# Implementation Guide for CDA Release 2 HITSP Summary Documents using CCD and CDA Content Modules C32, C83, and C80



C32 Version 2.5, C83 Version 2.0.1
DRAFT: FOR DEVELOPMENT USE ONLY

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# **Revision History**

Rev	Date	By Whom	Changes
First draft for posting	August 31, 2010	Dave Carlson	Updated model content and publication format
First draft for IG consolidation project	December 29, 2010	Dave Carlson	

# Notes on draft status

**December 29, 2010:** This is a first draft of HITSP/IHE/HL7 implementation guide consolidation for C32 and CCD. This draft includes all template sections defined in C83, some of which are not part of C32 summaries. The next draft will limit content to templates used in C32.

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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 HITSP 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.

This document combines specifications from several HITSP documents, as summarized in the following sections. For the authoritative source, please refer to the approved specifications from HITSP.

## **C32 Patient Summary**

The HITSP Summary Documents Using HL7 Continuity of Care Document (CCD) Component describes the document content summarizing a consumer's medical status for the purpose of information exchange. The content may include administrative (e.g., registration, demographics, insurance, etc.) and clinical (problem list, medication list, allergies, test results, etc) information. Any specific use of this Component by another HITSP specification may constrain the content further based upon the requirements and context of the document exchange. This specification defines content in order to promote interoperability between participating systems. Any given system creating or consuming the document may contain much more information than conveyed by this specification. Such systems may include Personal Health Record Systems (.1.s), Electronic Health Record Systems (EHRs), Practice Management Applications and other persons and systems as identified and permitted.

This Component is essentially a subset of the healthcare data that has been developed for specific business Use Cases. This subset contains the minimum critical or pertinent medical information sections as specified by the business case. Information conveyed according to the Component Construct is a representative extract of the information available on the creating system. The information in the HITSP Summary Documents Using HL7 Continuity of Care Document (CCD) Component and the creating systems must be consistent. Furthermore there should be no data elsewhere in the creating systemthat would contradict the meaning of any data in this construct. The expectation is that consuming systems will be able to use this specification as a source of information to input and/or update information in their instantiation of the healthcare record. This specification does not define the policies applicable to the import of this information.

It is anticipated and desirable that some implementers of the HITSP Summary Documents Using HL7 Continuity of Care Document (CCD) Component will want to add data and sections to permit greater communication between systems. The underlying standards (primarily HL7 CCD – Continuity of Care Document) have additional modules that may serve such purposes. This practice is beyond the scope of this HITSP Component. Implementers should be aware that they must assume that receivers of the document may only be able to view or process content modules as described in this specification, and may not be able to use the additional modules in the document. This means that the HITSP Summary Documents Using HL7 Continuity of Care Document (CCD) Component must be able to standalone. Applications may wish to display the document in two different user-selected views, one of which is restricted to the minimal dataset contents of this component. Adding optional sections and data elements should not generate errors. Optional data should be used if understood by the receiving system, but must not change the meaning of the document.

This Component refers to the HITSP 2008 work cycle. It expands upon the prior version of the specification for a consumer's registration/medication history information to include content to support the consumer's access to clinical information, medication management activities and supportive information for quality of care assessment.

#### **C83 Content Modules**

The purpose of the Healthcare Information Technology Standards Panel (HITSP) CDA Content Modules Component is to define the library of Components that may be used by CDA-based constructs developed by HITSP and others in standards based exchanges. The Components are organized into modules to simplify navigation. These modules are organized along the same principals as the HL7 Continuity of Care Document.

The data elements found in these modules are based on HL7 CDA Implementation Guides and the IHE PCC Technical Framework Volume II, Release 5 and its related supplements. These guides contain specifications for document sections that are consistent with all clinical documents currently selected for HITSP constructs.

## **C80 Clinical Document and Message Terminology**

The purpose of the Health Information Technology Standards Panel (HITSP) Clinical Document and Message Terminology Component is to define the vocabulary for either document-based or message-based HITSP constructs such as Clinical Document Architecture (CDA) documents, HL7 V2 messages, etc. For more in-depth information about how this Component relates to other HITSP constructs, see HITSP/TN901 Clinical Documents.

# **Approach**

Working with an initial portion of the data 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, <a href="http://www.hl7.org/documentcenter/public/membership/HL7\_Governance\_and\_Operations\_Manual.pdf">http://www.hl7.org/documentcenter/public/membership/HL7\_Governance\_and\_Operations\_Manual.pdf</a>).

#### **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.XXX.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: <a href="http://wiki.hl7.org/index.php?title=CCD\_Suggested\_Enhancements">http://wiki.hl7.org/index.php?title=CCD\_Suggested\_Enhancements</a> 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:h17-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.

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# Chapter

2

# **DOCUMENT TEMPLATES**

# Topics:

- Patient Summary
- Unstructured Document

This section contains the document level constraints for CDA documents that are compliant with this implementation guide.

# **Patient Summary**

```
[ClinicalDocument: templateId 2.16.840.1.113883.3.88.11.32.1]
```

This Component describes the document content that summarizes a consumer's medical status for the purpose of health information exchange. While an EHR or PHR system can contain much more information, this Component only deals with the summary information to be exchanged between such systems as established as requirements described in AHIC Use Cases.

- 1. SHALL conform to IHE Medical Document template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.1.1)
- **2. SHALL** conform to *CCD Continuity Of Care Document* template (templateId: 2.16.840.1.113883.10.20.1)
- **3.** MAY contain zero or one [0..1] component (C32-[CT1-1]), such that
  - **a.** Contains exactly one [1..1] *Advance Directives Section* (templateId: 2.16.840.1.113883.3.88.11.83.116)
- **4.** MAY contain zero or one [0..1] component (C32-[CT1-2]), such that
  - **a.** Contains exactly one [1..1] *Allergies Reactions Section* (templateId: 2.16.840.1.113883.3.88.11.83.102)
- **5.** MAY contain zero or more [0..\*] **component** (C32-[CT1-3]), such that
  - **a.** Contains exactly one [1..1] *Comment* (templateId: 2.16.840.1.113883.3.88.11.83.11)
- **6.** MAY contain zero or one [0..1] component (C32-[CT1-4]), such that
  - **a.** Contains exactly one [1..1] *Problem List Section* (templateId: 2.16.840.1.113883.3.88.11.83.103)
- 7. MAY contain zero or one [0..1] component (C32-[CT1-5]), such that
  - **a.** Contains exactly one [1..1] *Encounters Section* (templateId: 2.16.840.1.113883.3.88.11.83.127)
- **8.** MAY contain zero or one [0..1] component (C32-[CT1-7]), such that
  - **a.** Contains exactly one [1..1] *Immunizations Section* (templateId: 2.16.840.1.113883.3.88.11.83.117)
- **9.** MAY contain zero or one [0..1] component (C32-[CT1-9]), such that
  - **a.** Contains exactly one [1..1] *Payers Section* (templateId: 2.16.840.1.113883.3.88.11.83.101)
- **10. MAY** contain zero or one [0..1] **component** (C32-[CT1-11]), such that
  - **a.** Contains exactly one [1..1] *Medications Section* (templateId: 2.16.840.1.113883.3.88.11.83.112)
- 11. MAY contain zero or one [0..1] component (C32-[CT1-13]), such that
  - **a.** Contains exactly one [1..1] *Plan Of Care Section* (templateId: 2.16.840.1.113883.3.88.11.83.124)
- 12. MAY contain zero or one [0..1] component (C32-[CT1-14]), such that
  - **a.** Contains exactly one [1..1] *IHE Pregnancy History Section* (templateId: 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4)
- 13. MAY contain zero or one [0..1] component (C32-[CT1-15]), such that
  - **a.** Contains exactly one [1..1] *Surgeries Section* (templateId: 2.16.840.1.113883.3.88.11.83.108)
- 14. SHOULD contain at least one [1..\*] supportHeaders (C32-[CT1-16]), such that
  - **a.** Contains exactly one [1..1] *Support*
- **15. MAY** contain zero or one [0..1] **component** (C32-[CT1-17]), such that
  - **a.** Contains exactly one [1..1] *Vital Signs Section* (templateId: 2.16.840.1.113883.3.88.11.83.119)
- **16. MAY** contain zero or one [0..1] **component** (C32-[CT1-18]), such that
  - **a.** Contains exactly one [1..1] *Diagnostic Results Section* (templateId: 2.16.840.1.113883.3.88.11.83.122)

- **17. MAY** satisfy: Contains 0..\* HealthcareProvider in cda:documentationOf/cda:serviceEvent/cda:performer (C32-[CT1-6])
- 18. SHALL satisfy: Contains 0..\* InformationSource in ancestor-or-self::./cda:author[1] (C32-[CT1-8])
- **19. SHOULD** satisfy: Contains 0..\* LanguageSpoken in cda:recordTarget/cda:patientRole/cda:patient/cda:languageCommunication (C32-[CT1-10])
- 20. SHALL satisfy: Contains 1..1 Person Information in cda:recordTarget/cda:patientRole (C32-[CT1-12])

#### **Patient Summary example**

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"</pre>
xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <realmCode code="US"/>
  <templateId root="2.16.840.1.113883.10.20.1"/>
  <templateId root="2.16.840.1.113883.10.20.3"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.1"/>
  <templateId root="2.16.840.1.113883.3.88.11.32.1"/>
  <id root="062b2b82-0c61-466d-8737-b6979a516e04"/>
  <code code="34133-9" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Summarization of episode note"/>
  <title/>
  <effectiveTime/>
  <lanquageCode/>
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="2.16.840.1.113883.10.20.1.11"/>
          <id root="dc9f41fd-4aff-4ff1-a7ee-9f45340c557e"/>
          <code code="11450-4" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Problem list"/>
          <title>Problem list</title>
          <entry>
            <act classCode="ACT" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.1.27"/>
              <id root="ab4222b2-572a-468a-a558-8d62a5daa694"/>
              <code nullFlavor="NA"/>
              <effectiveTime>
                <low value="2011"/>
                <high value="2011"/>
              </effectiveTime>
              <entryRelationship>
                <observation classCode="OBS" moodCode="EVN">
                  <templateId root="2.16.840.1.113883.10.20.1.41"/>
                  <id root="281bfb03-9946-40b5-9880-1076d6577c6a"/>
                  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"</pre>
 codeSystemName="ActCode"/>
                  <statusCode code="completed"/>
                  <effectiveTime>
                    <low value="2011"/>
                    <high value="2011"/>
                  </effectiveTime>
                  <value xsi:type="CD"/>
                </observation>
              </entryRelationship>
              <entryRelationship>
                <observation classCode="OBS" moodCode="EVN">
                  <templateId root="2.16.840.1.113883.10.20.1.28"/>
                  <id root="35bbcf56-4178-4776-aaee-077b5602ad65"/>
                  <code/>
                  <statusCode code="completed"/>
                  <effectiveTime>
                    <low value="2011"/>
```

```
<high value="2011"/>
                 </effectiveTime>
                 <entryRelationship>
                   <observation classCode="OBS" moodCode="EVN">
                     <templateId root="2.16.840.1.113883.10.20.1.57"/>
                     <templateId root="2.16.840.1.113883.10.20.1.50"/>
                     <id root="05d8e641-408c-480f-a4cf-8ec3295c41b1"/>
                     <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Status"/>
                     <statusCode code="completed"/>
                     <effectiveTime>
                        <low value="2011"/>
                        <high value="2011"/>
                     </effectiveTime>
                     <value xsi:type="CE"/>
                   </observation>
                 </entryRelationship>
                 <entryRelationship>
                   <observation classCode="OBS" moodCode="EVN">
                     <templateId root="2.16.840.1.113883.10.20.1.57"/>
                     <templateId root="2.16.840.1.113883.10.20.1.51"/>
                     <id root="928a8f36-9686-4478-8e5a-01b53066c9a5"/>
                     <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Health status"/>
                     <statusCode code="completed"/>
                     <effectiveTime>
                        <low value="2011"/>
                        <high value="2011"/>
                     </effectiveTime>
                      <value xsi:type="CE"/>
                   </observation>
                 </entryRelationship>
                 <entryRelationship>
                   <observation classCode="OBS" moodCode="EVN">
                     <templateId root="2.16.840.1.113883.10.20.1.38"/>
                     <id root="46547a72-abca-498a-aa29-cab102b770da"/>
                     <code code="397659008"</pre>
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"
displayName="Age"/>
                     <statusCode code="completed"/>
                     <effectiveTime>
                        <low value="2011"/>
                        <high value="2011"/>
                     </effectiveTime>
                   </observation>
                 </entryRelationship>
               </observation>
             </entryRelationship>
           </act>
         </entry>
       </section>
     </component>
     <component>
       <section>
         <templateId root="2.16.840.1.113883.10.20.1.4"/>
         <id root="d7e52c55-3a65-496b-94c0-c030836e2576"/>
         <code code="10157-6" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="History of family member diseases"/>
         <title>History of family member diseases</title>
       </section>
     </component>
     <component>
       <section>
         <templateId root="2.16.840.1.113883.10.20.1.15"/>
```

```
<id root="86a3b4e4-4ec6-46e7-a0a6-8f0f8f820c2f"/>
         <code code="29762-2" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Social history"/>
         <title>Social history</title>
       </section>
     </component>
     <component>
       <section>
         <templateId root="2.16.840.1.113883.10.20.1.2"/>
         <id root="d78f2c0d-e022-4960-a4b5-70b141951c6b"/>
         <code code="48765-2" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Allergies, adverse reactions, alerts"/>
         <title>Allergies, adverse reactions, alerts</title>
         <entry>
           <act classCode="ACT" moodCode="EVN">
             <templateId root="2.16.840.1.113883.10.20.1.27"/>
             <id root="941c792e-8d7c-43d8-b5cc-fd3311bda85a"/>
             <code nullFlavor="NA"/>
             <effectiveTime>
               <low value="2011"/>
               <high value="2011"/>
             </effectiveTime>
             <entryRelationship>
               <observation classCode="OBS" moodCode="EVN">
                 <templateId root="2.16.840.1.113883.10.20.1.41"/>
                 <id root="2176c2fe-a310-4444-a8e4-84ac958d15b9"/>
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medication use"/>
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laboratory data"/>
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medication use"/>
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             <templateId root="2.16.840.1.113883.3.88.11.83.8"/>
             <id root="959d67e2-3b6c-4748-8d38-b366f86f2c59"/>
             <effectiveTime value="20110404"/>
             <routeCode codeSystem="2.16.840.1.113883.5.112"</pre>
codeSystemName="HL7 RouteOfAdministration"/>
             <entryRelationship>
               <observation classCode="OBS" moodCode="EVN">
                 <templateId root="2.16.840.1.113883.10.20.1.46"/>
                 <id root="a4ac03fe-ee1e-4b5e-9ffa-362bdcbb7be4"/>
                 <code code="30973-2" codeSystemName="" displayName="Dose</pre>
number"/>
                 <statusCode/>
                 <effectiveTime>
                   <low value="2011"/>
                   <high value="2011"/>
                 </effectiveTime>
                 <value xsi:type="INT"/>
               </observation>
             </entryRelationship>
             <entryRelationship>
               <observation classCode="OBS" moodCode="EVN">
                 <templateId root="2.16.840.1.113883.10.20.1.57"/>
                 <templateId root="2.16.840.1.113883.10.20.1.47"/>
                 <id root="0b99f2f3-92fd-4b23-afb7-eec8e6c0bcf3"/>
                 <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Status"/>
                 <statusCode code="completed"/>
                 <effectiveTime>
                   <low value="2011"/>
                   <high value="2011"/>
                 </effectiveTime>
                 <value xsi:type="CE"/>
               </observation>
             </entryRelationship>
             <entryRelationship>
               <act moodCode="INT">
                 <templateId root="2.16.840.1.113883.10.20.1.49"/>
                 <id root="863596d4-0712-40c5-a8eb-4d4e84c27738"/>
                 <effectiveTime>
                   <low value="2011"/>
                   <high value="2011"/>
                 </effectiveTime>
               </act>
             </entryRelationship>
```

