Implementation Guide for CDA Release 2
IHE Patient Care Coordination (PCC)

Revision 5.0

DRAFT: FOR DEVELOPMENT USE ONLY

Contents

Acknowledgments

Revision History

Rev	Date	By Whom	Changes
New	July 2010	Dave Carlson	
First draft for posting	August 31, 2010	Dave Carlson	Updated model content and publication format

Chapter 1

INTRODUCTION

Topics:

Overview

This implementation guide is generated from UML models developed in the Open Health Tools (OHT) Model-Driven Health Tools (MDHT) project. The IHE Patient Care Coordination (PCC) specification has 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.

Integrating the Healthcare Enterprise (IHE) is an initiative designed to stimulate the integration of the information systems that support modern healthcare institutions. Its fundamental objective is to ensure that in the care of patients all required information for medical decisions is both correct and available to healthcare professionals. The IHE initiative is both a process and a forum for encouraging integration efforts. It defines a technical framework for the implementation of established messaging standards to achieve specific clinical goals. It includes a rigorous testing process for the implementation of this framework. And it organizes educational sessions and exhibits at major meetings of medical professionals to demonstrate the benefits of this framework and encourage its adoption by industry and users.

The approach employed in the IHE initiative is not to define new integration standards, but rather to support the use of existing standards, HL7, DICOM, IETF, and others, as appropriate in their respective domains in an integrated manner, defining configuration choices when necessary. When clarifications or extensions to existing standards are necessary, IHE refers recommendations to the relevant standards bodies.

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, *http://www.hl7.org/documentcenter/public/membership/HL7_Governance_and_Operations_Manual.pdf*).

Templates

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

Vocabulary and Value Sets

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

Use of Templates

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

Originator Responsibilities

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

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

Conventions Used in This Guide

Conformance Requirements

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

Template name

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

Description of the template will be here .....

1. Conforms to <The template name> Template (templateId: XXXX<XX>XXX>YYY).

2. **SHALL** contain [1..1] @classCode = <AAA> <code display name> (CodeSystem: 123.456.789 <XXX> Class) **STATIC** (CONF:<number>).
3. .....

Figure 1: Template name and "conforms to" appearance

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

The following cardinality indicators may be interpreted as follows:

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

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

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

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

Figure 2: Template-based conformance statements example

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

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

Figure 3: CCD conformance statements example

Keywords

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

- **SHALL**: an absolute requirement

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

XML Examples

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

```
<ClinicalDocument xmlns='urn: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.

Chapter 2

DOCUMENT TEMPLATES

Topics:

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

Discharge Summary

[ClinicalDocument: templateId `1.3.6.1.4.1.19376.1.5.3.1.1.4`]

1. Conforms to *Medical Summary* template (templateId: `1.3.6.1.4.1.19376.1.5.3.1.1.2`)
2. **SHALL** contain [1..1] `code` (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)
3. **SHALL** contain [1..1] `component`, such that it
   a. contains *Active Problems Section* (templateId: `1.3.6.1.4.1.19376.1.5.3.1.3.6`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <realmCode code="US"/>
  <templateId root="2.16.840.1.113883.10.20.3" assigningAuthorityName="CDT
 General Header Constraints"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.1" assigningAuthorityName="IHE
 Medical Document"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.2" assigningAuthorityName="IHE
 Medical Summary"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.4" assigningAuthorityName="IHE
 Discharge Summary"/>
  <id root="6352d48d-217f-4f31-a5f8-bd5aa9fe6109"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <title/>
  <effectiveTime/>
  <confidentialityCode/>
  <languageCode/>
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="2.16.840.1.113883.10.20.1.11"
 assigningAuthorityName="CCD Problem Section"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.6"
 assigningAuthorityName="IHE Active Problems Section"/>
          <code code="11450-4" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Problem list"/>
          <title>Problem list</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 5: Discharge Summary example

Medical Document

[ClinicalDocument: templateId `1.3.6.1.4.1.19376.1.5.3.1.1.1`]

1. Conforms to *CDA Clinical Document*
2. Conforms to *CDT General Header Constraints* template (templateId: `2.16.840.1.113883.10.20.3`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <realmCode code="US"/>
  <templateId root="2.16.840.1.113883.10.20.3" assigningAuthorityName="CDT
 General Header Constraints"/>
```

```
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.1" assigningAuthorityName="IHE
 Medical Document"/>
  <id root="408305c9-2835-459c-819e-4d17a61ea02c"/>
  <code/>
  <title/>
  <effectiveTime/>
  <confidentialityCode/>
  <languageCode/>
</ClinicalDocument>
```

