass Codes*
- *Ingredient Name*
- *Language*
- *Language Ability Proficiency*
- *Medication Brand Name*
- *Medication Clinical Drug*
- *Medication Drug Class*
- *Medication Fill Status*
- *Medication Product Form*
- *Medication Route FDA Value Set*
- *Mood Code Evn Int*
- *NUBC UB-04 FL17-Patient Status*
- *No Immunization Reason Value Set*
- *Observation Interpretation (HL7)*
- *Patient Education*
- *Personal Relationship Role Type*
- *Plan of Care moodCode (Act/ Encounter/Procedure)*
- *Plan of Care moodCode (Observation)*
- *Plan of Care moodCode (SubstanceAdministration/ Supply)*
- *Postal Address Use*
- *Postal Code Value Set*
- *Problem*
- *Problem Act Status Code*
- *Problem Severity*
- *Problem Type*
- *Procedure Act Status Code*
- *Procedure Note Document Type Codes*
- *Progress Note Document Type Code*
- *Race*
- *Social History Type Set Definition*
- *State Value Set*
- *Supported File Formats*
- *Surgical Operation Note Document Type Code*
- *Telecom Use (US Realm Header)*

- *UCUM Units of Measure (case sensitive)*
- *Vaccines Administered Value Set*

Act Priority

Value Set	ActPriority - 2.16.840.1.113883.1.11.16866
Code System	ActPriority - 2.16.840.1.113883.5.7

Code	Code System	Print Name
A	ActPriority	ASAP
CR	ActPriority	Callback results
CS	ActPriority	Callback for scheduling
CSP	ActPriority	Callback placer for scheduling
CSR	ActPriority	Contact recipient for scheduling
EL	ActPriority	Elective
EM	ActPriority	Emergency
P	ActPriority	Preoperative
PRN	ActPriority	As needed
R	ActPriority	Routine
RR	ActPriority	Rush reporting
S	ActPriority	Stat
T	ActPriority	Timing critical
UD	ActPriority	Use as directed
UR	ActPriority	Urgent

Administrative Gender (HL7 V3)

Value Set	Administrative Gender (HL7 V3) - 2.16.840.1.113883.1.11.1
Code System	AdministrativeGenderCode - 2.16.840.1.113883.5.1

Code	Code System	Print Name
F	AdministrativeGenderCode	Female
M	AdministrativeGenderCode	Male
UN	AdministrativeGenderCode	Undifferentiated

Advance Directive Type Code

Value Set	Advance Directive Type Code - 2.16.840.1.113883.1.11.20.2
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	1
Definition	This identifies the type of the Advance Directive. Uses the AdvanceDirectiveTypeCode vocabulary defined by CCD.

Code	Code System	Print Name
281789004	SNOMEDCT	Antibiotics
89666000	SNOMEDCT	CPR
225204009	SNOMEDCT	IV Fluid and Support
52765003	SNOMEDCT	Intubation
78823007	SNOMEDCT	Life Support
304251008	SNOMEDCT	Resuscitation
61420007	SNOMEDCT	Tube Feedings
71388002	SNOMEDCT	Other Directive

Age PQ UCUM

Value Set	AgePQ_UCUM - 2.16.840.1.113883.11.20.9.21
Code System	UCUM - Unified Code for Units of Measure - 2.16.840.1.113883.6.8
Description	A valueSet of UCUM codes for representing age value units.

Code	Code System	Print Name
min	UCUM - Unified Code for Units of Measure	Minute
h	UCUM - Unified Code for Units of Measure	Hour
d	UCUM - Unified Code for Units of Measure	Day
wk	UCUM - Unified Code for Units of Measure	Week
mo	UCUM - Unified Code for Units of Measure	Month
a	UCUM - Unified Code for Units of Measure	Year

Allergy/Adverse Event Type

Value Set	Allergy/Adverse Event Type - 2.16.840.1.113883.3.88.12.3221.6.2
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Description	This describes the type of product and intolerance suffered by the patient http://phinvads.cdc.gov/vads/ViewValueSet.action?id=7AFDBFB5-A277-DE11-9B52-0015173D1785

Code	Code System	Print Name
420134006	SNOMEDCT	Propensity to adverse reactions
418038007	SNOMEDCT	Propensity to adverse reactions to substance

Code	Code System	Print Name
419511003	SNOMEDCT	Propensity to adverse reactions to drug
418471000	SNOMEDCT	Propensity to adverse reactions to food
419199007	SNOMEDCT	Allergy to substance
416098002	SNOMEDCT	Drug allergy
414285001	SNOMEDCT	Food allergy
59037007	SNOMEDCT	Drug intolerance
235719002	SNOMEDCT	Food intolerance

Body Site Value Set

Value Set	Body Site Value Set - 2.16.840.1.113883.3.88.12.3221.8.9
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	2
Definition	Body site value set is based upon the concepts descending from the SNOMED CT Anatomical Structure (91723000) hierarchy.

Consult Document Type

Value Set	ConsultDocumentType - 2.16.840.1.113883.11.20.9.31
Code System	LOINC - 2.16.840.1.113883.6.1

Code	Code System	Print Name
11488-4	LOINC	
34100-8	LOINC	
34104-0	LOINC	
51845-6	LOINC	
51853-0	LOINC	
51846-4	LOINC	
34101-6	LOINC	
34749-2	LOINC	
34102-4	LOINC	
34099-2	LOINC	
34756-7	LOINC	
34758-3	LOINC	
34760-9	LOINC	
34879-7	LOINC	
34761-7	LOINC	