```
<entryRelationship>
               <observation classCode="OBS" moodCode="EVN">
                 <templateId root="2.16.840.1.113883.10.20.1.54"/>
                 <id root="f85869d2-d08d-49a1-8d14-cae6826baed5"/>
                 <statusCode code="completed"/>
                 <effectiveTime>
                   <low value="2011"/>
                   <high value="2011"/>
                 </effectiveTime>
                 <entryRelationship>
                   <observation classCode="OBS" moodCode="EVN">
                     <templateId root="2.16.840.1.113883.10.20.1.55"/>
                     <id root="7d882ead-9ec8-43f5-ad39-bfcc848efbe1"/>
                     <code code="SEV" codeSystem="2.16.840.1.113883.5.4"</pre>
codeSystemName="ActCode" displayName="Severity observation"/>
                     <statusCode code="completed"/>
                     <effectiveTime>
                       <low value="2011"/>
                       <high value="2011"/>
                     </effectiveTime>
                   </observation>
                 </entryRelationship>
               </observation>
             </entryRelationship>
           </substanceAdministration>
         </entry>
       </section>
     </component>
     <component>
       <section>
         <templateId root="2.16.840.1.113883.10.20.1.12"/>
         <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.11"/>
         <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.12"/>
         <templateId root="2.16.840.1.113883.3.88.11.83.108"/>
         <id root="e870a616-5fdd-46fd-b8c4-671831a3c8a1"/>
         <code code="47519-4" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="History of procedures"/>
         <title>History of procedures</title>
         <entry>
           ocedure>
             <templateId root="2.16.840.1.113883.10.20.1.29"/>
             <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.19"/>
             <templateId root="2.16.840.1.113883.3.88.11.83.17"/>
             <id root="6e54d287-1408-4231-b9e3-0d61cde20146"/>
             <statusCode code="completed"/>
             <effectiveTime>
               <low value="2011"/>
               <high value="2011"/>
             </effectiveTime>
             <targetSiteCode codeSystem="2.16.840.1.113883.6.96"</pre>
codeSystemName="SNOMEDCT"/>
           </procedure>
         </entry>
       </section>
     </component>
     <component>
       <section>
         <templateId root="2.16.840.1.113883.10.20.1.10"/>
         <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.31"/>
         <templateId root="2.16.840.1.113883.3.88.11.83.124"/>
         <id root="d9c6d520-df5b-4877-ada0-3c1d044e23fa"/>
         <code code="18776-5" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Treatment plan"/>
         <title>Treatment plan</title>
```

```
<entry>
           <act>
             <templateId root="2.16.840.1.113883.10.20.1.25"/>
             <id root="b50866f0-4cf6-4eaf-bc08-86ad2e1b78f2"/>
             <effectiveTime>
               <low value="2011"/>
               <high value="2011"/>
             </effectiveTime>
           </act>
         </entry>
         <entry>
           <encounter>
             <templateId root="2.16.840.1.113883.10.20.1.25"/>
             <id root="1555a51c-8d85-40ac-841a-1fcabc4500ee"/>
             <effectiveTime>
               <low value="2011"/>
               <high value="2011"/>
             </effectiveTime>
           </encounter>
         </entry>
         <entry>
           <observation>
             <templateId root="2.16.840.1.113883.10.20.1.25"/>
             <id root="1cc1fbb0-1bb9-4e72-bd75-0f05e09faf0f"/>
             <effectiveTime>
               <low value="2011"/>
               <high value="2011"/>
             </effectiveTime>
           </observation>
         </entry>
         <entry>
           cedure>
             <templateId root="2.16.840.1.113883.10.20.1.25"/>
             <id root="149802c2-3132-4691-8e19-9bba0a4efefb"/>
             <effectiveTime>
               <low value="2011"/>
               <high value="2011"/>
             </effectiveTime>
           </procedure>
         </entry>
         <entry>
           <substanceAdministration classCode="SBADM">
             <templateId root="2.16.840.1.113883.10.20.1.25"/>
             <id root="0cc94720-7b0e-4c24-8dbd-441bbd44e558"/>
             <effectiveTime value="20110404"/>
           </substanceAdministration>
         </entry>
         <entry>
           <supply classCode="SPLY">
             <templateId root="2.16.840.1.113883.10.20.1.25"/>
             <id root="05fe989e-9ba1-4685-8726-a624890ac96d"/>
             <effectiveTime value="20110404"/>
           </supply>
         </entry>
       </section>
     </component>
     <component>
       <section>
         <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4"/>
         <id root="82fb8782-9d66-4882-97bf-8731955eef4c"/>
         <code code="10162-6" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="HISTORY OF PREGNANCIES"/>
         <title>HISTORY OF PREGNANCIES</title>
         <entry>
```

```
<observation>
             <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13"/>
             <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13.5"/>
             <id root="fb79ffaa-a59f-450c-b915-eb3de94358d1"/>
             <code/>
             <statusCode code="completed"/>
             <effectiveTime>
               <low value="2011"/>
               <high value="2011"/>
             </effectiveTime>
             <repeatNumber/>
             <interpretationCode/>
             <methodCode/>
             <targetSiteCode/>
           </observation>
         </entry>
       </section>
     </component>
     <component>
       <section>
         <templateId root="2.16.840.1.113883.10.20.1.16"/>
         <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.25"/>
         <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2"/>
         <templateId root="2.16.840.1.113883.3.88.11.83.119"/>
         <id root="935e9e06-07ba-4ccd-9956-2030b3297be7"/>
         <code code="8716-3" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Vital signs"/>
         <title>Vital signs</title>
         <entry>
           <organizer moodCode="EVN">
             <templateId root="2.16.840.1.113883.10.20.1.32"/>
             <templateId root="2.16.840.1.113883.10.20.1.35"/>
             <id root="2769117a-6ff2-4840-8e58-bab7ca29b06f"/>
             <code/>
             <statusCode/>
             <effectiveTime>
               <low value="2011"/>
               <high value="2011"/>
             </effectiveTime>
             <component>
               <observation moodCode="EVN">
                 <templateId root="2.16.840.1.113883.10.20.1.31"/>
                 <id root="63031614-e65d-456f-9b83-58b04a50f4ad"/>
                 <code/>
                 <statusCode/>
                 <effectiveTime>
                   <low value="2011"/>
                   <high value="2011"/>
                 </effectiveTime>
                 <interpretationCode/>
                 <methodCode/>
               </observation>
             </component>
           </organizer>
         </entry>
         <entry>
           <organizer classCode="CLUSTER" moodCode="EVN">
             <templateId root="2.16.840.1.113883.10.20.1.32"/>
             <templateId root="2.16.840.1.113883.10.20.1.35"/>
             <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13.1"/>
             <id root="39de826e-b449-4e8c-83e8-66b8c5a3fb9f"/>
             <code code="46680005" codeSystem="2.16.840.1.113883.6.96"</pre>
codeSystemName="SNOMEDCT" displayName="Vital signs"/>
             <statusCode code="completed"/>
```

```
<effectiveTime>
               <low value="2011"/>
               <high value="2011"/>
             </effectiveTime>
             <component>
               <observation moodCode="EVN">
                 <templateId root="2.16.840.1.113883.10.20.1.31"/>
                 <id root="f06c8f33-d009-467a-990b-1ff3f6de8f2e"/>
                 <code/>
                 <statusCode/>
                 <effectiveTime>
                   <low value="2011"/>
                   <high value="2011"/>
                 </effectiveTime>
                 <interpretationCode/>
                 <methodCode/>
               </observation>
             </component>
             <component>
               <observation moodCode="EVN">
                 <templateId root="2.16.840.1.113883.10.20.1.31"/>
                 <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13"/>
                 <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13.2"/>
                 <id root="9949f942-3071-496d-a30d-037c595bdeee"/>
                 <code codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC"/>
                 <statusCode code="completed"/>
                 <effectiveTime>
                   <low value="2011"/>
                   <high value="2011"/>
                 </effectiveTime>
                 <value xsi:type="PQ"/>
                 <interpretationCode/>
                 <methodCode/>
                 <targetSiteCode/>
               </observation>
             </component>
           </organizer>
         </entry>
       </section>
     </component>
     <component>
       <section>
         <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.28"/>
         <templateId root="2.16.840.1.113883.3.88.11.83.122"/>
         <id root="cf068bff-621b-4f14-8b15-c892f18682d1"/>
         <code code="30954-2" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="STUDIES SUMMARY"/>
         <title>STUDIES SUMMARY</title>
         <entry>
           <act classCode="ACT" moodCode="EVN">
             <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.4"/>
             <id root="cff2033d-7ab0-4ae7-8267-bd7d0815479d"/>
             <text/>
             <effectiveTime>
               <low value="2011"/>
               <high value="2011"/>
             </effectiveTime>
           </act>
         </entry>
         <entry>
           <observation>
             <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13"/>
             <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13.5"/>
```

```
<id root="cf5c0127-e30f-42b4-8f20-d5193242ed97"/>
              <code/>
              <statusCode code="completed"/>
              <effectiveTime>
                <low value="2011"/>
                <high value="2011"/>
              </effectiveTime>
              <repeatNumber/>
              <interpretationCode/>
              <methodCode/>
              <targetSiteCode/>
            </observation>
          </entry>
          <entry>
            <templateId root="2.16.840.1.113883.10.20.1.29"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.19"/>
              <templateId root="2.16.840.1.113883.3.88.11.83.17"/>
              <id root="c7dde385-eb0a-411b-8c3a-a32ae2b3da9d"/>
              <statusCode code="completed"/>
              <effectiveTime>
                <low value="2011"/>
                <high value="2011"/>
              </effectiveTime>
              <targetSiteCode codeSystem="2.16.840.1.113883.6.96"</pre>
 codeSystemName="SNOMEDCT"/>
            </procedure>
          </entry>
          <entry>
            <observation moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.1.31"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13"/>
              <templateId root="2.16.840.1.113883.3.88.11.83.15"/>
              <id root="48ba625d-098f-413a-8c13-b80c0a66e2b6"/>
              <code/>
              <statusCode code="completed"/>
              <effectiveTime>
                <low value="2011"/>
                <high value="2011"/>
              </effectiveTime>
              <interpretationCode/>
              <methodCode/>
            </observation>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

#### **Unstructured Document**

[ClinicalDocument: templateId 2.16.840.1.113883.3.88.11.62.1]

**IMPORTANT NOTE:** The HITSP C62 specification does not include a templateId for this doument type. The id 2.16.840.1.113883.3.88.11.62.1 is included in this model to support instance validation, but we are designing a solution to allow removal of this Id.

- 1. SHALL conform to IHE Scanned Document template (templateId: 1.3.6.1.4.1.19376.1.2.20)
- 2. SHALL conform to *IHE Medical Document* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.1.1)
- 3. SHOULD satisfy: This construct should not be used when the data are structured.
  - [OCL]: self.component.structuredBody.oclIsUndefined()

**4. SHALL** satisfy: Each document pertains to one and only one patient.

```
    [OCL]: self.recordTarget->one(record : cda::RecordTarget | not record.patientRole.oclIsUndefined() and not record.patientRole.patient.oclIsUndefined())
```

#### **Unstructured Document example**

# Chapter

3

# **SECTION TEMPLATES**

### **Topics:**

- Admission Medication History Section
- Advance Directives Section
- Allergies Reactions Section
- Assessment And Plan Section
- Chief Complaint Section
- Diagnostic Results Section
- Discharge Diagnosis Section
- Encounters Section
- Family History Section
- Functional Status Section
- History Of Past Illness Section
- History Of Present Illness
- Hospital Admission Diagnosis Section
- Hospital Course Section
- Hospital Discharge Medications Section
- Immunizations Section
- Medical Equipment Section
- Medications Administered Section
- Medications Section
- Payers Section
- Physical Exam Section
- Plan Of Care Section
- Problem List Section
- Reason For Referral Section
- Review Of Systems Section
- Social History Section
- Surgeries Section
- Vital Signs Section

## **Admission Medication History Section**

[Section: templateId 2.16.840.1.113883.3.88.11.83.113]

The Admission Medication Section contains information about the relevant medications of a patient prior to admission to a facility.

**1. SHALL** conform to *IHE Admission Medication History Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.20)

#### **Admission Medication History Section example**

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:h17-
org:v3" xsi:schemaLocation="urn:h17-org:v3 CDA.xsd">
        <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.20"/>
        <templateId root="2.16.840.1.113883.3.88.11.83.113"/>
        <id root="ae94954c-7fbe-43a6-a0a6-37bf346f601e"/>
        <code code="42346-7" codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC" displayName="MEDICATIONS ON ADMISSION"/>
        <title>MEDICATIONS ON ADMISSION</title>
</section>
```

### **Advance Directives Section**

[Section: templateId 2.16.840.1.113883.3.88.11.83.116]

The Advance Directives Section contains information that defines the patient's expectations and requests for care along with the locations of the documents.

**1. SHALL** conform to *IHE Coded Advance Directives Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.35)

#### **Advance Directives Section example**

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-</pre>
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <templateId root="2.16.840.1.113883.10.20.1.1"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.34"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.35"/>
  <templateId root="2.16.840.1.113883.3.88.11.83.116"/>
  <id root="cabd18c8-ea29-4708-8693-d29ed07ec1a6"/>
  <code code="42348-3" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Advance directives"/>
  <title>Advance directives</title>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.17"/>
      <id root="668d231b-95fc-4bfb-8ed9-efb49d014eaf"/>
      <code/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
    </observation>
  </entry>
</section>
```

# **Allergies Reactions Section**

[Section: templateId 2.16.840.1.113883.3.88.11.83.102]

The Allergies and Other Adverse Reactions Section contains data on the substance intolerances and the associated adverse reactions suffered by the patient. At a minimum, currently active and any relevant historical allergies and adverse reactions shall be listed.

**1. SHALL** conform to *IHE Allergies Reactions Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.13) (C83-[CT-102-2])

#### Allergies Reactions Section example

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:h17-</pre>
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <templateId root="2.16.840.1.113883.10.20.1.2"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.13"/>
  <templateId root="2.16.840.1.113883.3.88.11.83.102"/>
  <id root="72b9b757-71d8-4c28-9182-d8c9a312ba2e"/>
  <code code="48765-2" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Allergies, adverse reactions, alerts"/>
  <title>Allergies, adverse reactions, alerts</title>
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.27"/>
      <id root="lec1f990-53e8-4922-abc6-957f3f99f743"/>
      <code nullFlavor="NA"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.41"/>
          <id root="37cda0e5-8720-4ca8-996d-e990e1364660"/>
          <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"</pre>
 codeSystemName="ActCode"/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
          <value xsi:type="CD"/>
        </observation>
      </entryRelationship>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.28"/>
          <id root="5e2ee598-26cf-4ec5-8c75-9236615e52b4"/>
          <code/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
          <entryRelationship>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.1.57"/>
              <templateId root="2.16.840.1.113883.10.20.1.50"/>
              <id root="b5e04cd9-615c-4e99-8d01-3bf966a96c02"/>
```

```
<code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Status"/>
              <statusCode code="completed"/>
              <effectiveTime>
                <low value="2011"/>
                <high value="2011"/>
              </effectiveTime>
              <value xsi:type="CE"/>
            </observation>
          </entryRelationship>
          <entryRelationship>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.1.57"/>
              <templateId root="2.16.840.1.113883.10.20.1.51"/>
              <id root="e48566aa-e727-44ee-ac77-a5cc62fd84d3"/>
              <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Health status"/>
              <statusCode code="completed"/>
              <effectiveTime>
                <low value="2011"/>
                <high value="2011"/>
              </effectiveTime>
              <value xsi:type="CE"/>
            </observation>
          </entryRelationship>
          <entryRelationship>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.1.38"/>
              <id root="cb26f41a-3c7b-4150-9927-90db6bf9f8ec"/>
              <code code="397659008" codeSystem="2.16.840.1.113883.6.96"</pre>
 codeSystemName="SNOMEDCT" displayName="Age"/>
              <statusCode code="completed"/>
              <effectiveTime>
                <low value="2011"/>
                <high value="2011"/>
              </effectiveTime>
            </observation>
          </entryRelationship>
        </observation>
      </entryRelationship>
    </act>
  </entry>
</section>
```

### **Assessment And Plan Section**

[Section: templateId 2.16.840.1.113883.3.88.11.83.123]

The Assessment and Plan Section contains information about the assessment of the patient's condition and expectations for care including proposals, goals, and order requests for monitoring, tracking, or improving the condition of the patient.

An assessment and plan section varies from the plan of care section defined later in that it includes a physician assessment of the patient condition.

**NOTE**: The assessments described in this section are physician assessments of the patient's current condition, and do not include assessments of functional status, or other assessments typically used in nursing. In Implementation Guides currently selected, when both the assessment and plan are documented, they are included together in a single section documenting both. When the physician assessment is not present, only the plan of care section appears. There are no cases where a physician assessment is provided without a plan.