Code	Code System	Print Name
34764-1	LOINC	
34771-6	LOINC	
34776-5	LOINC	
34777-3	LOINC	
34779-9	LOINC	
34781-5	LOINC	
34783-1	LOINC	
34785-6	LOINC	
34795-5	LOINC	
34797-1	LOINC	
34798-9	LOINC	
34800-3	LOINC	
34803-7	LOINC	
34855-7	LOINC	
34805-2	LOINC	
34807-8	LOINC	
34810-2	LOINC	
34812-8	LOINC	
34814-4	LOINC	
34816-9	LOINC	
34820-1	LOINC	
34822-7	LOINC	
34824-3	LOINC	
34826-8	LOINC	
34828-4	LOINC	
34788-0	LOINC	
34791-4	LOINC	
34103-2	LOINC	
34831-8	LOINC	
34833-4	LOINC	
34835-9	LOINC	
34837-5	LOINC	
34839-1	LOINC	
34841-7	LOINC	
34845-8	LOINC	
34847-4	LOINC	

Code	Code System	Print Name
34849-0	LOINC	
34851-6	LOINC	
34853-2	LOINC	

Country Value Set

Value Set	CountryValueSet - 2.16.840.1.113883.3.88.12.80.63
Code System	Country (ISO 3166-1) - 1.0.3166.1

Coverage Role Type Value Set

Value Set	Coverage Role Type Value Set - 2.16.840.1.113883.1.11.18877
Code System	RoleCode - 2.16.840.1.113883.5.111
Version	1.0

Code	Code System	Print Name
FAMDEP	RoleCode	Family dependent
FSTUD	RoleCode	Full-time student
HANDIC	RoleCode	Handicapped dependent
INJ	RoleCode	Injured plaintiff
PSTUD	RoleCode	Part-time student
SELF	RoleCode	Self
SPON	RoleCode	Sponsored dependent
STUD	RoleCode	Student

DICOMPurposeOfReference

Value Set	DICOMPurposeOfReference - 2.16.840.1.113883.11.20.9.28
Code System	DCM - 1.2.840.10008.2.16.4

Code	Code System	Print Name
121079	DCM	Baseline
121080	DCM	Best illustration of finding
121112	DCM	Source of Measurement

DICOM Quantity Measurement Type Codes

Value Set	DICOMQuantityMeasurementTypeCodes - 2.16.840.1.113883.11.20.9.30
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Code System	DCM - 1.2.840.10008.2.16.4
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Code	Code System	Print Name
121211	DCM	Path length
121206	DCM	Distance
121207	DCM	Height
121216	DCM	Volume estimated from single 2D region
121218	DCM	Volume estimated from two non-coplanar 2D regions
121217	DCM	Volume estimated from three or more non-coplanar 2D regions
121222	DCM	Volume of sphere
121221	DCM	Volume of ellipsoid
121220	DCM	Volume of circumscribed sphere
121219	DCM	Volume of bounding three dimensional region

DIR Document Type Codes

Value Set	DIRDocumentTypeCodes - 2.16.840.1.113883.11.20.9.32
Code System	LOINC - 2.16.840.1.113883.6.1

Code	Code System	Print Name
18748-4	LOINC	Diagnostic Imaging Report
18747-6	LOINC	CT Report
18755-9	LOINC	MRI Report
18760-9	LOINC	Ultrasound Report
18757-5	LOINC	Nuclear Medicine Report
18758-3	LOINC	PET Scan Report
18745-0	LOINC	Cardiac Catheterization Report
11522-0	LOINC	Echocardiography Report
18746-8	LOINC	Colonoscopy Report
18751-8	LOINC	Endoscopy Report
11525-3	LOINC	Obstetrical Ultrasound Report

DIR Quantity Measurement Type Codes

Value Set	DIRQuantityMeasurementTypeCodes - 2.16.840.1.113883.11.20.9.29
Code System	SNOMEDCT - 2.16.840.1.113883.6.96

Code	Code System	Print Name
439932008	SNOMEDCT	Length of structure
440357003	SNOMEDCT	Width of structure
439934009	SNOMEDCT	Depth of structure
439984002	SNOMEDCT	Diameter of structure
439933003	SNOMEDCT	Long axis length of structure
439428006	SNOMEDCT	Short axis length of structure
439982003	SNOMEDCT	Major axis length of structure
439983008	SNOMEDCT	Minor axis length of structure
440356007	SNOMEDCT	Perpendicular axis length of structure
439429003	SNOMEDCT	Radius of structure
440433004	SNOMEDCT	Perimeter of non-circular structure
439747008	SNOMEDCT	Circumference of circular structure
439748003	SNOMEDCT	Diameter of circular structure
439746004	SNOMEDCT	Area of structure
439985001	SNOMEDCT	Area of body region
439749006	SNOMEDCT	Volume of structure

Discharge Summary Document Type Code

Value Set	DischargeSummaryDocumentTypeCode - 2.16.840.1.113883.11.20.4.1
Code System	LOINC - 2.16.840.1.113883.6.1

Code	Code System	Print Name
18842-5	LOINC	
11490-0	LOINC	
28655-9	LOINC	
29761-4	LOINC	
34745-0	LOINC	
34105-7	LOINC	
34106-5	LOINC	

Encounter Type Code

Value Set	EncounterTypeCode - 2.16.840.1.113883.3.88.12.80.32
Code System	CPT-4 - 2.16.840.1.113883.6.12
Version	20081218
Source	HITSP

Definition	This value set includes only the codes of the Current Procedure and Terminology designated for Evaluation and Management (99200 - 99299).
Description	This is used to identify medical services and procedures furnished by physicians and other healthcare professionals.

Entity Name Use

Value Set	EntityNameUse - 2.16.840.1.113883.1.11.15913
Code System	EntityNameUse - 2.16.840.1.113883.5.45

Code	Code System	Print Name
A	EntityNameUse	Artist/Stage
ABC	EntityNameUse	Alphabetic
ASGN	EntityNameUse	Assigned
C	EntityNameUse	License
I	EntityNameUse	Indigenous/Tribal
IDE	EntityNameUse	Ideographic
L	EntityNameUse	Legal
P	EntityNameUse	Pseudonym
PHON	EntityNameUse	Phonetic
R	EntityNameUse	Religious
SNDX	EntityNameUse	Soundex
SRCH	EntityNameUse	Search
SYL	EntityNameUse	Syllabic

Entity Person Name Part Qualifier

Value Set	EntityPersonNamePartQualifier - 2.16.840.1.113883.11.20.9.26
Code System	EntityNamePartQualifier - 2.16.840.1.113883.5.43

Code	Code System	Print Name
AC	EntityNamePartQualifier	academic
AD	EntityNamePartQualifier	adopted
BR	EntityNamePartQualifier	birth
CL	EntityNamePartQualifier	callme
IN	EntityNamePartQualifier	initial
NB	EntityNamePartQualifier	nobility
PR	EntityNamePartQualifier	professional
SP	EntityNamePartQualifier	spouse

Code	Code System	Print Name
TITLE	EntityNamePartQualifier	title
VV	EntityNamePartQualifier	voorvoegsel

Family History Related Subject Code

Value Set	FamilyHistoryRelatedSubjectCode - 2.16.840.1.113883.1.11.19579
Code System	RoleCode - 2.16.840.1.113883.5.111
Version	1
Definition	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

Code	Code System	Print Name
ADOPT	RoleCode	adopted child
AUNT	RoleCode	aunt
CHILD	RoleCode	Child
CHLDINLAW	RoleCode	child in-law
COUSN	RoleCode	cousin
DOMPART	RoleCode	domestic partner
FAMMEMB	RoleCode	Family Member
CHLDFOST	RoleCode	foster child
GRNDCHILD	RoleCode	grandchild
GPARENT	RoleCode	grandparent
GRPRN	RoleCode	Grandparent
GGRPRN	RoleCode	great grandparent
HSIB	RoleCode	half-sibling
MAUNT	RoleCode	MaternalAunt
MCOUSN	RoleCode	MaternalCousin
MGRPRN	RoleCode	MaternalGrandparent
MGGRPRN	RoleCode	MaternalGreatgrandparent
MUNCLE	RoleCode	MaternalUncle
NCHILD	RoleCode	natural child
NPRN	RoleCode	natural parent
NSIB	RoleCode	natural sibling
NIENEPH	RoleCode	niece/nephew
PRN	RoleCode	Parent
PRNINLAW	RoleCode	parent in-law

Code	Code System	Print Name
PAUNT	RoleCode	PaternalAunt
PCOUSN	RoleCode	PaternalCousin
PGRPRN	RoleCode	PaternalGrandparent
PGGRPRN	RoleCode	PaternalGreatgrandparent
PUNCLE	RoleCode	PaternalUncle
SIB	RoleCode	Sibling
SIBINLAW	RoleCode	sibling in-law
SIGOTHR	RoleCode	significant other
SPS	RoleCode	spouse
STEP	RoleCode	step child
STPPRN	RoleCode	step parent
STPSIB	RoleCode	step sibling
UNCLE	RoleCode	uncle

Financially Responsible Party Type

Value Set	FinanciallyResponsiblePartyType - 2.16.840.1.113883.1.11.10416
Code System	HL7RoleClass - 2.16.840.1.113883.5.110

HITSP Ethnicity Value Set

Value Set	HITSP Ethnicity Value Set - 2.16.840.1.113883.1.11.15836
Code System	Race and Ethnicity - CDC - 2.16.840.1.113883.6.238

HITSP Problem Status

Value Set	HITSP Problem Status - 2.16.840.1.113883.3.88.12.80.68
Code System	SNOMEDCT - 2.16.840.1.113883.6.96

Code	Code System	Print Name
55561003	SNOMEDCT	Active
73425007	SNOMEDCT	Inactive
413322009	SNOMEDCT	Resolved

HITSP Vital Sign Result Type

Value Set	HITSP Vital Sign Result Type - 2.16.840.1.113883.3.88.12.80.62
Code System	LOINC - 2.16.840.1.113883.6.1

Version	1
Source	HITSP
Definition	This identifies the vital sign result type

Code	Code System	Print Name
9279-1	LOINC	Respiratory Rate
8867-4	LOINC	Heart Rate
2710-2	LOINC	O2 % BldC Oximetry
8480-6	LOINC	BP Systolic
8462-4	LOINC	BP Diastolic
8310-5	LOINC	Body temperature
8302-2	LOINC	height
8306-3	LOINC	height (lying)
8287-5	LOINC	Head Circumference
3141-9	LOINC	Weight Measured
39156-5	LOINC	BMI (Body Mass Index)
3140-1	LOINC	BSA (Body Surface Area)

HL7 BasicConfidentialityKind

Value Set	HL7 BasicConfidentialityKind - 2.16.840.1.113883.1.11.16926
Code System	ConfidentialityCode - 2.16.840.1.113883.5.25
Source	HL7

Code	Code System	Print Name
N	ConfidentialityCode	Normal
R	ConfidentialityCode	Restricted
V	ConfidentialityCode	Very Restricted

HL7 LanguageAbilityMode

Value Set	HL7 LanguageAbilityMode - 2.16.840.1.113883.1.11.12249
Code System	LanguageAbilityMode - 2.16.840.1.113883.5.60
Version	1
Definition	This identifies the language ability of the individual. A value representing the method of expression of the language.

Code	Code System	Print Name
ESGN	LanguageAbilityMode	Expressed signed

Code	Code System	Print Name
ESP	LanguageAbilityMode	Expressed spoken
EWR	LanguageAbilityMode	Expressed written
RSGN	LanguageAbilityMode	Received signed
RSP	LanguageAbilityMode	Received spoken
RWR	LanguageAbilityMode	Received written

HL7 Marital Status

Value Set	HL7 Marital Status - 2.16.840.1.113883.1.11.12212
Code System	MaritalStatus - 2.16.840.1.113883.5.2
Version	1
Definition	Marital Status is the domestic partnership status of a person.