```
1. SHALL conform to IHE Assessment And Plan Section template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.1.13.2.5)
```

#### Assessment And Plan Section example

# Chief Complaint Section

[Section: templateId 2.16.840.1.113883.3.88.11.83.105]

The Chief Complaint Section contains information about the patient's chief complaint.

**1. SHALL** conform to *IHE Chief Complaint Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1)

### **Chief Complaint Section example**

# **Diagnostic Results Section**

[Section: templateId 2.16.840.1.113883.3.88.11.83.122]

The Diagnostic Results Section contains information about the results from diagnostic procedures the patient received.

- **1. SHALL** conform to *IHE Coded Results Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.28) (C83-[CT-122-1])
- 2. SHALL contain at least one [1..\*] entry (C83-[CT-122-2]), such that
  - **a.** Contains exactly one [1..1] *Procedure* (templateId: 2.16.840.1.113883.3.88.11.83.17)
- 3. SHALL contain at least one [1..\*] entry (C83-[CT-122-2]), such that
  - **a.** Contains exactly one [1..1] *Result* (templateId: 2.16.840.1.113883.3.88.11.83.15)

#### Diagnostic Results Section example

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:h17-
org:v3" xsi:schemaLocation="urn:h17-org:v3 CDA.xsd">
        <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.28"/>
        <templateId root="2.16.840.1.113883.3.88.11.83.122"/>
        <id root="6299314b-cab9-402e-a07e-e7360f8da8de"/>
        <code code="30954-2" codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC" displayName="STUDIES SUMMARY"/>
        <title>STUDIES SUMMARY</title>
        <entry>
            <act classCode="ACT" moodCode="EVN">
```

```
<templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.4"/>
      <id root="df597600-2854-4553-bde8-0elaa49bdc1c"/>
      <text/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
    </act>
  </entry>
  <entry>
    <observation>
      <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13"/>
      <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13.5"/>
      <id root="8f3b7347-f93b-4742-a64f-b047f5f7c830"/>
      <code/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <repeatNumber/>
      <interpretationCode/>
      <methodCode/>
      <targetSiteCode/>
    </observation>
  </entry>
  <entry>
    cedure>
      <templateId root="2.16.840.1.113883.10.20.1.29"/>
      <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.19"/>
      <templateId root="2.16.840.1.113883.3.88.11.83.17"/>
      <id root="ebd902ae-50df-401d-80b9-7bafdd1658e5"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <targetSiteCode codeSystem="2.16.840.1.113883.6.96"</pre>
 codeSystemName="SNOMEDCT"/>
    </procedure>
  </entry>
  <entry>
    <observation moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.31"/>
      <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13"/>
      <templateId root="2.16.840.1.113883.3.88.11.83.15"/>
      <id root="00c0a2e9-e643-4650-a07d-6a85004ff551"/>
      <code/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <interpretationCode/>
      <methodCode/>
    </observation>
  </entry>
</section>
```

# **Discharge Diagnosis Section**

```
[Section: templateId 2.16.840.1.113883.3.88.11.83.111]
```

The Discharge Diagnosis Section contains information about the conditions identified during the hospital stay that either need to be monitored after discharge from the hospital and/or where resolved during the hospital course.

**1. SHALL** conform to *IHE Discharge Diagnosis Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.7)

#### Discharge Diagnosis Section example

### **Encounters Section**

```
[Section: templateId 2.16.840.1.113883.3.88.11.83.127]
```

The Encounter Section contains information describing the patient history of encounters. At a minimum, current and pertinent historical encounters should be included; a full encounter history may be included.

- **1. SHALL** conform to *IHE Encounter History Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.3)
- 2. SHALL contain at least one [1..\*] entry, such that
  - **a.** Contains exactly one [1..1] *Encounter* (templateId: 2.16.840.1.113883.3.88.11.83.16)

#### **Encounters Section example**

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:h17-</pre>
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <templateId root="2.16.840.1.113883.10.20.1.3"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.5.3.3"/>
  <templateId root="2.16.840.1.113883.3.88.11.83.127"/>
  <id root="b238de71-c0f5-4da2-b6a9-04140bdb0638"/>
  <code code="46240-8" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="History of encounters"/>
  <title>History of encounters</title>
  <entry>
    <encounter classCode="ENC">
      <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.14"/>
      <templateId root="2.16.840.1.113883.10.20.1.25"/>
      <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.14"/>
      <id root="e94cad8a-398c-4390-90f7-c44661ed521d"/>
      <code codeSystem="2.16.840.1.113883.5.4"</pre>
 codeSystemName="ActEncounterCode"/>
      <text/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
```

```
</encounter>
  </entry>
  <entry>
    <encounter classCode="ENC" moodCode="EVN">
      <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.14"/>
      <templateId root="2.16.840.1.113883.10.20.1.21"/>
      <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.14"/>
      <templateId root="2.16.840.1.113883.3.88.11.83.16"/>
      <id root="94616e29-c5cf-4270-b8b1-e8b8f0b2cf11"/>
      <code codeSystem="2.16.840.1.113883.6.12" codeSystemName="CPT-4"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
    </encounter>
 </entry>
</section>
```

# **Family History Section**

[Section: templateId 2.16.840.1.113883.3.88.11.83.125]

The Family History Section contains information about the genetic family members, to the extent that they are known, the diseases they suffered from, their ages at death, and other relevant genetic information.

**1. SHALL** conform to *IHE Family Medical History Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.14)

#### **Family History Section example**

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
        <templateId root="2.16.840.1.113883.10.20.1.4"/>
        <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.14"/>
        <templateId root="2.16.840.1.113883.3.88.11.83.125"/>
        <id root="75f8a7ba-5149-4aec-ba70-dcb6001c7534"/>
        <code code="10157-6" codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC" displayName="History of family member diseases"/>
        <ti>title>History of family member diseases</title>
</section>
```

### Functional Status Section

[Section: templateId 2.16.840.1.113883.3.88.11.83.109]

The Functional Status Section provides information about the capability of the patient to perform acts of daily living.

**1. SHALL** conform to *CCD Functional Status Section* template (templateId: 2.16.840.1.113883.10.20.1.5)

#### **Functional Status Section example**

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:h17-
org:v3" xsi:schemaLocation="urn:h17-org:v3 CDA.xsd">
        <templateId root="2.16.840.1.113883.10.20.1.5"/>
        <templateId root="2.16.840.1.113883.3.88.11.83.109"/>
        <id root="7756239b-cb39-4c4b-a7b3-012e8c161d9e"/>
        <code code="47420-5" codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC" displayName="Functional status assessment"/>
        <title>Functional status assessment</title>
</section>
```

# **History Of Past Illness Section**

[Section: templateId 2.16.840.1.113883.3.88.11.83.104]

The History of Past Illness Section contains data about problems the patient suffered in the past.

**1. SHALL** conform to *IHE History Of Past Illness Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.8)

#### **History Of Past Illness Section example**

# **History Of Present Illness**

[Section: templateId 2.16.840.1.113883.3.88.11.83.107]

The History of Present Illness Section contains information about the sequence of events preceding the patient's current complaints.

**1. SHALL** conform to *IHE History Of Present Illness* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.4)

#### **History Of Present Illness example**

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:h17-
org:v3" xsi:schemaLocation="urn:h17-org:v3 CDA.xsd">
        <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.4"/>
        <templateId root="2.16.840.1.113883.3.88.11.83.107"/>
        <id root="23217e73-665e-481e-9581-70afbdde6b36"/>
        <code code="10164-2" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="HISTORY OF PRESENT ILLNESS"/>
        <title>HISTORY OF PRESENT ILLNESS</title>
</section>
```

# **Hospital Admission Diagnosis Section**

[Section: templateId 2.16.840.1.113883.3.88.11.83.110]

The Hospital Admitting Diagnosis Section contains information about the primary reason for admission to a hospital facility.

**1. SHALL** conform to *IHE Hospital Admission Diagnosis Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.3)

### **Hospital Admission Diagnosis Section example**

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:h17-
org:v3" xsi:schemaLocation="urn:h17-org:v3 CDA.xsd">
        <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.3"/>
        <templateId root="2.16.840.1.113883.3.88.11.83.110"/>
```

```
<id root="b3e872d1-93d2-42ac-88cb-139933f5e479"/>
  <code code="46241-6" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="HOSPITAL ADMISSION DX"/>
    <title>HOSPITAL ADMISSION DX</title>
</section>
```

## **Hospital Course Section**

```
[Section: templateId 2.16.840.1.113883.3.88.11.83.121]
```

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

**1. SHALL** conform to *IHE Hospital Course Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.5)

#### Hospital Course Section example

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
        <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.5"/>
        <templateId root="2.16.840.1.113883.3.88.11.83.121"/>
        <id root="5300d0f4-d8f9-4a6d-ac1d-3fcba70a2086"/>
        <code code="8648-8" codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC" displayName="HOSPITAL COURSE"/>
        <title>HOSPITAL COURSE</title>
</section>
```

# **Hospital Discharge Medications Section**

```
[Section: templateId 2.16.840.1.113883.3.88.11.83.114]
```

The Hospital Discharge Medications Section contains information about the relevant medications of the medications ordered for the patient for use after discharge from the hospital.

**1. SHALL** conform to *IHE Hospital Discharge Medications Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.22)

### **Hospital Discharge Medications Section example**

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:h17-
org:v3" xsi:schemaLocation="urn:h17-org:v3 CDA.xsd">
        <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.22"/>
        <templateId root="2.16.840.1.113883.3.88.11.83.114"/>
        <id root="a5bec865-7f08-4a82-9640-de3a1bb384df"/>
        <code code="10183-2" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="HOSPITAL DISCHARGE MEDICATIONS"/>
        <title>HOSPITAL DISCHARGE MEDICATIONS</title>
</section>
```

### **Immunizations Section**

```
[Section: templateId 2.16.840.1.113883.3.88.11.83.117]
```

The Immunizations Section contains information describing the immunizations administered to the patient.

- **1. SHALL** conform to *IHE Immunizations Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.23)
- 2. SHALL contain at least one [1..\*] entry, such that
  - **a.** Contains exactly one [1..1] *Immunization* (templateId: 2.16.840.1.113883.3.88.11.83.13)

#### **Immunizations Section example**

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:h17-</pre>
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <templateId root="2.16.840.1.113883.10.20.1.6"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.23"/>
  <templateId root="2.16.840.1.113883.3.88.11.83.117"/>
  <id root="ec6ede08-e650-4d9f-b061-37dbfab86b22"/>
  <code code="11369-6" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="History of immunizations"/>
  <title>History of immunizations</title>
  <entry>
    <substanceAdministration>
      <templateId root="2.16.840.1.113883.10.20.1.24"/>
      <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.12"/>
      <id root="635c64b5-36ba-41a2-99de-1bb7a038bd47"/>
      <code/>
      <statusCode/>
      <effectiveTime value="20110404"/>
      <routeCode codeSystem="2.16.840.1.113883.5.112" codeSystemName="HL7</pre>
RouteOfAdministration"/>
      <doseQuantity/>
      <rateQuantity/>
      <maxDoseQuantity/>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.46"/>
          <id root="236015ea-bf1f-4316-9b37-3bf592505987"/>
          <code code="30973-2" codeSystemName="" displayName="Dose number"/>
          <statusCode/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
          <value xsi:type="INT"/>
        </observation>
      </entryRelationship>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.57"/>
          <templateId root="2.16.840.1.113883.10.20.1.47"/>
          <id root="1b87d268-320e-4a69-9eb0-b06656065adb"/>
          <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Status"/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
          <value xsi:type="CE"/>
        </observation>
      </entryRelationship>
      <entryRelationship>
        <act moodCode="INT">
          <templateId root="2.16.840.1.113883.10.20.1.49"/>
          <id root="c52868cd-134d-400d-aa9a-95b7ae2f3457"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
        </act>
      </entryRelationship>
      <entryRelationship>
```

```
<observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.54"/>
         <id root="b7021b0b-e483-4e91-b29d-c49082f0170a"/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <entryRelationship>
           <observation classCode="OBS" moodCode="EVN">
             <templateId root="2.16.840.1.113883.10.20.1.55"/>
             <id root="c717d2b6-ca1c-4f4d-9d23-0fbeaaac6108"/>
             <code code="SEV" codeSystem="2.16.840.1.113883.5.4"</pre>
codeSystemName="ActCode" displayName="Severity observation"/>
             <statusCode code="completed"/>
             <effectiveTime>
               <low value="2011"/>
               <high value="2011"/>
             </effectiveTime>
           </observation>
         </entryRelationship>
       </observation>
     </entryRelationship>
   </substanceAdministration>
 </entry>
 <entry>
   <substanceAdministration>
     <templateId root="2.16.840.1.113883.10.20.1.24"/>
     <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.12"/>
     <templateId root="2.16.840.1.113883.3.88.11.83.13"/>
     <id root="0f0207ef-12c2-479a-b6c4-a3479b68c621"/>
     <effectiveTime value="20110404"/>
     <routeCode codeSystem="2.16.840.1.113883.5.112" codeSystemName="HL7</pre>
RouteOfAdministration"/>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.46"/>
         <id root="b3034eb7-9462-4583-8544-909551f3e5f1"/>
         <code code="30973-2" codeSystemName="" displayName="Dose number"/>
         <statusCode/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <value xsi:type="INT"/>
       </observation>
     </entryRelationship>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.57"/>
         <templateId root="2.16.840.1.113883.10.20.1.47"/>
         <id root="a03164e3-878c-4e98-beed-3a213e9bdce1"/>
         <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Status"/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <value xsi:type="CE"/>
       </observation>
     </entryRelationship>
     <entryRelationship>
       <act moodCode="INT">
```

```
<templateId root="2.16.840.1.113883.10.20.1.49"/>
          <id root="80f546f8-e7ae-41e3-ade7-241d949b8512"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
        </act>
      </entryRelationship>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.54"/>
          <id root="358a8cff-323e-49d3-acdc-43488a4d6d3d"/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
          <entryRelationship>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.1.55"/>
              <id root="09766bb2-9552-4f6e-bda6-3aeed3ecabad"/>
              <code code="SEV" codeSystem="2.16.840.1.113883.5.4"</pre>
 codeSystemName="ActCode" displayName="Severity observation"/>
              <statusCode code="completed"/>
              <effectiveTime>
                <low value="2011"/>
                <high value="2011"/>
              </effectiveTime>
            </observation>
          </entryRelationship>
        </observation>
      </entryRelationship>
    </substanceAdministration>
  </entry>
</section>
```

# **Medical Equipment Section**

[Section: templateId 2.16.840.1.113883.3.88.11.83.128]

The Medical Equipment section contains information describing 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.

1. SHALL conform to IHE Medical Devices Section template (templateId:

```
1.3.6.1.4.1.19376.1.5.3.1.1.5.3.5)
```

#### **Medical Equipment Section example**

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
        <templateId root="2.16.840.1.113883.10.20.1.7"/>
        <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.5.3.5"/>
        <templateId root="2.16.840.1.113883.3.88.11.83.128"/>
        <id root="21df6d64-f4fd-4cdd-8184-487a23ab7ec2"/>
        <code code="46264-8" codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC" displayName="History of medical device use"/>
        <title>History of medical device use</title>
</section>
```

### **Medications Administered Section**

[Section: templateId 2.16.840.1.113883.3.88.11.83.115]

The Medications Administered Section contains information about the relevant medications administered to a patient during the course of an encounter.

**1. SHALL** conform to *IHE Medications Administered Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.21)

#### **Medications Administered Section example**

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
        <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.21"/>
        <templateId root="2.16.840.1.113883.3.88.11.83.115"/>
        <id root="60dc8d70-e351-4472-a89d-b87b5d43d497"/>
        <code code="18610-6" codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC" displayName="MEDICATION ADMINISTERED"/>
        <title>MEDICATION ADMINISTERED</title>
</section>
```

### **Medications Section**

[Section: templateId 2.16.840.1.113883.3.88.11.83.112]

The Medications Section contains information about the relevant medications for the patient. At a minimum, the currently active medications should be listed.