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

HL7 Religious Affiliation

Value Set	HL7 Religious Affiliation - 2.16.840.1.113883.1.11.19185
Code System	ReligiousAffiliation - 2.16.840.1.113883.5.1076
Version	1
Definition	This reflects the spiritual faith affiliation

HP Document Type

Value Set	HPDocumentType - 3. 2.16.840.1.113883.1.11.20.22
Code System	LOINC - 2.16.840.1.113883.6.1

Code	Code System	Print Name
34117-2	LOINC	

Code	Code System	Print Name
11492-6	LOINC	
28626-0	LOINC	
34774-0	LOINC	
34115-6	LOINC	
34116-4	LOINC	
34095-0	LOINC	
34096-8	LOINC	
51849-8	LOINC	
47039-3	LOINC	
34763-3	LOINC	
34094-3	LOINC	
34138-8	LOINC	

Health Insurance Type Value Set

Value Set	Health Insurance Type Value Set - 2.16.840.1.113883.3.88.12.3221.5.2
Version	20081218
Source	HITSP
Definition	This value set uses the ACS X12 vocabulary for Insurance Type Code (ASC X12 Data Element 1336) and has been limited by HITSP to the value set reproduced below in Table 2-52 Health Insurance Type Value Set Definition The type of health plan covering the individual, e.g., an HMO, PPO, POS, etc.

Code	Code System	Print Name
12		Medicare Secondary Working Aged Beneficiary or Spouse with Employer Group Health Plan
13		Medicare Secondary End-Stage Renal Disease Beneficiary in the 12 month coordination period with an employer's group health plan
14		Medicare Secondary, No-fault Insurance including Auto is Primary
15		Medicare Secondary Worker's Compensation
16		Medicare Secondary Public Health Service (PHS) or Other Federal Agency
41		Medicare Secondary Black Lung
42		Medicare Secondary Veteran's Administration
43		Medicare Secondary Disabled Beneficiary Under Age 65 with Large Group Health Plan (LGHP)
47		Medicare Secondary, Other Liability Insurance is Primary

Code	Code System	Print Name
AP		Auto Insurance Policy
C1		Commercial
CO		Consolidated Omnibus Budget Reconciliation Act (COBRA)
CP		Medicare Conditionally Primary
D		Disability
DB		Disability Benefits
EP		Exclusive Provider Organization
FF		Family or Friends
GP		Group Policy
HM		Health Maintenance Organization (HMO)
HN		Health Maintenance Organization (HMO) - Medicare Risk
HS		Special Low Income Medicare Beneficiary
IN		Indemnity
IP		Individual Policy
LC		Long Term Care
LD		Long Term Policy
LI		Life Insurance
LT		Litigation
MA		Medicare Part A
MB		Medicare Part B
MC		Medicaid
MH		Medigap Part A
MI		Medigap Part B
MP		Medicare Primary
OT		Other
PE		Property Insurance - Personal
PL		Personal
PP		Personal Payment (Cash - No Insurance)
PR		Preferred Provider Organization (PPO)
PS		Point of Service (POS)
QM		Qualified Medicare Beneficiary
RP		Property Insurance - Real
SP		Supplemental Policy
TF		Tax Equity Fiscal Responsibility Act (TEFRA)
WC		Workers Compensation

Code	Code System	Print Name
WU		Wrap Up Policy

Healthcare Provider Taxonomy (NUCC - HIPAA)

Value Set	Healthcare Provider Taxonomy (NUCC - HIPAA) - 2.16.840.1.114222.4.11.1066
Code System	NUCC Health Care Provider Taxonomy - 2.16.840.1.113883.6.101

Healthcare Service Location

Value Set	HealthcareServiceLocation - 2.16.840.1.113883.1.11.20275
Code System	HealthcareServiceLocation - 2.16.840.1.113883.6.259
Definition	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.

IND Roleclass Codes

Value Set	INDRoleclassCodes - 2.16.840.1.113883.11.20.9.33
Code System	HL7RoleClass - 2.16.840.1.113883.5.110
Description	Specific classification codes for further qualifying RoleClass codes.

Code	Code System	Print Name
PRS	HL7RoleClass	personal relationship
NOK	HL7RoleClass	next of kin
CAREGIVER	HL7RoleClass	caregiver
AGNT	HL7RoleClass	agent
GUAR	HL7RoleClass	guarantor
ECON	HL7RoleClass	emergency contact

Ingredient Name

Value Set	Ingredient Name - 2.16.840.1.113883.3.88.12.80.20
Code System	Unique Ingredient Identifier (UNII) - 2.16.840.1.113883.4.9
Description	Unique ingredient identifiers (UNIIs) for substances in drugs, biologics, foods, and devices. http://www.fda.gov/ForIndustry/DataStandards/StructuredProductLabeling/ucm162523.htm

Language

Value Set	Language - 2.16.840.1.113883.1.11.11526
Code System	LOINC - 2.16.840.1.113883.6.1
Version	200609
Source	The Internet Society
Source URL	http://www.ietf.org/rfc/rfc4646.txt
Definition	The value set is 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 and Frequently Asked Questions.

Language Ability Proficiency

Value Set	LanguageAbilityProficiency - 2.16.840.1.113883.1.11.12199
Code System	LanguageAbilityProficiency - 2.16.840.1.113883.5.61

Code	Code System	Print Name
E	LanguageAbilityProficiency	Excellent
F	LanguageAbilityProficiency	Fair
G	LanguageAbilityProficiency	Good
P	LanguageAbilityProficiency	Poor

Medication Brand Name

Value Set	Medication Brand Name - 2.16.840.1.113883.3.88.12.80.16
Code System	RxNorm - 2.16.840.1.113883.6.88
Description	Brand names http://phinivads.cdc.gov/vads/ViewValueSet.action?id=229BEF3E-971C-DF11-B334-0015173D1785

Medication Clinical Drug

Value Set	Medication Clinical Drug - 2.16.840.1.113883.3.88.12.80.17
Code System	RxNorm - 2.16.840.1.113883.6.88
Description	Clinical drug names https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.80.17

Medication Drug Class

Value Set	Medication Drug Class - 2.16.840.1.113883.3.88.12.80.18
Code System	NDF-RT (Drug Classification) - 2.16.840.1.113883.3.26.1.5

Description	This identifies the pharmacological drug class, such as Cephalosporins. Shall contain a value descending from the NDF-RT concept types of "Mechanism of Action - N0000000223", "Physiologic Effect - N0000009802" or "Chemical Structure - N0000000002". NUI will be used as the concept code. http://phinvads.cdc.gov/vads/ViewValueSet.action?id=77FDBFB5-A277-DE11-9B52-0015173D1785
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Medication Fill Status

Value Set	Medication Fill Status - 2.16.840.1.113883.3.88.12.80.64
Code System	ActStatus - 2.16.840.1.113883.5.14
Version	1
Definition	The HL7 ActStatus has been limited by HITSP. This identifies whether the medication has been fulfilled, such as completed and aborted

Code	Code System	Print Name
aborted	ActStatus	Aborted
completed	ActStatus	Completed

Medication Product Form

Value Set	Medication Product Form - 2.16.840.1.113883.3.88.12.3221.8.11
Code System	NCI Thesaurus - 2.16.840.1.113883.3.26.1.1
Version	1
Definition	This is the physical form of the product as presented to the individual. For example: tablet, capsule, liquid or ointment. NCI concept code for pharmaceutical dosage form: C42636

Medication Route FDA Value Set

Value Set	Medication Route FDA Value Set - 2.16.840.1.113883.3.88.12.3221.8.7
Code System	NCI Thesaurus - 2.16.840.1.113883.3.26.1.1
Version	1
Definition	Route of Administration value set is based upon FDA Drug Registration and Listing Database (FDA Orange Book) which are used in FDA structured product and labelling (SPL).

Code	Code System	Print Name
C38192	NCI Thesaurus	AURICULAR (OTIC)
C38193	NCI Thesaurus	BUCCAL
C38194	NCI Thesaurus	CONJUNCTIVAL
C38675	NCI Thesaurus	CUTANEOUS
C38197	NCI Thesaurus	DENTAL

Code	Code System	Print Name
C38633	NCI Thesaurus	ELECTRO-OSMOSIS
C38205	NCI Thesaurus	ENDOCERVICAL
C38206	NCI Thesaurus	ENDOSINUSIAL
C38208	NCI Thesaurus	ENDOTRACHEAL
C38209	NCI Thesaurus	ENTERAL
C38210	NCI Thesaurus	EPIDURAL
C38211	NCI Thesaurus	EXTRA-AMNIOTIC
C38212	NCI Thesaurus	EXTRACORPOREAL
C38200	NCI Thesaurus	HEMODIALYSIS
C38215	NCI Thesaurus	INFILTRATION
C38219	NCI Thesaurus	INTERSTITIAL
C38220	NCI Thesaurus	INTRA-ABDOMINAL
C38221	NCI Thesaurus	INTRA-AMNIOTIC
C38222	NCI Thesaurus	INTRA-ARTERIAL
C38223	NCI Thesaurus	INTRA-ARTICULAR
C38224	NCI Thesaurus	INTRABILIARY
C38225	NCI Thesaurus	INTRABRONCHIAL
C38226	NCI Thesaurus	INTRABURSAL
C38227	NCI Thesaurus	INTRACARDIAC
C38228	NCI Thesaurus	INTRACARTILAGINOUS
C38229	NCI Thesaurus	INTRACAUDAL
C38230	NCI Thesaurus	INTRACAVERNOUS
C38231	NCI Thesaurus	INTRACAVITARY
C38232	NCI Thesaurus	INTRACEREBRAL
C38233	NCI Thesaurus	INTRACISTERNAL
C38234	NCI Thesaurus	INTRACORNEAL
C38217	NCI Thesaurus	INTRACORONAL, DENTAL
C38218	NCI Thesaurus	INTRACORONARY
C38235	NCI Thesaurus	INTRACORPORUS CAVERNOSUM
C38238	NCI Thesaurus	INTRADERMAL
C38239	NCI Thesaurus	INTRADISCAL
C38240	NCI Thesaurus	INTRADUCTAL
C38241	NCI Thesaurus	INTRADUODENAL
C38242	NCI Thesaurus	INTRADURAL
C38243	NCI Thesaurus	INTRAEPIDERMAL
C38245	NCI Thesaurus	INTRAESOPHAGEAL