- **1. SHALL** conform to *IHE Medications Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.19) (C83-[CT-112-1])
- **2. SHALL** contain at least one [1..\*] **entry** (C83-[CT-112-2]), such that **a.** Contains exactly one [1..1] *Medication* (templateId: 2.16.840.1.113883.3.88.11.83.8)

### **Medications Section example**

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:h17-</pre>
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <templateId root="2.16.840.1.113883.10.20.1.8"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.19"/>
  <templateId root="2.16.840.1.113883.3.88.11.83.112"/>
  <id root="f43a6c5d-593a-4d37-a97e-80cd1995029f"/>
  <code code="10160-0" codeSystemName="" displayName="History of medication</pre>
 use"/>
  <title>History of medication use</title>
  <entry>
    <substanceAdministration>
      <templateId root="2.16.840.1.113883.10.20.1.24"/>
      <id root="bf1f02c6-aac2-41a9-bc07-d7d70e6f6f43"/>
      <statusCode/>
      <effectiveTime value="20110404"/>
      <routeCode codeSystem="2.16.840.1.113883.5.112" codeSystemName="HL7</pre>
RouteOfAdministration"/>
      <doseQuantity/>
      <rateQuantity/>
      <maxDoseQuantity/>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.46"/>
          <id root="3c5932a5-4eac-452c-8d71-c9e168a2a43e"/>
```

```
<code code="30973-2" codeSystemName="" displayName="Dose number"/>
         <statusCode/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <value xsi:type="INT"/>
       </observation>
     </entryRelationship>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.57"/>
         <templateId root="2.16.840.1.113883.10.20.1.47"/>
         <id root="dab30795-ac5f-4626-b51f-e81de1d89225"/>
         <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Status"/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <value xsi:type="CE"/>
       </observation>
     </entryRelationship>
     <entryRelationship>
       <act moodCode="INT">
         <templateId root="2.16.840.1.113883.10.20.1.49"/>
         <id root="4731e89d-db90-47db-a0e4-391111e44a28"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
       </act>
     </entryRelationship>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.54"/>
         <id root="8389b280-70bb-4dae-82b0-2e4df4a0b865"/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <entryRelationship>
           <observation classCode="OBS" moodCode="EVN">
             <templateId root="2.16.840.1.113883.10.20.1.55"/>
             <id root="86a9c2b3-3735-4317-80ce-4e663914b0fb"/>
             <code code="SEV" codeSystem="2.16.840.1.113883.5.4"</pre>
codeSystemName="ActCode" displayName="Severity observation"/>
             <statusCode code="completed"/>
             <effectiveTime>
               <low value="2011"/>
               <high value="2011"/>
             </effectiveTime>
           </observation>
         </entryRelationship>
       </observation>
     </entryRelationship>
   </substanceAdministration>
 </entry>
 <entry>
  <supply>
     <templateId root="2.16.840.1.113883.10.20.1.34"/>
     <id root="3b4243fd-180f-4832-80ec-449261766a86"/>
```

```
<statusCode/>
     <effectiveTime value="20110404"/>
     <repeatNumber/>
     <quantity/>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.57"/>
         <templateId root="2.16.840.1.113883.10.20.1.47"/>
         <id root="f1e4a89f-e80f-48ec-a75e-22b430a47b98"/>
         <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Status"/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <value xsi:type="CE"/>
       </observation>
     </entryRelationship>
     <entryRelationship>
       <act moodCode="INT">
         <templateId root="2.16.840.1.113883.10.20.1.43"/>
         <id root="eeeab647-af2b-4454-a2c9-8f7ef3d73997"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
       </act>
     </entryRelationship>
   </supply>
 </entry>
 <entry>
   <substanceAdministration>
     <templateId root="2.16.840.1.113883.10.20.1.24"/>
     <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.7"/>
     <id root="e8e79fe9-bcbc-4d1f-91a5-0f8f41119ab5"/>
     <statusCode/>
     <effectiveTime value="20110404"/>
     <routeCode codeSystem="2.16.840.1.113883.5.112" codeSystemName="HL7</pre>
RouteOfAdministration"/>
     <approachSiteCode/>
     <doseQuantity/>
     <rateQuantity/>
     <maxDoseQuantity/>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.46"/>
         <id root="10fad36c-b436-4e4d-afe5-3e2ee7d68bd4"/>
         <code code="30973-2" codeSystemName="" displayName="Dose number"/>
         <statusCode/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <value xsi:type="INT"/>
       </observation>
     </entryRelationship>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.57"/>
         <templateId root="2.16.840.1.113883.10.20.1.47"/>
         <id root="64274339-befe-4af7-a1c7-6d37dcc6f197"/>
         <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Status"/>
```

```
<statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <value xsi:type="CE"/>
       </observation>
     </entryRelationship>
     <entryRelationship>
       <act moodCode="INT">
         <templateId root="2.16.840.1.113883.10.20.1.49"/>
         <id root="c2068b9d-f620-40f3-b0a2-ebe2f061efef"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
       </act>
     </entryRelationship>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.54"/>
         <id root="a9fe5ab3-45ae-4a7b-8235-94e517cc2937"/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <entryRelationship>
           <observation classCode="OBS" moodCode="EVN">
             <templateId root="2.16.840.1.113883.10.20.1.55"/>
             <id root="95030800-a9e2-4ccf-920f-0b5c9ab0e0db"/>
             <code code="SEV" codeSystem="2.16.840.1.113883.5.4"</pre>
codeSystemName="ActCode" displayName="Severity observation"/>
             <statusCode code="completed"/>
             <effectiveTime>
               <low value="2011"/>
               <high value="2011"/>
             </effectiveTime>
           </observation>
         </entryRelationship>
       </observation>
     </entryRelationship>
   </substanceAdministration>
 </entry>
 <entry>
   <substanceAdministration>
     <templateId root="2.16.840.1.113883.10.20.1.24"/>
     <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.7"/>
     <templateId root="2.16.840.1.113883.3.88.11.83.8"/>
     <id root="c5a33adc-7c51-41c0-baa1-cfad8bc67412"/>
     <effectiveTime value="20110404"/>
     <routeCode codeSystem="2.16.840.1.113883.5.112" codeSystemName="HL7</pre>
RouteOfAdministration"/>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.46"/>
         <id root="86171751-be07-4381-a3d7-21ee1d55736d"/>
         <code code="30973-2" codeSystemName="" displayName="Dose number"/>
         <statusCode/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <value xsi:type="INT"/>
```

```
</observation>
      </entryRelationship>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.57"/>
          <templateId root="2.16.840.1.113883.10.20.1.47"/>
          <id root="2689073d-f15c-4ba4-95ec-4288af0e47d9"/>
          <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Status"/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
          <value xsi:type="CE"/>
        </observation>
      </entryRelationship>
      <entryRelationship>
        <act moodCode="INT">
          <templateId root="2.16.840.1.113883.10.20.1.49"/>
          <id root="0247861b-1877-419d-8a88-01c60cd7955b"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
        </act>
      </entryRelationship>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.54"/>
          <id root="f671ac8b-eb8c-46c9-8c72-a25454e238e0"/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
          <entryRelationship>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.1.55"/>
              <id root="63cef313-a341-48fa-ba37-cc8b0672701c"/>
              <code code="SEV" codeSystem="2.16.840.1.113883.5.4"</pre>
 codeSystemName="ActCode" displayName="Severity observation"/>
              <statusCode code="completed"/>
              <effectiveTime>
                <low value="2011"/>
                <high value="2011"/>
              </effectiveTime>
            </observation>
          </entryRelationship>
        </observation>
      </entryRelationship>
    </substanceAdministration>
  </entry>
</section>
```

# **Payers Section**

[Section: templateId 2.16.840.1.113883.3.88.11.83.101]

The Payers Section contains data on the patient's payers, whether a 'third party' insurance, self-pay, other payer or guarantor, or some combination. At a minimum, the patient's pertinent current payment sources should be listed. If no

payment sources are supplied, the reason shall be supplied as free text in the narrative block (e.g., Not Insured, Payer Unknown, Medicare Pending, et cetera).

1. SHALL conform to *IHE Payers Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.7)

#### **Payers Section example**

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:h17-</pre>
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <templateId root="2.16.840.1.113883.10.20.1.9"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.5.3.7"/>
  <templateId root="2.16.840.1.113883.3.88.11.83.101"/>
  <id root="9229d822-dad0-4090-aab0-13ceb0ebbde9"/>
 <code code="48768-6" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Payment sources"/>
  <title>Payment sources</title>
  <entry>
    <act classCode="ACT" moodCode="DEF">
      <templateId root="2.16.840.1.113883.10.20.1.20"/>
      <id root="34a29050-c0ed-4910-8351-7d9fd3357d14"/>
      <code code="48768-6" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Payment sources"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <entryRelationship>
        <act classCode="ACT" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.26"/>
          <id root="12f2ade7-fb46-4418-a3aa-413da8ac4650"/>
          <code/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
        </act>
      </entryRelationship>
    </act>
  </entry>
  <entry>
    <act classCode="ACT" moodCode="DEF">
      <templateId root="2.16.840.1.113883.10.20.1.20"/>
      <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.17"/>
      <id root="b1c5cdde-a188-4aab-8012-a9249afa0edf"/>
      <code code="48768-6" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Payment sources"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <entryRelationship>
        <act classCode="ACT" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.26"/>
          <id root="0e2b1c30-7932-407f-aa11-6f6575dda659"/>
          <code/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
        </act>
```

```
</entryRelationship>
  </act>
  </entry>
</section>
```

# **Physical Exam Section**

```
[Section: templateId 2.16.840.1.113883.3.88.11.83.118]
```

The Physical Examination Section contains information describing the physical findings.

**1. SHALL** conform to *IHE Physical Exam Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.1.9.15)

#### **Physical Exam Section example**

### Plan Of Care Section

[Section: templateId 2.16.840.1.113883.3.88.11.83.124]

The Plan of Care Section contains information about the expectations for care to be provided including proposed interventions and goals for improving the condition of the patient.

A plan of care section varies from the assessment and plan section defined above in that it does not include a physician assessment of the patient condition.

1. SHALL conform to IHE Care Plan Section template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.31)

#### Plan Of Care Section example

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-</pre>
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <templateId root="2.16.840.1.113883.10.20.1.10"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.31"/>
  <templateId root="2.16.840.1.113883.3.88.11.83.124"/>
  <id root="e5810ce8-2882-498c-98f4-bf702adb7f45"/>
  <code code="18776-5" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Treatment plan"/>
  <title>Treatment plan</title>
 <entry>
    <act>
      <templateId root="2.16.840.1.113883.10.20.1.25"/>
      <id root="fab6babc-06cf-4f2f-a572-00ee97ec9168"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
    </act>
  </entry>
  <entry>
    <encounter>
```

```
<templateId root="2.16.840.1.113883.10.20.1.25"/>
      <id root="2e6d2500-e691-4153-9ed3-0fc71c26b992"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
    </encounter>
  </entry>
  <entry>
    <observation>
      <templateId root="2.16.840.1.113883.10.20.1.25"/>
      <id root="01e6b087-7479-4af9-bfef-7a4805e0a755"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    cedure>
      <templateId root="2.16.840.1.113883.10.20.1.25"/>
      <id root="b46e2e4d-881e-4b7c-9c00-28b25d384dd7"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
    </procedure>
  </entry>
  <entry>
    <substanceAdministration>
      <templateId root="2.16.840.1.113883.10.20.1.25"/>
      <id root="5556b926-7961-420e-b14f-e75146329863"/>
      <effectiveTime value="20110404"/>
    </substanceAdministration>
  </entry>
  <entry>
    <supply>
      <templateId root="2.16.840.1.113883.10.20.1.25"/>
      <id root="94c76eb8-d350-4836-8def-5d94631df6c0"/>
      <effectiveTime value="20110404"/>
    </supply>
  </entry>
</section>
```

# **Problem List Section**

[Section: templateId 2.16.840.1.113883.3.88.11.83.103]

The Problem List Section contains data on the problems currently being monitored for the patient.

- **1. SHALL** conform to *IHE Active Problems Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.6) (C83-[CT-103-2])
- 2. SHALL contain at least one [1..\*] entry (C83-[CT-103-1]), such that
  - **a.** Contains exactly one [1..1] *Condition* (templateId: 2.16.840.1.113883.3.88.11.83.7)

#### **Problem List Section example**

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:h17-
org:v3" xsi:schemaLocation="urn:h17-org:v3 CDA.xsd">
        <templateId root="2.16.840.1.113883.10.20.1.11"/>
        <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.6"/>
        <templateId root="2.16.840.1.113883.3.88.11.83.103"/>
```

```
<id root="c9cb0e40-3560-4bca-a41c-503fce6af72c"/>
<code code="11450-4" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Problem list"/>
 <title>Problem list</title>
 <entry>
   <act classCode="ACT" moodCode="EVN">
     <templateId root="2.16.840.1.113883.10.20.1.27"/>
     <id root="6a0c9fd6-ef33-4101-be04-3ab653bd0530"/>
     <code nullFlavor="NA"/>
     <effectiveTime>
       <low value="2011"/>
       <high value="2011"/>
     </effectiveTime>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.41"/>
         <id root="3faf1fac-b712-4e0b-b885-54d60199d39b"/>
         <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"</pre>
codeSystemName="ActCode"/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <value xsi:type="CD"/>
       </observation>
     </entryRelationship>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.28"/>
         <id root="361d6a35-ca23-4fab-82d3-66cf290f9bbf"/>
         <code/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <entryRelationship>
           <observation classCode="OBS" moodCode="EVN">
             <templateId root="2.16.840.1.113883.10.20.1.57"/>
             <templateId root="2.16.840.1.113883.10.20.1.50"/>
             <id root="5aec6b91-e388-4d9f-a668-b39bef70976a"/>
             <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Status"/>
             <statusCode code="completed"/>
             <effectiveTime>
               <low value="2011"/>
               <high value="2011"/>
             </effectiveTime>
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            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.1.57"/>
              <templateId root="2.16.840.1.113883.10.20.1.51"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.1.2"/>
              <id root="e0fe9714-f89b-4ad3-bb5b-c93ee885d022"/>
              <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Health status"/>
              <text/>
              <statusCode code="completed"/>
              <effectiveTime>
                <low value="2011"/>
                <high value="2011"/>
              </effectiveTime>
              <value xsi:type="CE"/>
            </observation>
          </entryRelationship>
          <entryRelationship>
            <act classCode="ACT" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.1.40"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.2"/>
              <id root="200e4bd7-db5f-4e24-a52f-b22b16de710f"/>
              <code code="48767-8" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Annotation comment"/>
              <statusCode code="completed"/>
              <effectiveTime>
                <low value="2011"/>
                <high value="2011"/>
              </effectiveTime>
            </act>
          </entryRelationship>
        </observation>
      </entryRelationship>
    </act>
  </entry>
</section>
```

#### Reason For Referral Section

[Section: templateId 2.16.840.1.113883.3.88.11.83.106]

The Reason for Referral Section contains information about the reason that the patient is being referred.

**1. SHALL** conform to *IHE Reason For Referral Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.1)

#### **Reason For Referral Section example**

# **Review Of Systems Section**

[Section: templateId 2.16.840.1.113883.3.88.11.83.120]

The Review of Systems Section contains information describing patient responses to questions about the function of various body systems.

**1. SHALL** conform to *IHE Review Of Systems Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.18)

#### **Review Of Systems Section example**

# **Social History Section**

[Section: templateId 2.16.840.1.113883.3.88.11.83.126]

The Social History Section contains information about the person's beliefs, home life, community life, work life, hobbies, and risky habits.

**1. SHALL** conform to *IHE Social History Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.16)

#### **Social History Section example**

# **Surgeries Section**

[Section: templateId 2.16.840.1.113883.3.88.11.83.108]

- **1. SHALL** conform to *IHE Coded Surgeries Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.12) (C83-[CT-108-1])
- **2. SHALL** contain at least one [1..\*] **entry** (C83-[CT-108-2]), such that
  - **a.** Contains exactly one [1..1] *Procedure* (templateId: 2.16.840.1.113883.3.88.11.83.17)

#### **Surgeries Section example**

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:h17-
org:v3" xsi:schemaLocation="urn:h17-org:v3 CDA.xsd">
```

```
<templateId root="2.16.840.1.113883.10.20.1.12"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.11"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.12"/>
  <templateId root="2.16.840.1.113883.3.88.11.83.108"/>
  <id root="68374cc9-28b2-48ea-942f-550fc2524f26"/>
  <code code="47519-4" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="History of procedures"/>
  <title>History of procedures</title>
  <entry>
    cedure>
      <templateId root="2.16.840.1.113883.10.20.1.29"/>
      <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.19"/>
      <templateId root="2.16.840.1.113883.3.88.11.83.17"/>
      <id root="05612c8b-4df9-4f20-89bb-95934932aadc"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <targetSiteCode codeSystem="2.16.840.1.113883.6.96"</pre>
 codeSystemName="SNOMEDCT"/>
    </procedure>
  </entry>
</section>
```

# Vital Signs Section

[Section: templateId 2.16.840.1.113883.3.88.11.83.119]

The Vital Signs Section contains information documenting the patient vital signs.

- **1. SHALL** conform to *IHE Coded Vital Signs Section* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2) (C83-[CT-119-1])
- 2. SHALL satisfy: Contains entries conforming to the Vital Sign module. (C83-[CT-119-2])
  - [OCL]: self.entry->exists(entry : cda::Entry | entry.organizer.oclIsKindOf(ihe::VitalSignsOrganizer) and entry.organizer.component.observation->exists(obs : cda::Observation | obs.oclIsKindOf(hitsp::VitalSign)))

#### Vital Signs Section example

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:h17-</pre>
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <templateId root="2.16.840.1.113883.10.20.1.16"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.25"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2"/>
  <templateId root="2.16.840.1.113883.3.88.11.83.119"/>
  <id root="9b780d85-4dfb-455c-af6b-7e528481eb17"/>
  <code code="8716-3" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Vital signs"/>
  <title>Vital signs</title>
  <entry>
    <organizer moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.32"/>
      <templateId root="2.16.840.1.113883.10.20.1.35"/>
      <id root="e8551ae2-2a2f-4f29-a627-944f0791fc17"/>
      <code/>
      <statusCode/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
```

```
<component>
        <observation moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.31"/>
          <id root="2c2cff8e-4947-49b3-a824-9d61d8bb3f65"/>
          <code/>
          <statusCode/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
          <interpretationCode/>
          <methodCode/>
        </observation>
      </component>
    </organizer>
  </entry>
  <entry>
    <organizer classCode="CLUSTER" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.32"/>
      <templateId root="2.16.840.1.113883.10.20.1.35"/>
      <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13.1"/>
      <id root="8ff46620-4001-41ff-9af9-a6a5d398c185"/>
      <code code="46680005" codeSystem="2.16.840.1.113883.6.96"</pre>
 codeSystemName="SNOMEDCT" displayName="Vital signs"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <component>
        <observation moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.31"/>
          <id root="43fe0360-f3c4-4267-b080-8ae7aa4d97df"/>
          <code/>
          <statusCode/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
          <interpretationCode/>
          <methodCode/>
        </observation>
      </component>
      <component>
        <observation moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.31"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13.2"/>
          <id root="56b316dd-4e2b-4b03-9401-cf91ad87e517"/>
          <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
          <value xsi:type="PQ"/>
          <interpretationCode/>
          <methodCode/>
          <targetSiteCode/>
        </observation>
      </component>
    </organizer>
  </entry>
</section>
```

# Chapter

4

# **CLINICAL STATEMENT TEMPLATES**

# Topics:

- Allergy Drug Sensitivity
- Comment
- Condition
- Condition Entry
- Encounter
- Immunization
- Insurance Provider
- Medication
- Medication Combination Medication
- Medication Conditional Dose
- Medication Normal Dose
- Medication Order Information
- Medication Split Dose
- Medication Tapered Dose
- Medication Type
- Procedure
- Result
- Vital Sign

This section of the Implementation Guide details the clinical statement entries referenced in the document section templates. The clinical statement entry templates are arranged alphabetically.

# **Allergy Drug Sensitivity**

[Act: templateId 2.16.840.1.113883.3.88.11.83.6]

This module contains the allergy or intolerance conditions and the associated adverse reactions suffered by the patient. See the HL7 Continuity of Care Document Section 3.8 for constraints applicable to this module.

- **1. SHALL** conform to *IHE Allergy Intolerance Concern* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.4.5.3) (C83-[DE-6-CDA-2])
- 2. SHOULD satisfy: the observation/effectiveTime element is present to record event date
  - This is a date that expresses when this particular allergy or intolerance was known to be active for the patient
- 3. SHALL satisfy: the observation/code element shall be present to record the adverse event type
  - Describes the type of product and intolerance suffered by the patient. The type of product shall be classified
    with respect to whether the adverse event occurs in relationship with a medication, food, or environmental
    or other product. The adverse event should also be classified more specifically as an allergy, non-allergy
    intolerance, or just adverse reaction if that level of detail is not known
- **4. SHALL** satisfy: the code/@code attribute value is from Allergy/Adverse Event Type Value Set, 2.16.840.1.113883.3.88.12.3221.6.2, version: 20081218, Static (C154-[DE-6.02-1])
- **5. SHOULD** satisfy: the observation/participant element may be present
- 6. SHALL satisfy: the participant/@typecode attribute shall be 'CSM'
- 7. SHALL satisfy: the participant/participantRole element may be present
- 8. SHALL satisfy: the participant/participantRole/@classcode attribute shall be 'MANU'
- 9. SHALL satisfy: The participant/participantRole/PlayingEntity element may be present
- 10. SHALL satisfy: the participant/participantRole/playingEntity/@classcode attribute shall be 'MMAT'
- 11. SHALL satisfy: the participant/participantRole/playingEntity/name element is present
  - This is the name or other description of the product or agent that causes the intolerance
- **12. SHOULD** satisfy: participant/participantRole/playingEntity/code element is present
  - This value is a code describing the product
- **13.** For participant/participantRole/playingEntity/code element, Food and substance allergies **SHALL** be coded as Ingredient Name Value Set, 2.16.840.1.113883.3.88.12.80.20, Dynamic (C154-[DE-6.04-1])
- **14.** For participant/participantRole/playingEntity/code element, Allergies to a class of medication **SHALL** be coded as Medication Drug Class Value Set, 2.16.840.1.113883.3.88.12.80.17, version: 20081218, Dynamic (C154-[DE-6.04-2])
- **15.** For participant/participantRole/playingEntity/code element, Allergies to a specific medication **SHALL** be coded with Medication Brand Name Value Set, 2.16.840.1.113883.3.88.12.80.16, version: 20081218, Dynamic (C154-[DE-6.04-3])
- **16. SHOULD** satisfy: the text element is present in the Reaction Observation entry
  - This is the reaction that may be caused by the product or agent
- 17. SHOULD satisfy: the code element is present in the Reaction Observation entry
  - This value is a code describing the reaction
- **18. SHALL** satisfy: the code element is coded as Problem Value Set, 2.16.840.1.113883.3.88.12.3221.7.4, version: 20100125, Dynamic (C154-[DE-6.06-1])
- 19. SHOULD satisfy: The text element is present in the Severity Observation template
  - This is a description of the level of severity of the allergy or intolerance
- **20. SHOULD** satisfy: the code element is present in the Severity Observation entry
  - · This value is a code describing the level severity of the allergy or intolerance
- **21. SHALL** satisfy: the code element is coded as Problem Severity Value Set, 2.16.840.1.113883.3.88.12.3221.6.8, version: 20081218, Static (C154-[DE-6.08-1])

#### **Allergy Drug Sensitivity example**

<?xml version="1.0" encoding="UTF-8"?>

```
<act xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:h17-</pre>
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd" classCode="ACT"
moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.1.27"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.5.1"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.5.3"/>
  <templateId root="2.16.840.1.113883.3.88.11.83.6"/>
  <id root="8ae7d086-cd98-4a18-97ca-25fd64731190"/>
 <code nullFlavor="NA"/>
  <statusCode/>
  <effectiveTime>
    <low value="2011"/>
    <high value="2011"/>
  </effectiveTime>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.41"/>
      <id root="a5336773-a85c-4d17-99d7-e6c07d89420b"/>
      <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"</pre>
 codeSystemName="ActCode"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <value xsi:type="CD"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.28"/>
      <id root="67bb6e5f-ba8d-408c-90fa-ec0683daa2f4"/>
      <code/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.57"/>
          <templateId root="2.16.840.1.113883.10.20.1.50"/>
          <id root="86df8f33-8b70-4a15-b160-bea3d4cde421"/>
          <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Status"/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
          <value xsi:type="CE"/>
        </observation>
      </entryRelationship>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.57"/>
          <templateId root="2.16.840.1.113883.10.20.1.51"/>
          <id root="d41ed53e-158b-4ae2-bb36-ceba0d952609"/>
          <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Health status"/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
```

```
</effectiveTime>
          <value xsi:type="CE"/>
        </observation>
      </entryRelationship>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.38"/>
          <id root="274187a9-a80b-434d-a877-0b6adb5b864c"/>
          <code code="397659008" codeSystem="2.16.840.1.113883.6.96"</pre>
 codeSystemName="SNOMEDCT" displayName="Age"/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
        </observation>
      </entryRelationship>
    </observation>
 </entryRelationship>
</act>
```

## Comment

[Act: templateId 2.16.840.1.113883.3.88.11.83.11]

This module contains a comment to be supplied for any other entry Content Modules.

- **1. SHALL** conform to *IHE Comment* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.4.2) (C83-[DE-10-CDA-3])
- 2. SHALL contain exactly one [1..1] author (C83-[DE-10-CDA-4]), such that
  - The author of a comment is recorded as specified for authors in the Information Source module.
- **3.** Data elements defined elsewhere in the specification **SHALL NOT** be recorded using the Comments Module. (C83-[DE-10-CDA-1])
  - 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. Instead, it would be recorded using the data element defined in Allergy/Drug Sensitivity.

#### Comment example

```
<?xml version="1.0" encoding="UTF-8"?>
<act xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:h17-</pre>
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd" classCode="ACT"
moodCode="EVN">
 <templateId root="2.16.840.1.113883.10.20.1.40"/>
 <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.2"/>
 <templateId root="2.16.840.1.113883.3.88.11.83.11"/>
 <id root="981b4381-cf3c-4318-8f14-08be181c6f61"/>
 <code code="48767-8" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Annotation comment"/>
 <text/>
 <statusCode code="completed"/>
 <effectiveTime>
   <low value="2011"/>
   <high value="2011"/>
 </effectiveTime>
</act>
```

## Condition

[Act: templateId 2.16.840.1.113883.3.88.11.83.7]

- **1. SHALL** conform to *IHE Problem Concern Entry* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.4.5.2) (C83-[DE-7-CDA-2])
- 2. SHALL contain at least one [1..\*] entryRelationship, such that
  - a. Contains @typeCode="SUBJ" SUBJ (has subject)
  - **b.** Contains exactly one [1..1] *Condition Entry* (templateId: 1.3.6.1.4.1.19376.1.5.3.1.4.5)
- **3.** The treating provider or providers **SHALL** be recorded in a <performer> element under the <act> that describes the condition of concern (C83-[DE-7.05-CDA-3])
  - [OCL]: not self.performer->isEmpty()
- **4.** The identifier of the treating provider **SHALL** be present in the <id> element beneath the <assignedEntity>. This identifier **SHALL** be the identifier of one of the providers listed in the healthcare providers module. (C83-[DE-7.05-CDA-2])
  - [OCL]: self.performer->exists(p : cda::Performer2 | p.assignedEntity.id->size() > 0)
- **5.** The time over which this provider treated the condition **MAY** be recorded in the <time> element beneath the <performer> element (C83-[DE-7.05-CDA-1])
  - [OCL]: self.performer->exists(p : cda::Performer2 | p.time.oclIsUndefined())

#### Condition example

```
<?xml version="1.0" encoding="UTF-8"?>
<act xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:h17-</pre>
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd" classCode="ACT"
moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.1.27"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.5.1"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.5.2"/>
  <templateId root="2.16.840.1.113883.3.88.11.83.7"/>
  <id root="f98ac629-92b8-4f63-b438-5018e1c597e1"/>
  <code nullFlavor="NA"/>
  <statusCode/>
  <effectiveTime>
    <low value="2011"/>
    <high value="2011"/>
  </effectiveTime>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.41"/>
      <id root="461b3969-c612-46b3-8c01-87c8f0bcaa68"/>
      <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"</pre>
 codeSystemName="ActCode"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <value xsi:type="CD"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.28"/>
      <id root="6fd286cb-672b-4613-ad08-ee472c89cc85"/>
      <code/>
```

```
<statusCode code="completed"/>
     <effectiveTime>
       <low value="2011"/>
       <high value="2011"/>
     </effectiveTime>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.57"/>
         <templateId root="2.16.840.1.113883.10.20.1.50"/>
         <id root="016b7606-b8ab-4601-94db-b407379c4a5f"/>
         <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Status"/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <value xsi:type="CE"/>
       </observation>
     </entryRelationship>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.57"/>
         <templateId root="2.16.840.1.113883.10.20.1.51"/>
         <id root="24857fe4-7083-4497-a1b0-606599dd5859"/>
         <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Health status"/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <value xsi:type="CE"/>
       </observation>
     </entryRelationship>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.38"/>
         <id root="1e750c0a-bbf1-486a-98b1-0d8498962450"/>
         <code code="397659008" codeSystem="2.16.840.1.113883.6.96"</pre>
codeSystemName="SNOMEDCT" displayName="Age"/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
       </observation>
     </entryRelationship>
   </observation>
 </entryRelationship>
 <entryRelationship>
   <observation classCode="OBS" moodCode="EVN">
     <templateId root="2.16.840.1.113883.10.20.1.28"/>
     <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.5"/>
     <id root="1c7558e6-3083-45f3-ae26-01c774ac784e"/>
     <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
     <text/>
     <statusCode code="completed"/>
     <effectiveTime>
       <low value="2011"/>
       <high value="2011"/>
     </effectiveTime>
     <value xsi:type="CD"/>
     <entryRelationship>
```

```
<observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.57"/>
         <templateId root="2.16.840.1.113883.10.20.1.50"/>
         <id root="e6f3d77e-2128-457a-b7ff-acc6e4970ad9"/>
         <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Status"/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <value xsi:type="CE"/>
       </observation>
     </entryRelationship>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.57"/>
         <templateId root="2.16.840.1.113883.10.20.1.51"/>
         <id root="4485fb9a-ed35-4666-8353-da284ed267f3"/>
         <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Health status"/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <value xsi:type="CE"/>
       </observation>
     </entryRelationship>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.38"/>
         <id root="db6ba716-e891-4528-8055-05cf00c11985"/>
         <code code="397659008" codeSystem="2.16.840.1.113883.6.96"</pre>
codeSystemName="SNOMEDCT" displayName="Age"/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
       </observation>
     </entryRelationship>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.55"/>
         <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.1"/>
         <id root="ca0ef185-2d11-49e1-9b69-a46a2454c5c6"/>
         <code code="SEV" codeSystem="2.16.840.1.113883.5.4"</pre>
codeSystemName="ActCode" displayName="Severity observation"/>
         <text/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <value xsi:type="CD"/>
       </observation>
     </entryRelationship>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.57"/>
         <templateId root="2.16.840.1.113883.10.20.1.50"/>
         <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.1.1"/>
         <id root="7031c922-b415-4a8d-8b07-3b383655c22e"/>
```

```
<code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Status"/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
       </observation>
     </entryRelationship>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.57"/>
         <templateId root="2.16.840.1.113883.10.20.1.51"/>
         <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.1.2"/>
         <id root="163a317e-cc61-436e-a00d-73f20214830c"/>
         <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Health status"/>
         <text/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <value xsi:type="CE"/>
       </observation>
     </entryRelationship>
     <entryRelationship>
       <act classCode="ACT" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.40"/>
         <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.2"/>
         <id root="85769d92-ab8a-4951-89ba-54bd8f24b29b"/>
         <code code="48767-8" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Annotation comment"/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
       </act>
     </entryRelationship>
   </observation>
 </entryRelationship>
 <entryRelationship>
   <observation classCode="OBS" moodCode="EVN">
     <templateId root="2.16.840.1.113883.10.20.1.28"/>
     <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.5"/>
     <id root="2da9d122-0b36-40ea-a95c-9ecbe74b5469"/>
     <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
     <text/>
     <statusCode code="completed"/>
     <effectiveTime>
       <low value="2011"/>
       <hiqh value="2011"/>
     </effectiveTime>
     <value xsi:type="CD"/>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.57"/>
         <templateId root="2.16.840.1.113883.10.20.1.50"/>
         <id root="660832c4-a043-48d4-a8a7-5a927e8e9a37"/>
         <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Status"/>
         <statusCode code="completed"/>
         <effectiveTime>
```

```
<low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <value xsi:type="CE"/>
       </observation>
     </entryRelationship>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.57"/>
         <templateId root="2.16.840.1.113883.10.20.1.51"/>
         <id root="ab27de6a-7833-485f-b93a-6149052a3caa"/>
         <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Health status"/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <value xsi:type="CE"/>
       </observation>
     </entryRelationship>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.38"/>
         <id root="a8f57f4c-7eb8-46c1-ac97-749ca4d5b5c7"/>
         <code code="397659008" codeSystem="2.16.840.1.113883.6.96"</pre>
codeSystemName="SNOMEDCT" displayName="Age"/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
       </observation>
     </entryRelationship>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.55"/>
         <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.1"/>
         <id root="9b183249-d2d1-4905-87b7-9ba5fae17048"/>
         <code code="SEV" codeSystem="2.16.840.1.113883.5.4"</pre>
codeSystemName="ActCode" displayName="Severity observation"/>
         <text/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
         <value xsi:type="CD"/>
       </observation>
     </entryRelationship>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.57"/>
         <templateId root="2.16.840.1.113883.10.20.1.50"/>
         <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.1.1"/>
         <id root="8782765a-3892-410d-a349-8baab17a11ac"/>
         <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Status"/>
         <statusCode code="completed"/>
         <effectiveTime>
           <low value="2011"/>
           <high value="2011"/>
         </effectiveTime>
       </observation>
```

```
</entryRelationship>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.57"/>
          <templateId root="2.16.840.1.113883.10.20.1.51"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.1.2"/>
          <id root="4c6aa79a-aec5-49fd-87ab-9f34e5b20b1f"/>
          <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Health status"/>
          <text/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
          <value xsi:type="CE"/>
        </observation>
      </entryRelationship>
      <entryRelationship>
        <act classCode="ACT" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.40"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.2"/>
          <id root="06243665-d22f-4322-9ed7-d031a3b4f1e8"/>
          <code code="48767-8" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Annotation comment"/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
        </act>
      </entryRelationship>
    </observation>
  </entryRelationship>
</act>
```

# **Condition Entry**

[Observation: templateId 1.3.6.1.4.1.19376.1.5.3.1.4.5]

Condition Entry is not defined as a separate template in HITSP C83, but only as additional constraints on the IHE Problem Entry when embedded in a Condition template. In this model, Condition Entry is defined as a separate class (without a template ID) that restricts the IHE Problem Entry. When these templates are consolidated in the new implementation guide, these Condition Entry constraints will be merged with Problem Entry.