Code	Code System	Print Name
C38246	NCI Thesaurus	INTRAGASTRIC
C38247	NCI Thesaurus	INTRAGINGIVAL
C38249	NCI Thesaurus	INTRAILEAL
C38250	NCI Thesaurus	INTRALESIONAL
C38251	NCI Thesaurus	INTRALUMINAL
C38252	NCI Thesaurus	INTRALYMPHATIC
C38253	NCI Thesaurus	INTRAMEDULLARY
C38254	NCI Thesaurus	INTRAMENINGEAL
C28161	NCI Thesaurus	INTRAMUSCULAR
C38255	NCI Thesaurus	INTRAOCULAR
C38256	NCI Thesaurus	INTRAOVARIAN
C38257	NCI Thesaurus	INTRAPERICARDIAL
C38258	NCI Thesaurus	INTRAPERITONEAL
C38259	NCI Thesaurus	INTRAPLEURAL
C38260	NCI Thesaurus	INTRAPROSTATIC
C38261	NCI Thesaurus	INTRAPULMONARY
C38262	NCI Thesaurus	INTRASINAL
C38263	NCI Thesaurus	INTRASPINAL
C38264	NCI Thesaurus	INTRASYNOVIAL
C38265	NCI Thesaurus	INTRATENDINOUS
C38266	NCI Thesaurus	INTRATESTICULAR
C38267	NCI Thesaurus	INTRATHECAL
C38207	NCI Thesaurus	INTRATHORACIC
C38268	NCI Thesaurus	INTRATUBULAR
C38269	NCI Thesaurus	INTRATUMOR
C38270	NCI Thesaurus	INTRATYMPANIC
C38272	NCI Thesaurus	INTRAUTERINE
C38273	NCI Thesaurus	INTRAVASCULAR
C38276	NCI Thesaurus	INTRAVENOUS
C38277	NCI Thesaurus	INTRAVENTRICULAR
C38278	NCI Thesaurus	INTRAVESICAL
C38280	NCI Thesaurus	INTRAVITREAL
C38203	NCI Thesaurus	IONTOPHORESIS
C38281	NCI Thesaurus	IRRIGATION
C38282	NCI Thesaurus	LARYNGEAL
C38284	NCI Thesaurus	NASAL

Code	Code System	Print Name
C38285	NCI Thesaurus	NASOGASTRIC
C48623	NCI Thesaurus	NOT APPLICABLE
C38286	NCI Thesaurus	OCCLUSIVE DRESSING TECHNIQUE
C38287	NCI Thesaurus	OPHTHALMIC
C38288	NCI Thesaurus	ORAL
C38289	NCI Thesaurus	OROPHARYNGEAL
C38291	NCI Thesaurus	PARENTERAL
C38676	NCI Thesaurus	PERCUTANEOUS
C38292	NCI Thesaurus	PERIARTICULAR
C38677	NCI Thesaurus	PERIDURAL
C38293	NCI Thesaurus	PERINEURAL
C38294	NCI Thesaurus	PERIODONTAL
C38295	NCI Thesaurus	RECTAL
C38216	NCI Thesaurus	RESPIRATORY (INHALATION)
C38296	NCI Thesaurus	RETROBULBAR
C38198	NCI Thesaurus	SOFT TISSUE
C38297	NCI Thesaurus	SUBARACHNOID
C38298	NCI Thesaurus	SUBCONJUNCTIVAL
C38299	NCI Thesaurus	SUBCUTANEOUS
C38300	NCI Thesaurus	SUBLINGUAL
C38301	NCI Thesaurus	SUBMUCOSAL
C38304	NCI Thesaurus	TOPICAL
C38305	NCI Thesaurus	TRANSDERMAL
C38283	NCI Thesaurus	TRANSMUCOSAL
C38307	NCI Thesaurus	TRANSPLACENTAL
C38308	NCI Thesaurus	TRANSTRACHEAL
C38309	NCI Thesaurus	TRANSTYMPANIC
C38312	NCI Thesaurus	URETERAL
C38271	NCI Thesaurus	URETHRAL

Mood Code Evn Int

Value Set	MoodCodeEvnInt - 2.16.840.1.113883.11.20.9.18
Code System	HL7ActMood - 2.16.840.1.113883.5.1001
Version	2011-04-03
Definition	Subset of HL7 ActMood codes, constrained to represent event (EVN) and intent (INT) moods

Code	Code System	Print Name
EVN	HL7ActMood	Event
INT	HL7ActMood	Intent

NUBC UB-04 FL17-Patient Status

Value Set	NUBC UB-04 FL17-Patient Status - 2.16.840.1.113883.6.301.5
Code System	HL7DischargeDisposition - 2.16.840.1.113883.12.112
Source	National Uniform Billing Committee (NUBC)
Source URL	www.nubc.org
Definition	See (UB-04/NUBC CURRENT UB DATA SPECIFICATIONS MANUAL) UB-04 FL14.
Description	A code indicating the priority of the admission (e.g., Emergency, Urgent, Elective, et cetera).

No Immunization Reason Value Set

Value Set	No Immunization Reason Value Set - 2.16.840.1.113883.1.11.19717
Code System	ActReason - 2.16.840.1.113883.5.8
Version	1
Source	
Definition	This identifies the reason why the immunization did not occur

Code	Code System	Print Name
IMMUNE	ActReason	Immunity
MEDPREC	ActReason	medical precaution
OSTOCK	ActReason	Out of stock
PATOBJ	ActReason	patient objection
PHILISOP	ActReason	philosophical objection
RELIG	ActReason	religious objection
VACEFF	ActReason	vaccine efficacy concerns
VACSAF	ActReason	vaccine safety concerns

Observation Interpretation (HL7)

Value Set	Observation Interpretation (HL7) - 2.16.840.1.113883.1.11.78
Code System	ObservationInterpretation - 2.16.840.1.113883.5.83
Version	1
Definition	Observation interpretation concepts that are based upon HL7 V3 vocabulary.