- **1. SHALL** conform to *IHE Problem Entry* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.4.5)
- 2. SHOULD contain exactly one [1..1] code, which SHOULD be selected from ValueSet 2.16.840.1.113883.3.88.12.3221.7.2 Problem Type STATIC 1
- 3. SHALL contain exactly one [1..1] value, which SHALL be selected from ValueSet 2.16.840.1.113883.3.88.12.3221.7.4 Problem STATIC 1
- **4.** The onset date **SHALL** be recorded in the <low> element of the <effectiveTime> element when known. (C83-[DE-7.01-1])
  - [OCL]: not self.effectiveTime.low.oclIsUndefined()
- **5.** The resolution data **SHALL** be recorded in the <high> element of the <effectiveTime> element when known. (C83-[DE-7.01-2])
  - [OCL]: not self.effectiveTime.high.oclIsUndefined()

- **6.** If the problem is known to be resolved, but the date of resolution is not known, then the <high> element **SHALL** be present, and the nullFlavor attribute **SHALL** be set to 'UNK'. Therefore, the existence of an <high> element within a problem does indicate that the problem has been resolved. (C83-[DE-7.01-3])
  - [OCL]: not self.effectiveTime.high.oclIsUndefined()

#### **Condition Entry example**

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"</pre>
xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd"
 classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.1.28"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.5"/>
  <id root="05647ba2-54eb-45c2-a6fd-bfc76fd9bf0f"/>
 <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
 <text/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2011"/>
    <high value="2011"/>
  </effectiveTime>
  <value xsi:type="CD"/>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.57"/>
      <templateId root="2.16.840.1.113883.10.20.1.50"/>
      <id root="63182459-19c8-4a41-bd70-2ef2af47cdcf"/>
      <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Status"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <value xsi:type="CE"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.57"/>
      <templateId root="2.16.840.1.113883.10.20.1.51"/>
      <id root="650cfbab-a9a5-40e1-ab05-5a9286a1389b"/>
      <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Health status"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <value xsi:type="CE"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.38"/>
      <id root="689b45d6-19f5-4a38-9eb9-525f1e7cbebd"/>
      <code code="397659008" codeSystem="2.16.840.1.113883.6.96"</pre>
 codeSystemName="SNOMEDCT" displayName="Age"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
```

```
</observation>
 </entryRelationship>
 <entryRelationship>
   <observation classCode="OBS" moodCode="EVN">
     <templateId root="2.16.840.1.113883.10.20.1.55"/>
     <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.1"/>
     <id root="43392767-7520-4a17-9eda-ce821731aeb5"/>
     <code code="SEV" codeSystem="2.16.840.1.113883.5.4"</pre>
codeSystemName="ActCode" displayName="Severity observation"/>
     <text/>
     <statusCode code="completed"/>
     <effectiveTime>
       <low value="2011"/>
       <high value="2011"/>
     </effectiveTime>
     <value xsi:type="CD"/>
   </observation>
 </entryRelationship>
 <entryRelationship>
   <observation classCode="OBS" moodCode="EVN">
     <templateId root="2.16.840.1.113883.10.20.1.57"/>
     <templateId root="2.16.840.1.113883.10.20.1.50"/>
     <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.1.1"/>
     <id root="0a357c10-dd68-4315-a7f6-9600f9bd9cee"/>
     <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Status"/>
     <statusCode code="completed"/>
     <effectiveTime>
       <low value="2011"/>
       <high value="2011"/>
     </effectiveTime>
   </observation>
 </entryRelationship>
 <entryRelationship>
   <observation classCode="OBS" moodCode="EVN">
     <templateId root="2.16.840.1.113883.10.20.1.57"/>
     <templateId root="2.16.840.1.113883.10.20.1.51"/>
     <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.1.2"/>
     <id root="3c301c9e-6d76-42cd-aa52-ae5512f1e69b"/>
     <code code="11323-3" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Health status"/>
     <text/>
     <statusCode code="completed"/>
     <effectiveTime>
       <low value="2011"/>
       <high value="2011"/>
     </effectiveTime>
     <value xsi:type="CE"/>
   </observation>
 </entryRelationship>
 <entryRelationship>
   <act classCode="ACT" moodCode="EVN">
     <templateId root="2.16.840.1.113883.10.20.1.40"/>
     <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.2"/>
     <id root="53ec2e9c-5753-43a2-94af-81cfa6f238d8"/>
     <code code="48767-8" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Annotation comment"/>
     <statusCode code="completed"/>
     <effectiveTime>
       <low value="2011"/>
       <high value="2011"/>
     </effectiveTime>
   </act>
 </entryRelationship>
```

</observation>

# **Encounter**

[Encounter: templateId 2.16.840.1.113883.3.88.11.83.16]

The encounter entry contains data describing the interactions between the patient and clinicians. Interaction includes both in-person and non-in-person encounters such as telephone and e-mail communication.

- **1. SHALL** conform to *IHE Encounter Activity* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.4.14)
- 2. SHOULD contain exactly one [1..1] code, which SHOULD be selected from ValueSet 2.16.840.1.113883.3.88.12.80.32 EncounterType DYNAMIC (C83-[DE-16.02-1])
- **3. MAY** contain zero or one [0..1] **priorityCode**, which **MAY** be selected from ValueSet 2.16.840.1.113883.3.88.12.80.33 Admission Type (NUBC) **STATIC** (C154-[DE-16.07-1])

#### **Encounter example**

```
<?xml version="1.0" encoding="UTF-8"?>
<encounter xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"</pre>
xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd"
 classCode="ENC" moodCode="EVN">
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.14"/>
  <templateId root="2.16.840.1.113883.10.20.1.21"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.14"/>
  <templateId root="2.16.840.1.113883.3.88.11.83.16"/>
  <id root="51c5f7db-c2c3-49da-bbed-90fcbc0438cc"/>
  <code codeSystem="2.16.840.1.113883.6.12" codeSystemName="CPT-4"/>
  <text/>
  <effectiveTime>
    <low value="2011"/>
    <high value="2011"/>
  </effectiveTime>
  <priorityCode/>
</encounter>
```

## **Immunization**

[SubstanceAdministration: templateId 2.16.840.1.113883.3.88.11.83.13]

- **1. SHALL** conform to *IHE Immunization* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.4.12)
- 2. SHALL contain zero or one [0..1] code (CodeSystem: 2.16.840.1.113883.12.292 Vaccines administered (CVX))
- **3. SHOULD** contain zero or one [0..1] **entryRelationship**, such that
- 4. The reason for refusal SHALL be coded as specified in HITSP/C80 Section 2.2.3.5.3 No Immunization Reason

#### **Immunization example**

```
<entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.46"/>
      <id root="82b79c7f-3391-4140-9388-648085930a93"/>
      <code code="30973-2" codeSystemName="" displayName="Dose number"/>
      <statusCode/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <value xsi:type="INT"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.57"/>
      <templateId root="2.16.840.1.113883.10.20.1.47"/>
      <id root="d34e55c1-e3aa-4191-a06e-d59f539d6115"/>
      <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Status"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <value xsi:type="CE"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <act moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.1.49"/>
      <id root="f348c778-9841-4b37-b2a1-6c4a2a8867a1"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
    </act>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.54"/>
      <id root="191ef8bd-8fc8-424e-bdc7-bfd1a3200f02"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.55"/>
          <id root="5f87bbca-496e-4a74-a3ff-482d72e28a6d"/>
          <code code="SEV" codeSystem="2.16.840.1.113883.5.4"</pre>
 codeSystemName="ActCode" displayName="Severity observation"/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
        </observation>
      </entryRelationship>
    </observation>
  </entryRelationship>
</substanceadministration>
```

# **Insurance Provider**

[Act: templateId 2.16.840.1.113883.3.88.11.83.5]

1. SHALL conform to IHE Coverage Entry template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.4.17)

#### **Insurance Provider example**

```
<?xml version="1.0" encoding="UTF-8"?>
<act xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-</pre>
org:v3" xsi:schemaLocation="urn:h17-org:v3 CDA.xsd" classCode="ACT"
moodCode="DEF">
  <templateId root="2.16.840.1.113883.10.20.1.20"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.17"/>
  <templateId root="2.16.840.1.113883.3.88.11.83.5"/>
  <id root="768f334c-db8d-4bcb-ade3-ae12971040a6"/>
  <code code="48768-6" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Payment sources"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2011"/>
    <high value="2011"/>
  </effectiveTime>
  <entryRelationship>
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.26"/>
      <id root="9b334148-2d2f-48e0-9eb8-c37fddd7ec04"/>
      <code/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
    </act>
  </entryRelationship>
</act>
```

### Medication

[SubstanceAdministration: templateId 2.16.840.1.113883.3.88.11.83.8]

- **1. SHALL** conform to *IHE Medication* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.4.7) (C83-[DE-8-CDA-2])
- 2. MAY contain at least one [1..\*] effectiveTime (CONF-308)
  - Indicate Medication Stopped: Used to express a "hard stop," such as the last Sig sequence in a tapering dose, where the last sequence is 'then D/C' or where the therapy/drug is used to treat a condition and that treatment is for a fixed duration with a hard stop, such as antibiotic treatment, etc.
  - Administration Timing: defines a specific administration or use time. Can be a text string (Morning, Evening, Before Meals, 1 Hour After Meals, 3 Hours After Meals, Before Bed) or an exact time.
  - Frequency: defines how often the medication is to be administered as events per unit of time. Often expressed as the number of times per day (e.g., four times a day), but may also include event-related information (e.g., 1 hour before meals, in the morning, at bedtime). Complimentary to Interval, although equivalent expressions may have different implications (e.g., every 8 hours versus 3 times a day).
  - Interval: defines how the product is to be administered as an interval of time. For example, every 8 hours.
     Complimentary to Frequency, although equivalent expressions may have different implications (e.g., every 8 hours versus 3 times a day).

- Duration: for non-instantaneous administrations, indicates the length of time the administration should be continued. For example, (infuse) over 30 minutes.
- 3. MAY contain at least one [1..\*] routeCode, which MAY be selected from ValueSet 2.16.840.1.113883.3.88.12.3221.8.7 Medication Route FDA STATIC 1 (CONF-309, CONF-310)
  - The route is a coded value, and indicates how the medication is received by the patient (by mouth, intravenously, topically, et cetera).
- 4. MAY contain at least one [1..\*] doseQuantity
  - the amount of the product to be given. This may be a known, measurable unit (e.g., milliliters), an administration unit (e.g., tablet), or an amount of active ingredient (e.g., 250 mg). May define a variable dose, dose range or dose options based upon identified criteria (see Dose Indicator)
- 5. MAY contain exactly one [1..1] administrationUnitCode, which MAY be selected from ValueSet 2.16.840.1.113883.3.88.12.3221.8.11 Medication Product Form STATIC 1 (C154-[DE-8.11-1])
  - The physical form of the product as presented to the patient. For example: tablet, capsule, liquid or ointment
- **6.** MAY contain at least one [1..\*] maxDoseQuantity (CONF-312)
  - defines a maximum or dose limit. This segment can repeat for more than one dose restriction
- 7. MAY contain zero or more [0..\*] approachSiteCode, which MAY be selected from ValueSet 2.16.840.1.113883.3.88.12.3221.8.9 Body Site STATIC 2 (C154-[DE-8.09-1])
  - The anatomic site where the medication is administered. Usually applicable to injected or topical products
- **8.** MAY contain zero or more [0..\*] **code** (C83-[DE-8.12-CDA-1])
  - Delivery Method: A description of how the product is administered/consumed
- **9.** Contains zero or one [0..1] **entryRelationship**, such that
  - **a.** Contains exactly one [1..1] *Medication Type* (templateId: 2.16.840.1.113883.3.88.11.83.8.1)
- **10.** Contains at least one [1..\*] **entryRelationship**, such that
  - **a.** Contains exactly one [1..1] *Medication Order Information* (templateId: 2.16.840.1.113883.3.88.11.83.8.3)
- **11.** Contains zero or one [0..1] **entryRelationship**, such that
  - Any noted intended or unintended effects of the product. For example: full body rash, nausea, rash resolved
  - **a.** Contains exactly one [1..1] *CCD Reaction Observation* (templateId: 2.16.840.1.113883.10.20.1.54)
- **12. SHALL** satisfy: The time at which the medication was stopped is determined based on the content of the <high> element of the first <effectiveTime> element. (2.2.2.8.3)
- **13. SHALL** satisfy: The HL7 data type for PIVL\_TS uses the institutionSpecified attribute to indicate whether it is the interval (time between dosing), or frequency (number of doses in a time period) that is important. If institutionSpecified is not present or is set to false, then the time between dosing is important (every 8 hours). If true, then the frequency of administration is important (e.g., 3 times per day). (2.2.2.8.4)
  - defines a specific administration or use time. Can be a text string (Morning, Evening, Before Meals, 1 Hour After Meals, 3 Hours After Meals, Before Bed) or an exact time
- **14.** The first <effectiveTime> **SHALL** use the IVL\_TS data type unless for a single administration, in which case, it **SHALL** use the TS data type. (C83-[DE-8-CDA-3])
- **15.** Medications that are administered based on activities of daily living **SHALL** identify the events that trigger administration in the <event> element beneath the <effectiveTime> element. The <effectiveTime> element **SHALL** be of type EIVL\_TS. (C83-[DE-8.03-CDA-1])
- 16. Medications that are administered at a specified frequency SHALL record the expected interval between doses in the <period> element beneath an <effectiveTime> of type PIVL\_TS. The <effectiveTime> element SHALL have an institutionSpecified attribute value of "true". (C83-[DE-8.04-CDA-1])
  - defines how often the medication is to be administered as events per unit of time. Often expressed as the number of times per day (e.g., four times a day), but may also include event-related information (e.g., 1 hour

- before meals, in the morning, at bedtime). Complimentary to Interval, although equivalent expressions may have different implications (e.g., every 8 hours versus 3 times a day)
- 17. Medications that are administered at a specified interval SHALL record interval between doses in the <period> element beneath an <effectiveTime> element of type PIVL\_TS. The <effectiveTime> element SHALL have an institutionSpecified attribute value of "false". (C83-[DE-8.05-CDA-1])
  - defines how the product is to be administered as an interval of time. For example, every 8 hours.
     Complimentary to Frequency, although equivalent expressions may have different implications (e.g., every 8 hours versus 3 times a day)
- **18.** doseQuantity/@unit, Dose Units **MAY** be present when needed. If present it **SHALL** be coded as 2.16.840.1.113883.3.88.12.80.29 Unit of Measure (C154-[DE-8.08-1])
- **19.** When the coded product or brand name describes the strength or concentration of the medication, and the dosing is in administration units (e.g., 1 tablet, 2 capsules), units **SHOULD** contain the preferred name of the presentation units within braces { } using the units of presentation from the NCI Thesaurus (C154-[DE-8.08-2])
- **20.** The free text description of the delivery method **MAY** be included within a <originalText> element beneath the <code> element (C83-[DE-8.12-CDA-2])
- **21. SHALL** satisfy: Contains one consumable element which contains the Medication Information template. The name and code for the medication are recorded in the <consumable> element.
- **22.** The medication status **MAY** be recorded using the CCD Medication Status observation using the value set defined in the CCD (C154-[DE-8.20-1])
  - If the medication is Active, Discharged, Chronic, Acute, etc
- **23.** [0..\*] indications **SHALL** be recorded using the Indication problem observation (templateID 2.16.840.1.113883.10.20.1.28) described in the CCD Implementation Guide. (C83-[DE-8.20-CDA-1])
  - The medical condition or problem intended to be addressed by the ordered product. For example: for chest pain, for pain, for high blood pressure
- **24.** The indication problem observation **SHALL** contain a <text> element that includes a <reference> element whose value attribute points to the narrative text that is the indication for the medication (C83-[DE-8.20-CDA-2])
- **25.** The indication **SHALL** be coded as 2.16.840.1.113883.3.88.12.3221.7.4, Problem Value Set, version: 20100125, Dynamic (C154-[DE-8.20-1])
- **26.** Patient Instructions **SHALL** be recorded using the Patient Medication Instructions template (templateID 1.3.6.1.4.1.19376.1.5.3.1.4.3) (C83-[DE-8.22-CDA-1])
  - Instructions to the patient that are not traditionally part of the Sig. For example, "keep in the refrigerator."
     More extensive patient education materials can also be included
    - External patient educational materials can be referenced with an appropriate URL entry in the text/ reference/value.
- **27.** The vehicle for administering a medication **MAY** be recorded in a <participantRole> element inside a <participant> element in the <substanceAdministration> element (C83-[DE-8.24-CDA-1])
  - Non-active ingredient(s), or substances not of therapeutic interest, in which the active ingredients are
    dispersed. Most often applied to liquid products where the major fluid component is considered the vehicle.
    For example: Normal Saline is the vehicle in "Ampicillin 150mg in 50ml NS"; Aquaphor is the vehicle in
    "10% LCD in Aquaphor"
- 28. The typeCode attribute of the <participant> element SHALL be CSM (C83-[DE-8.24-CDA-2])
- **29.** The classCode of the cparticipantRole
  SHALL be MANU (C83-[DE-8.24-CDA-3])
- **30.** A <code> element for the <participantRole> **SHALL** be present and **SHALL** contain the code 412307009 from the SNOMED CT code system (C83-[DE-8.24-CDA-4])
- **31.** The <name> element in the <playingEntity> element **SHALL** record the name of the drug vehicle (C83-[DE-8.24-CDA-5])
- **32.** The <code> element in the <playingEntity> element **MAY** be used to supply a coded term for the drug vehicle (C83-[DE-8.24-CDA-6])
- **33. SHALL** satisfy: The Medication Vehicle shall be coded as 2.16.840.1.113883.3.88.12.80.21, Medication Vehicle Value Set, version: 20081218, Dynamic (C154-[DE-8.24-1])

#### **Medication example**

<?xml version="1.0" encoding="UTF-8"?>

```
<substanceadministration xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"</pre>
xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <templateId root="2.16.840.1.113883.10.20.1.24"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.7"/>
  <templateId root="2.16.840.1.113883.3.88.11.83.8"/>
  <id root="2ee1e41d-4d4e-4830-b188-4e31b403274a"/>
 <code/>
 <statusCode/>
 <effectiveTime value="20110404"/>
  <routeCode codeSystem="2.16.840.1.113883.5.112" codeSystemName="HL7</pre>
RouteOfAdministration"/>
  <approachSiteCode/>
  <doseQuantity/>
  <rateQuantity/>
  <maxDoseQuantity/>
  <administrationUnitCode/>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.46"/>
      <id root="9e622afd-8d0c-4f97-8124-dd15fb94bcf5"/>
      <code code="30973-2" codeSystemName="" displayName="Dose number"/>
      <statusCode/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <value xsi:type="INT"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.57"/>
      <templateId root="2.16.840.1.113883.10.20.1.47"/>
      <id root="d17b60bc-5887-46ef-ac1c-5ca452e61dbe"/>
      <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Status"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <value xsi:type="CE"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <act moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.1.49"/>
      <id root="6da58824-67e7-42de-b673-ff5ca1faae60"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
    </act>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.54"/>
      <id root="2600fa2e-d161-468f-a203-f6084221d969"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <entryRelationship>
```

## **Medication Combination Medication**

[SubstanceAdministration: templateId 1.3.6.1.4.1.19376.1.5.3.1.4.11]

- **1. SHALL** conform to *IHE Combination Medication* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.4.11)
- **2. SHALL** conform to *Medication* template (templateId: 2.16.840.1.113883.3.88.11.83.8)

#### **Medication Combination Medication example**

```
<?xml version="1.0" encoding="UTF-8"?>
<substanceadministration xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"</pre>
xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <templateId root="2.16.840.1.113883.10.20.1.24"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.7"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.11"/>
  <templateId root="2.16.840.1.113883.3.88.11.83.8"/>
  <id root="aa9d2de1-ad24-4e95-8d52-50eeed1db5eb"/>
  <code/>
  <statusCode/>
  <effectiveTime value="20110404"/>
  <routeCode codeSystem="2.16.840.1.113883.5.112" codeSystemName="HL7</pre>
 RouteOfAdministration"/>
  <approachSiteCode/>
  <doseQuantity/>
  <rateQuantity/>
  <maxDoseQuantity/>
  <administrationUnitCode/>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.46"/>
      <id root="d90d577b-0fc0-46cc-8991-66a23e526303"/>
      <code code="30973-2" codeSystemName="" displayName="Dose number"/>
      <statusCode/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <value xsi:type="INT"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.57"/>
      <templateId root="2.16.840.1.113883.10.20.1.47"/>
      <id root="35fea782-e4f2-4962-bb42-942137c61961"/>
```

```
<code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Status"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <value xsi:type="CE"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <act moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.1.49"/>
      <id root="67994480-d6ca-4781-8f12-3eb822598b82"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
    </act>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.54"/>
      <id root="664da182-a68b-477f-be5d-6aaf5a6f2b05"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.55"/>
          <id root="8d030ecc-8297-46d6-9cf8-686474fcabcd"/>
          <code code="SEV" codeSystem="2.16.840.1.113883.5.4"</pre>
 codeSystemName="ActCode" displayName="Severity observation"/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
        </observation>
      </entryRelationship>
    </observation>
  </entryRelationship>
</substanceadministration>
```

# **Medication Conditional Dose**

[SubstanceAdministration: templateId 1.3.6.1.4.1.19376.1.5.3.1.4.10]

- **1. SHALL** conform to *IHE Conditional Dose* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.4.10)
- **2. SHALL** conform to *Medication* template (templateId: 2.16.840.1.113883.3.88.11.83.8)

#### **Medication Conditional Dose example**

```
<code/>
 <statusCode/>
 <effectiveTime value="20110404"/>
 <routeCode codeSystem="2.16.840.1.113883.5.112" codeSystemName="HL7</pre>
RouteOfAdministration"/>
 <approachSiteCode/>
 <doseQuantity/>
 <rateQuantity/>
 <maxDoseQuantity/>
 <administrationUnitCode/>
 <entryRelationship>
   <observation classCode="OBS" moodCode="EVN">
     <templateId root="2.16.840.1.113883.10.20.1.46"/>
     <id root="a027996e-a8c0-4f26-ba3a-8cb36ac5a303"/>
     <code code="30973-2" codeSystemName="" displayName="Dose number"/>
     <statusCode/>
     <effectiveTime>
       <low value="2011"/>
       <high value="2011"/>
     </effectiveTime>
     <value xsi:type="INT"/>
   </observation>
 </entryRelationship>
 <entryRelationship>
   <observation classCode="OBS" moodCode="EVN">
     <templateId root="2.16.840.1.113883.10.20.1.57"/>
     <templateId root="2.16.840.1.113883.10.20.1.47"/>
     <id root="4f4f5db7-c8b1-4efc-8919-5311db2485e2"/>
     <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
codeSystemName="LOINC" displayName="Status"/>
     <statusCode code="completed"/>
     <effectiveTime>
       <low value="2011"/>
       <high value="2011"/>
     </effectiveTime>
     <value xsi:type="CE"/>
   </observation>
 </entryRelationship>
 <entryRelationship>
   <act moodCode="INT">
     <templateId root="2.16.840.1.113883.10.20.1.49"/>
     <id root="7fa039c8-645d-4ac7-abde-2a866e3fd341"/>
     <effectiveTime>
       <low value="2011"/>
       <high value="2011"/>
     </effectiveTime>
   </act>
 </entryRelationship>
 <entryRelationship>
   <observation classCode="OBS" moodCode="EVN">
     <templateId root="2.16.840.1.113883.10.20.1.54"/>
     <id root="8770226d-07b5-4560-af8e-eacd7c7371bb"/>
     <statusCode code="completed"/>
     <effectiveTime>
       <low value="2011"/>
       <high value="2011"/>
     </effectiveTime>
     <entryRelationship>
       <observation classCode="OBS" moodCode="EVN">
         <templateId root="2.16.840.1.113883.10.20.1.55"/>
         <id root="be0e0845-090d-4747-9f13-95f537c37bb1"/>
         <code code="SEV" codeSystem="2.16.840.1.113883.5.4"</pre>
codeSystemName="ActCode" displayName="Severity observation"/>
         <statusCode code="completed"/>
```

## **Medication Normal Dose**

[SubstanceAdministration: templateId 1.3.6.1.4.1.19376.1.5.3.1.4.7.1]

- 1. SHALL conform to IHE Normal Dose template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.4.7.1)
- **2. SHALL** conform to *Medication* template (templateId: 2.16.840.1.113883.3.88.11.83.8)

#### **Medication Normal Dose example**

```
<?xml version="1.0" encoding="UTF-8"?>
<substanceadministration xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"</pre>
xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <templateId root="2.16.840.1.113883.10.20.1.24"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.7"/>
  <templateId root="2.16.840.1.113883.3.88.11.83.8"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.7.1"/>
  <id root="0cd9de9c-68a1-4581-8909-454a0c4d4652"/>
  <code/>
  <statusCode/>
  <effectiveTime value="20110404"/>
  <routeCode codeSystem="2.16.840.1.113883.5.112" codeSystemName="HL7</pre>
RouteOfAdministration"/>
  <approachSiteCode/>
  <doseQuantity/>
  <rateQuantity/>
  <maxDoseQuantity/>
  <administrationUnitCode/>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.46"/>
      <id root="e1513b36-00d6-438b-a490-86ab68450186"/>
      <code code="30973-2" codeSystemName="" displayName="Dose number"/>
      <statusCode/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <value xsi:type="INT"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.57"/>
      <templateId root="2.16.840.1.113883.10.20.1.47"/>
      <id root="c061f377-90a4-4469-8df2-e853558c987e"/>
      <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Status"/>
      <statusCode code="completed"/>
     <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
```

```
<value xsi:type="CE"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <act moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.1.49"/>
      <id root="98430cba-872f-4431-b145-b08e4f5356c6"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
    </act>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.54"/>
      <id root="606ab16e-8559-4e52-826a-ea0a393ce1f1"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.55"/>
          <id root="7e35e153-0c2c-4608-b787-d73e5a3919c3"/>
          <code code="SEV" codeSystem="2.16.840.1.113883.5.4"</pre>
 codeSystemName="ActCode" displayName="Severity observation"/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
        </observation>
      </entryRelationship>
    </observation>
  </entryRelationship>
</substanceadministration>
```

### **Medication Order Information**

[Supply: templateId 2.16.840.1.113883.3.88.11.83.8.3]

Order information may be recorded as part of the fulfillment history (moodcode = EVN) or as part of the administration information (moodcode = INT)

- **1. SHALL** conform to *IHE Supply Entry* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.4.7.3) (C83-[DE-8-CDA-7])
- 2. MAY contain exactly one [1..1] repeatNumber (CONF-321)
  - The number of times that the ordering provider has authorized the pharmacy to dispense this medication

Please note that the number of fills requested is what is recorded in the document, not the number of refills. The number of refills is simply one less than the number of fills.

- 3. MAY contain exactly one [1..1] statusCode, which MAY be selected from ValueSet 2.16.840.1.113883.3.88.12.80.64 Medication Fill Status STATIC 1 (CONF-319)
  - When supply element has a moodCode attribute set to EVN
- **4.** The order number, i.e., the identifier from the perspective of the ordering provider, **SHOULD** be recorded in the id element within the supply element with moodcode = 'INT' (C83-[DE-8.26-CDA-1])
  - The order identifier from the perspective of the ordering clinician. Also known as the 'placer number' versus the pharmacies prescription number (or 'filler number')

- **5. SHOULD** satisfy: The effectiveTime/high element is present to record the order expiration date and time when supply/@moodcode = INT
  - The date, including time if applicable, when the order is no longer valid. Dispenses and administrations are not continued past this date for an order instance
- **6.** The quantity ordered **SHALL** be recorded in the value attribute of quantity element inside a supply element used to record order information (C83-[DE-8.26-CDA-1])
  - The amount of product indicated by the ordering provider to be dispensed. For example, number of dosage units or volume of a liquid substance. Note: this is comprised of both a numeric value and a unit of measure
- 7. SHALL satisfy: the @unit attribute of quantity element is present (C83-[DE-8.26-CDA-2])
- **8.** When the quantity ordered or dispensed is in other than administration units (e.g., when the quantity ordered is a volume of liquid or mass of substance) units **SHALL** be coded as 2.16.840.1.113883.3.88.12.80.29, Unit of Measure, Dynamic (C83-[DE-8.26-CDA-3], C83-[DE-8.38-CDA-2])
- 9. When the quantity ordered or dispensed is in administration units, the unit attribute **SHOULD** contain the preferred name of the presentation units within braces { } using the units of presentation as 2.16.840.1.113883.3.88.12.3221.8.11, Medication Product Form Value Set, Dynamic (C83-[DE-8.26-CDA-4], C83-[DE-8.38-CDA-3])
- **10.** The prescription number **SHALL** be recorded in the extension attribute of the <id> element within a supply element having a moodCode attribute of EVN (C83-[DE-8.34-CDA-1])
  - The prescription identifier assigned by the pharmacy
- **11.** The root attribute of the id element **SHOULD** be the OID of the assigning authority for the identifier. (C83-[DE-8.34-CDA-2])
  - determining the assigning authority is not feasible in all settings.
- 12. A GUID MAY be used in place of the OID of the assigning authority (C83-[DE-8.34-CDA-3])
- 13. SHALL satisfy: The dispense date is recorded in effectiveTime element within a supply element with a moodCode attribute set to EVN
  - The date of this dispense
- **14. MAY** satisfy: The dispensing pharmacy's location is present in the addr element in performer/assignEntity element inside a supply element with a moodCode attribute set to EVN
- **15.** The state element of the performer/assignedEntity/addr element in the United States **SHALL** be recorded using 2.16.840.1.113883.3.88.12.80.1, State Value Set, version: 20081218, Dynamic (C154-[DE-8.36-1])
- **16.** The postalCode element of the performer/assignedEntity/addr element in the United States **SHALL** be recorded using 2.16.840.1.113883.3.88.12.80.2, Postal Code Value Set, version: 20081218, Dynamic (C154-[DE-8.36-2])
- **17.** The country element of the performer/assignedEntity/addr element in the United States **SHALL** be recorded using 2.16.840.1.113883.3.88.12.80.3, Country Value Set, version: 20081218, Dynamic (C154-[DE-8.36-3])
- **18.** The quantity dispensed **SHALL** be recorded in the value attribute of quantity element inside a supply element with a moodCode attribute set to EVN
  - The actual quantity of product supplied in this dispense. Note: This is comprised of both a numeric value and a unit of measure
- **19.** The fill number **SHOULD** be recorded in the sequenceNumber attribute of a entryRelationship element with a typeCode attribute set to COMP (C83-[DE-8.39-CDA-1])
  - The fill number for the history entry. The fill number identifies the supply (dispense) event as a distinct activities against the prescription.

### **Medication Order Information example**

## **Medication Split Dose**

[SubstanceAdministration: templateId 1.3.6.1.4.1.19376.1.5.3.1.4.9]

1. SHALL conform to IHE Split Dose template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.4.9)

2. SHALL conform to *Medication* template (templateId: 2.16.840.1.113883.3.88.11.83.8)

#### **Medication Split Dose example**