Code	Code System	Print Name
A	ObservationInterpretation	Abnormal
HX	ObservationInterpretation	above high threshold
LX	ObservationInterpretation	below low threshold
B	ObservationInterpretation	better
Carrier	ObservationInterpretation	Carrier
D	ObservationInterpretation	decreased
U	ObservationInterpretation	increased
IND	ObservationInterpretation	Indeterminate
I	ObservationInterpretation	intermediate
MS	ObservationInterpretation	moderately susceptible
NEG	ObservationInterpretation	Negative
N	ObservationInterpretation	Normal
POS	ObservationInterpretation	Positive
R	ObservationInterpretation	resistent
S	ObservationInterpretation	susceptible
VS	ObservationInterpretation	Very susceptible
W	ObservationInterpretation	worse

Patient Education

Value Set	PatientEducation - 2.16.840.1.113883.11.20.9.34
Code System	SNOMEDCT - 2.16.840.1.113883.6.96

Personal Relationship Role Type

Value Set	Personal Relationship Role Type - 2.16.840.1.113883.1.11.19563
Code System	RoleCode - 2.16.840.1.113883.5.111
Version	1
Definition	A Personal Relationship records the role of a person in relation to another person. This value set is to be used when recording the relationships between different people who are not necessarily related by family ties, but also includes family relationships

Code	Code System	Print Name
ADOPT	RoleCode	adopted child
AUNT	RoleCode	aunt
CHILD	RoleCode	Child
CHLDINLAW	RoleCode	child in-law
COUSN	RoleCode	cousin

Code	Code System	Print Name
DOMPART	RoleCode	domestic partner
FAMMEMB	RoleCode	Family Member
CHLDFOST	RoleCode	foster child
GRNDCHILD	RoleCode	grandchild
GPARNT	RoleCode	grandparent
GRPRN	RoleCode	Grandparent
GGRPRN	RoleCode	great grandparent
HSIB	RoleCode	half-sibling
MAUNT	RoleCode	MaternalAunt
MCOUSN	RoleCode	MaternalCousin
MGRPRN	RoleCode	MaternalGrandparent
MGGRPRN	RoleCode	MaternalGreatgrandparent
MUNCLE	RoleCode	MaternalUncle
NCHILD	RoleCode	natural child
NPRN	RoleCode	natural parent
NSIB	RoleCode	natural sibling
NBOR	RoleCode	neighbor
NIENEPH	RoleCode	niece/nephew
PRN	RoleCode	Parent
PRNINLAW	RoleCode	parent in-law
PAUNT	RoleCode	PaternalAunt
PCOUSN	RoleCode	PaternalCousin
PGRPRN	RoleCode	PaternalGrandparent
PGGRPRN	RoleCode	PaternalGreatgrandparent
PUNCLE	RoleCode	PaternalUncle
ROOM	RoleCode	Roommate
SIB	RoleCode	Sibling
SIBINLAW	RoleCode	sibling in-law
SIGOTHR	RoleCode	significant other
SPS	RoleCode	spouse
STEP	RoleCode	step child
STPPRN	RoleCode	step parent
STPSIB	RoleCode	step sibling
UNCLE	RoleCode	uncle
FRND	RoleCode	unrelated friend

Plan of Care moodCode (Act/Encounter/Procedure)

Value Set	Plan of Care moodCode (Act/Encounter/Procedure) - 2.16.840.1.113883.11.20.9.23
Code System	HL7ActMood - 2.16.840.1.113883.5.1001

Code	Code System	Print Name
INT	HL7ActMood	Intent
ARQ	HL7ActMood	Appointment Request
PRMS	HL7ActMood	Promise
PRP	HL7ActMood	Proposal
RQO	HL7ActMood	Request

Plan of Care moodCode (Observation)

Value Set	Plan of Care moodCode (Observation) - 2.16.840.1.113883.11.20.9.25
Code System	HL7ActMood - 2.16.840.1.113883.5.1001

Code	Code System	Print Name
INT	HL7ActMood	Intent
GOL	HL7ActMood	Goal
PRMS	HL7ActMood	Promise
PRP	HL7ActMood	Proposal
RQO	HL7ActMood	Request

Plan of Care moodCode (SubstanceAdministration/Supply)

Value Set	Plan of Care moodCode (SubstanceAdministration/Supply) - 2.16.840.1.113883.11.20.9.24
Code System	HL7ActMood - 2.16.840.1.113883.5.1001

Code	Code System	Print Name
INT	HL7ActMood	Intent
PRMS	HL7ActMood	Promise
PRP	HL7ActMood	Proposal
RQO	HL7ActMood	Request

Postal Address Use

Value Set	PostalAddressUse - 2.16.840.1.113883.1.11.10637
Code System	AddressUse - 2.16.840.1.113883.5.1119

Code	Code System	Print Name
BAD	AddressUse	bad address
DIR	AddressUse	direct
H	AddressUse	home address
HP	AddressUse	primary home
HV	AddressUse	vacation home
PHYS	AddressUse	physical visit address
PST	AddressUse	postal address
PUB	AddressUse	public
TMP	AddressUse	temporary
WP	AddressUse	work place

Postal Code Value Set

Value Set	PostalCodeValueSet - 2.16.840.1.113883.3.88.12.80.2
Code System	US Postal Codes - 2.16.840.1.113883.6.231

Problem

Value Set	Problem - 2.16.840.1.113883.3.88.12.3221.7.4
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	DYNAMIC
Source	http://phinvads.cdc.gov/vads/ViewValueSet.action?id=70FDBFB5-A277-DE11-9B52-0015173D1785
Description	Problems and diagnoses. Limited to terms descending from the Clinical Findings (404684003) or Situation with Explicit Context (243796009) hierarchies.

Problem Act Status Code

Value Set	ProblemActStatusCode - 2.16.840.1.113883.11.20.9.19
Code System	ActStatus - 2.16.840.1.113883.5.14
Version	2011-09-09
Description	This value set indicates the status of the problem concern act.

Code	Code System	Print Name
active	ActStatus	active
suspended	ActStatus	suspended
aborted	ActStatus	aborted
completed	ActStatus	completed

Problem Severity

Value Set	Problem Severity - 2.16.840.1.113883.3.88.12.3221.6.8
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Description	This is a description of the level of the severity of the problem.

Code	Code System	Print Name
255604002	SNOMEDCT	Mild
371923003	SNOMEDCT	Mild to moderate
6736007	SNOMEDCT	Moderate
371924009	SNOMEDCT	Moderate to severe
24484000	SNOMEDCT	Severe
399166001	SNOMEDCT	Fatal

Problem Type

Value Set	Problem Type - 2.16.840.1.113883.3.88.12.3221.7.2
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	2008-12-18
Description	This value set indicates the level of medical judgment used to determine the existence of a problem.