```
<?xml version="1.0" encoding="UTF-8"?>
<substanceadministration xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"</pre>
xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <templateId root="2.16.840.1.113883.10.20.1.24"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.7"/>
  <templateId root="2.16.840.1.113883.3.88.11.83.8"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.9"/>
  <id root="a3121ac8-244a-4ccc-976c-5d0ce266e520"/>
  <code/>
  <statusCode/>
 <effectiveTime value="20110404"/>
  <routeCode codeSystem="2.16.840.1.113883.5.112" codeSystemName="HL7</pre>
RouteOfAdministration"/>
  <approachSiteCode/>
  <doseQuantity/>
  <rateQuantity/>
  <maxDoseQuantity/>
  <administrationUnitCode/>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.46"/>
      <id root="c0da0d30-2374-4e6a-b34b-437f1f117c8f"/>
      <code code="30973-2" codeSystemName="" displayName="Dose number"/>
      <statusCode/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <value xsi:type="INT"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.57"/>
      <templateId root="2.16.840.1.113883.10.20.1.47"/>
      <id root="22d5144f-e2b0-49af-be83-de130d611957"/>
      <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Status"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <value xsi:type="CE"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <act moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.1.49"/>
      <id root="eac9ae92-d789-4f89-b7a0-8b725b7df83d"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
    </act>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.54"/>
      <id root="8f15b930-6a4c-4096-bb6b-156b5dc6b51b"/>
```

```
<statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.55"/>
          <id root="92f8430f-4a42-4382-b0cb-30a35d1fcc52"/>
          <code code="SEV" codeSystem="2.16.840.1.113883.5.4"</pre>
 codeSystemName="ActCode" displayName="Severity observation"/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
        </observation>
      </entryRelationship>
    </observation>
  </entryRelationship>
</substanceadministration>
```

## **Medication Tapered Dose**

[SubstanceAdministration: templateId null]

- 1. SHALL conform to IHE Tapered Dose template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.4.8)
- 2. SHALL conform to *Medication* template (templateId: 2.16.840.1.113883.3.88.11.83.8)

#### **Medication Tapered Dose example**

```
<?xml version="1.0" encoding="UTF-8"?>
<substanceadministration xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"</pre>
xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <templateId root="2.16.840.1.113883.10.20.1.24"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.7"/>
  <templateId root="2.16.840.1.113883.3.88.11.83.8"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.8"/>
  <templateId root="null"/>
  <id root="461a476d-8f20-4c3c-9407-3ead4b8a99b0"/>
  <code/>
  <statusCode/>
  <effectiveTime value="20110404"/>
  <routeCode codeSystem="2.16.840.1.113883.5.112" codeSystemName="HL7</pre>
 RouteOfAdministration"/>
  <approachSiteCode/>
  <doseQuantity/>
  <rateQuantity/>
  <maxDoseQuantity/>
  <administrationUnitCode/>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.46"/>
      <id root="973ff64f-f854-45fd-b3e8-36415f21129f"/>
      <code code="30973-2" codeSystemName="" displayName="Dose number"/>
      <statusCode/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <value xsi:type="INT"/>
    </observation>
  </entryRelationship>
```

```
<entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.57"/>
      <templateId root="2.16.840.1.113883.10.20.1.47"/>
      <id root="7024f2d7-6064-4f85-9fdc-fca9257e9eee"/>
      <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"</pre>
 codeSystemName="LOINC" displayName="Status"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <value xsi:type="CE"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <act moodCode="INT">
      <templateId root="2.16.840.1.113883.10.20.1.49"/>
      <id root="154dbde1-905b-4e51-8db4-001052627f1d"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
    </act>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.1.54"/>
      <id root="e6357c50-4279-49c2-93b2-6a76fc9efdb8"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2011"/>
        <high value="2011"/>
      </effectiveTime>
      <entryRelationship>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.1.55"/>
          <id root="6cf610cd-83e0-4f5d-8267-fa2e18bf1b35"/>
          <code code="SEV" codeSystem="2.16.840.1.113883.5.4"</pre>
 codeSystemName="ActCode" displayName="Severity observation"/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2011"/>
            <high value="2011"/>
          </effectiveTime>
        </observation>
      </entryRelationship>
    </observation>
  </entryRelationship>
</substanceadministration>
```

## **Medication Type**

[Observation: templateId 2.16.840.1.113883.3.88.11.83.8.1]

A classification based on how the medication is marketed (e.g., prescription, over the counter drug)

1. SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet 2.16.840.1.113883.3.88.12.3221.8.19 Medication Type STATIC 1 (C83-[DE-8.19-CDA-5], C154-[DE-8.19-1])

**Medication Type example** 

## **Procedure**

[Procedure: templateId 2.16.840.1.113883.3.88.11.83.17]

Defines a coded entry describing a procedure performed on a patient.

- **1. SHALL** conform to *IHE Procedure Entry Procedure Activity Procedure* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.4.19) (C83-[DE-17-CDA-2])
- 2. SHOULD contain exactly one [1..1] targetSiteCode, which SHOULD be selected from ValueSet 2.16.840.1.113883.3.88.12.3221.8.9 Body Site STATIC 2 (C83-[DE-17-CDA-3])
  - The anatomical site where a procedure is performed
- **3. SHOULD** contain exactly one [1..1] **code** (CONF-433)
  - This is a coded value describing the type of the Procedure
- **4. SHALL** satisfy: The code/originalText/reference/@value is present.
  - Free text describing the Procedure
  - [OCL]: not self.code.originalText.reference.value.oclIsUndefined()
- **5. SHOULD** satisfy: Contains the procedure provider in performer / assignedEntity.
  - Name and other information for the person or organization performed or hosted the Procedure
  - [OCL]: self.performer->forAll(perf : cda::Performer2 | not perf.oclIsUndefined() and perf.assignedEntity->size() > 0)

#### Procedure example

```
<?xml version="1.0" encoding="UTF-8"?>
xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
 <templateId root="2.16.840.1.113883.10.20.1.29"/>
 <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.19"/>
 <templateId root="2.16.840.1.113883.3.88.11.83.17"/>
 <id root="0ea14f9e-0833-4d58-9349-ac48f6902f6d"/>
 <code/>
 <text/>
 <statusCode code="completed"/>
 <effectiveTime>
   <low value="2011"/>
   <high value="2011"/>
 </effectiveTime>
 <approachSiteCode/>
 <targetSiteCode codeSystem="2.16.840.1.113883.6.96"</pre>
codeSystemName="SNOMEDCT"/>
</procedure>
```

#### Result

[Observation: templateId 2.16.840.1.113883.3.88.11.83.15]

This module contains current and relevant historical result observations for the patient. The scope of "observations" is broad with the exception of "vital signs" which are contained in the Vital Signs section.

- **1. SHALL** conform to *CCD Result Observation* template (templateId: 2.16.840.1.113883.10.20.1.31) ([C83-[DE-15-CDA-3])
- **2. SHALL** conform to *IHE Simple Observation* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.4.13) (C83-[DE-15-CDA-2])
- 3. SHALL contain exactly one [1..1] code
  - **a.** Result Type **SHOULD** be selected from LOINC (codeSystem 2.16.840.1.113883.6.1) or SNOMED CT (codeSystem 2.16.840.1.113883.6.96) (C154-[DE-15.03-1])

- **b.** Result Type for laboratory results **SHOULD** be coded as specified in HITSP/C80 Section 2.2.3.6.1 Laboratory Observations. (C154-[DE-15.03-2])
- 4. SHALL contain exactly one [1..1] effectiveTime
- **5. SHALL** contain exactly one [1..1] **value** 
  - The Result value records the desired result in a goal or recorded event, and will not present when recording an intent, request or proposal to measure a result.
  - **a.** Result Value **SHALL** be present when the observation/@moodCode is EVN or GOL, and **SHALL NOT** be present when observation/@moodCode is INT or PRP. (C83-[DE-15.05-CDA-1])

```
• [OCL]: (self.moodCode = vocab::x_ActMoodDocumentObservation::EVN or self.moodCode = vocab::x_ActMoodDocumentObservation::EVN)
    implies (not self.value->isEmpty()) and
    (self.moodCode = vocab::x_ActMoodDocumentObservation::INT or self.moodCode = vocab::x_ActMoodDocumentObservation::PRP)
    implies (self.value->isEmpty())
```

#### Result example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"</pre>
xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd"
moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.1.31"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13"/>
  <templateId root="2.16.840.1.113883.3.88.11.83.15"/>
  <id root="22c85ccf-4f18-4002-bf91-5fb2c969d778"/>
  <code/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2011"/>
    <high value="2011"/>
  </effectiveTime>
  <interpretationCode/>
  <methodCode/>
</observation>
```

## Vital Sign

```
[Observation: templateId 2.16.840.1.113883.3.88.11.83.14]
```

These entries are used to record current and relevant historical vital signs for the patient. Vital Signs are a subset of *Results Section*, but are reported in this section to follow clinical conventions.

The differentiation between Vital Signs and Results varies by clinical context. Common examples of vital signs include temperature, height, weight, blood pressure, etc. However, some clinical contexts may alter these common vitals, for example in neonatology "height" may be replaced by "crown-to-rump" measurement.

- **1. SHALL** conform to *IHE Vital Sign Observation* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.4.13.2) (C83-[DE-14-CDA-2])
- 2. SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet 2.16.840.1.113883.3.88.12.80.62 Vital Sign Result STATIC 1 (C154-[DE-14.03-1])
- **3. SHALL** satisfy: Data Element Definitions for Results [Placeholder]
  - Vital Signs are a subset of Results Section, but are reported in this section to follow clinical conventions.

#### Vital Sign example

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

## Chapter

# 5

## **OTHER CLASSES**

## **Topics:**

- Healthcare Provider
- Language Spoken
- Medication Information
- Support
- Support Guardian
- Support Participant

This section of the Implementation Guide describes other classes that are not CDA Clinical Documents, Sections, or Clinical Statements.

## **Healthcare Provider**

[Performer1: templateId 2.16.840.1.113883.3.88.11.83.4]

**1. SHALL** conform to *IHE Healthcare Providers Pharmacies* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.2.3)

```
Healthcare Provider example
```

## Language Spoken

[LanguageCommunication: templateId 2.16.840.1.113883.3.88.11.83.2]

- **1. SHALL** conform to *IHE Language Communication* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.2.1) (C83-[DE-2.01-CDA-3])
- 2. SHALL contain exactly one [1..1] languageCode, which SHALL be selected from ValueSet 2.16.840.1.113883.1.11.11526 Language DYNAMIC (C154-[DE-2.01-1])
- 3. SHALL contain zero or one [0..1] modeCode, which SHALL be selected from ValueSet 2.16.840.1.113883.1.11.12249 LanguageAbilityMode STATIC 1 (C83-[DE-2.01-CDA-4])
  - Mode codes SHALL be appropriate to the type of language. Thus English, as spoken in the U.S. SHOULD use
    the code en-US and SHOULD only use mode codes for written and verbal communications. On the other hand,
    American Sign Language would be represented using the code sign-US, and would only use mode codes for
    signed communication.
- **4. SHALL** satisfy: Languages spoken shall be recorded using the <languageCommunication> infrastructure class associated with the patient. The <languageCommunication> element describes the primary and secondary languages of communication for a person. (C83-[DE-2.01-CDA-1])
- 5. SHALL satisfy: Sign language is treated as a separate language. (C154-[DE-2.01-2])
- **6.** CDA allows for use of proficiencyLevelCode element, but this element **SHOULD NOT** be used. (C83-[DE-2.01-CDA-5])
  - Judgments about language proficiency are subjective, and could have a negative impact on consumers.
  - [OCL]: self.proficiencyLevelCode.oclIsUndefined()

#### Language Spoken example

Unable to create XML Snippet

### **Medication Information**

```
[ManufacturedProduct: templateId 2.16.840.1.113883.3.88.11.83.8.2]
```

The product concentration is determined from the coded product or brand name using knowledge base information in the vocabularies specified for these fields, and therefore this information is not explicitly included.

**1. SHALL** conform to *IHE Product Entry* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.4.7.2) (C83-[DE-8-CDA-4])

- 2. The coded product name **SHALL** appear in the @code attribute of the manufacturedMaterial/code element. (C83-[DE-8.13-CDA-1])
  - A code describing the product from a controlled vocabulary
- **3.** If the code for the generic product is unknown, the code and codeSystem attributes **MAY** be omitted (C83-[DE-8.13-CDA-2])
- **4.** The coded product name **SHALL** be coded as 2.16.840.1.113883.3.88.12.80.17, Medication Clinical Drug Name Value Set, version: 20081218, Dynamic (C154-[DE-8.13-1])
- 5. When only the class of the drug is known (e.g., Beta Blocker or Sulfa Drug), it SHALL be coded as 2.16.840.1.113883.3.88.12.80.18, Medication Drug Class Value Set, version: 20081218, Dynamic (C154-[DE-8.13-2])
- **6.** When only the medication ingredient name is know, the coded product name **MAY** be coded as 2.16.840.1.113883.3.88.12.80.20, Ingredient Name Value Set, Dynamic (C154-[DE-8.13-3])
- 7. The code for the specific brand of product **SHALL** appear in a manufacturedMaterial/translation element (C83-[DE-8.14-CDA-1])
  - A code describing the product as a branded or trademarked entity from a controlled vocabulary
- **8.** The brand name **SHALL** be coded as 2.16.840.1.113883.3.88.12.80.16, Medication Brand Name Value Set, version: 20081218, Dynamic, OR **SHALL** be coded as 2.16.840.1.113883.3.88.12.80.19, Medication Packaged Product Value Set, Dynamic (C154-[DE-8.14-1])
- **9.** The product (generic) name **SHALL** appear in the originalText element beneath the manufacturedMaterial/code element (C83-[DE-8.15-CDA-1])
  - The name of the substance or product without reference to a specific vendor (e.g., generic or other non-proprietary name). If a Coded Product Name is present, this is the text associated with the coded concept
- **10.** The brand name **SHALL** appear in the <name> element of the <manufacturedMaterial> element (C83-[DE-8.14-CDA-2])
  - The branded or trademarked name of the substance or product. If a Coded Brand Name is present, this is the text associated with the coded concept

#### **Medication Information example**

## **Support**

At a minimum, key support contacts relative to healthcare decisions, including next of kin, should be included. If no healthcare providers are supplied, the reason should be supplied as free text in the narrative block (e.g., Unknown, etc).

1. SHALL conform to IHE Patient Contact

#### Support example

Unable to create XML Snippet

## **Support Guardian**

```
[Guardian: templateId 2.16.840.1.113883.3.88.11.83.3]
```

At a minimum, key support contacts relative to healthcare decisions, including next of kin, should be included. If no healthcare providers are supplied, the reason should be supplied as free text in the narrative block (e.g., Unknown, etc).

- **1. SHALL** conform to *IHE Patient Contact Guardian* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.2.4)
- 2. SHALL conform to Support

#### **Support Guardian example**

## **Support Participant**

```
[Participant1: templateId 2.16.840.1.113883.3.88.11.83.3]
```

At a minimum, key support contacts relative to healthcare decisions, including next of kin, should be included. If no healthcare providers are supplied, the reason should be supplied as free text in the narrative block (e.g., Unknown, etc).

- **1. SHALL** conform to *IHE Patient Contact Participant* template (templateId: 1.3.6.1.4.1.19376.1.5.3.1.2.4)
- 2. SHALL conform to Support

#### **Support Participant example**

# Chapter



## **VALUE SETS**

The following tables summarize the value sets used in this Implementation Guide.

## REFERENCES

- HL7 Implementation Guide: CDA Release 2 Continuity of Care Document (CCD) A CDA implementation of ASTM E2369-05 Standard Specification for Continuity of Care Record<sup>©</sup> (CCR) April 01, 2007 available through HL7.
- HL7 Implementation Guide for CDA Release 2 Quality Reporting Document Architecture (QRDA) Draft Standard for Trial Use March 2009. Available at: Quality Reporting Document Architecture (QRDA)
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