Code	Code System	Print Name
404684003	SNOMEDCT	Finding
409586006	SNOMEDCT	Complaint
282291009	SNOMEDCT	Diagnosis
64572001	SNOMEDCT	Condition
248536006	SNOMEDCT	Functional limitation
418799008	SNOMEDCT	Symptom
55607006	SNOMEDCT	Problem
373930000	SNOMEDCT	Cognitive function finding

Procedure Act Status Code

Value Set	ProcedureActStatusCode - 2.16.840.1.113883.11.20.9.22
Code System	ActStatus - 2.16.840.1.113883.5.14
Definition	A ValueSet of HL7 actStatus codes for use with a procedure activity

Code	Code System	Print Name
completed	ActStatus	Completed
active	ActStatus	Active
aborted	ActStatus	Aborted
cancelled	ActStatus	Cancelled

Procedure Note Document Type Codes

Value Set	ProcedureNoteDocumentTypeCodes - 2.16.840.1.113883.11.20.6.1
Code System	LOINC - 2.16.840.1.113883.6.1

Code	Code System	Print Name
28570-0	LOINC	
11505-5	LOINC	
18744-3	LOINC	
18745-0	LOINC	
18746-8	LOINC	
18751-8	LOINC	
18753-4	LOINC	
18836-7	LOINC	
28577-5	LOINC	
28625-2	LOINC	
29757-2	LOINC	
33721-2	LOINC	
34121-4	LOINC	
34896-1	LOINC	
34899-5	LOINC	
47048-4	LOINC	
48807-2	LOINC	

Progress Note Document Type Code

Value Set	ProgressNoteDocumentTypeCode - 2.16.840.1.113883.11.20.8.1
Code System	LOINC - 2.16.840.1.113883.6.1

Code	Code System	Print Name
11506-3	LOINC	
18733-6	LOINC	

Code	Code System	Print Name
18762-5	LOINC	
28569-2	LOINC	
28617-9	LOINC	
34900-1	LOINC	
34904-3	LOINC	
18764-1	LOINC	
28623-7	LOINC	
11507-1	LOINC	
11508-9	LOINC	
11509-7	LOINC	
28627-8	LOINC	
11510-5	LOINC	
28656-7	LOINC	
11512-1	LOINC	
34126-3	LOINC	
15507-7	LOINC	
34129-7	LOINC	
34125-5	LOINC	
34130-5	LOINC	
34131-3	LOINC	
34124-8	LOINC	
34127-1	LOINC	
34128-9	LOINC	
34901-9	LOINC	
34132-1	LOINC	

Race

Value Set	Race - 2.16.840.1.113883.1.11.14914
Code System	Race and Ethnicity - CDC - 2.16.840.1.113883.6.238
Version	1
Definition	A Value Set of codes for Classifying data based upon race. Race is always reported at the discretion of the person for whom this attribute is reported, and reporting must be completed according to Federal guidelines for race reporting. Any code descending from the Race concept (1000-9) in that terminology may be used in the exchange.

Social History Type Set Definition

Value Set	Social History Type Set Definition - 2.16.840.1.113883.3.88.12.80.60
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	1
Definition	This indicates the type of social history observation

Code	Code System	Print Name
229819007	SNOMEDCT	Tobacco use and exposure
256235009	SNOMEDCT	Exercise
160573003	SNOMEDCT	Alcohol intake
364393001	SNOMEDCT	Nutritional observable
364703007	SNOMEDCT	Employment detail
425400000	SNOMEDCT	Toxic exposure status
363908000	SNOMEDCT	Details of drug misuse behavior
228272008	SNOMEDCT	Health-related behavior
105421008	SNOMEDCT	Educational Achievement

State Value Set

Value Set	StateValueSet - 2.16.840.1.113883.3.88.12.80.1
Code System	FIPS 5-2 (State) - 2.16.840.1.113883.6.92

Supported File Formats

Value Set	SupportedFileFormats - 2.16.840.1.113883.11.20.7.1
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Code	Code System	Print Name
application/msword		MSWord
application/pdf		PDF
text/plain		Plain Text
text/rtf		RTF Text
text/html		HTML
image/gif		GIF Image
image/tiff		TIF Image
image/jpeg		JPEG Image
image/png		PNG Image

Surgical Operation Note Document Type Code

Value Set	SurgicalOperationNoteDocumentTypeCode - 2.16.840.1.113883.11.20.1.1
Code System	LOINC - 2.16.840.1.113883.6.1

Code	Code System	Print Name
11504-8	LOINC	
34137-0	LOINC	
28583-3	LOINC	
28624-5	LOINC	
28573-4	LOINC	
34877-1	LOINC	
34874-8	LOINC	
34870-6	LOINC	
34868-0	LOINC	
34818-5	LOINC	

Telecom Use (US Realm Header)

Value Set	Telecom Use (US Realm Header) - 2.16.840.1.113883.11.20.9.20
Code System	AddressUse - 2.16.840.1.113883.5.1119

Code	Code System	Print Name
HP	AddressUse	primary home
WP	AddressUse	work place
MC	AddressUse	mobile contact
HV	AddressUse	vacation home

UCUM Units of Measure (case sensitive)

Value Set	UCUM Units of Measure (case sensitive) - 2.16.840.1.113883.1.11.12839
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Vaccines Administered Value Set

Value Set	Vaccines Administered Value Set - 2.16.840.1.114222.4.11.934
Code System	Vaccines administered (CVX) - 2.16.840.1.113883.6.59
Version	3
Definition	Vaccine Name Keyword: Clinical Vaccines, Vaccine Names