Figure 6: Medical Document example

Medical Summary

[ClinicalDocument: templateId `1.3.6.1.4.1.19376.1.5.3.1.1.2`]

1. Conforms to *Medical Document* template (templateId: `1.3.6.1.4.1.19376.1.5.3.1.1.1`)
2. **SHALL** contain [1..1] `code` (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)
3. **SHALL** satisfy:

   ```
   self.getSections()->exists(sect : cda::Section | sect.getActs()-
   >exists(act : cda::Act | act.oclIsKindOf(ihe::ProblemConcernEntry)))
   ```
4. **SHALL** satisfy:

   ```
   self.getSections()->exists(sect : cda::Section | sect.getActs()-
   >exists(act : cda::Act | act.oclIsKindOf(ihe::AllergyIntoleranceConcern)))
   ```
5. **SHALL** satisfy:

   ```
   self.getSections()->exists(sect : cda::Section |
    sect.getSubstanceAdministrations()->exists(sub :
    cda::SubstanceAdministration | sub.oclIsKindOf(ihe::Medication)))
   ```

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <realmCode code="US"/>
  <templateId root="2.16.840.1.113883.10.20.3" assigningAuthorityName="CDT
 General Header Constraints"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.1" assigningAuthorityName="IHE
 Medical Document"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.2" assigningAuthorityName="IHE
 Medical Summary"/>
  <id root="7a8228e6-b642-44b2-9fd1-48c9d901414d"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <title/>
  <effectiveTime/>
  <confidentialityCode/>
  <languageCode/>
</ClinicalDocument>
```

Figure 7: Medical Summary example

PHR Extract

[ClinicalDocument: templateId `1.3.6.1.4.1.19376.1.5.3.1.1.5`]

1. Conforms to *Medical Summary* template (templateId: `1.3.6.1.4.1.19376.1.5.3.1.1.2`)

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

```
  <templateId root="2.16.840.1.113883.10.20.3" assigningAuthorityName="CDT
 General Header Constraints"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.1" assigningAuthorityName="IHE
 Medical Document"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.2" assigningAuthorityName="IHE
 Medical Summary"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.5" assigningAuthorityName="IHE
 PHR Extract"/>
  <id root="4b4a481a-8003-4d33-ab72-886d29ae9a59"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <title/>
  <effectiveTime/>
  <confidentialityCode/>
  <languageCode/>
</ClinicalDocument>
```

Figure 8: PHR Extract example

PHR Update

[ClinicalDocument: templateId `1.3.6.1.4.1.19376.1.5.3.1.1.6`]

1. Conforms to *Medical Summary* template (templateId: `1.3.6.1.4.1.19376.1.5.3.1.1.2`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <realmCode code="US"/>
  <templateId root="2.16.840.1.113883.10.20.3" assigningAuthorityName="CDT
 General Header Constraints"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.1" assigningAuthorityName="IHE
 Medical Document"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.2" assigningAuthorityName="IHE
 Medical Summary"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.6" assigningAuthorityName="IHE
 PHR Update"/>
  <id root="8a9eb7d5-48eb-475a-be01-a3b6f1d01288"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <title/>
  <effectiveTime/>
  <confidentialityCode/>
  <languageCode/>
</ClinicalDocument>
```

Figure 9: PHR Update example

Chapter 3

SECTION TEMPLATES

Topics:

Active Problems Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.6`]

1. Conforms to *CCD Problem Section* template (templateId: `2.16.840.1.113883.10.20.1.11`)
2. **SHALL** contain [1..*] `entry`, such that it
   a. contains *Problem Concern Entry* (templateId: `1.3.6.1.4.1.19376.1.5.3.1.4.5.2`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="2.16.840.1.113883.10.20.1.11"
 assigningAuthorityName="CCD Problem Section"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.6"
 assigningAuthorityName="IHE Active Problems Section"/>
          <code code="11450-4" codeSystem="2.16.840.1.113883.6.1"
 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"
 assigningAuthorityName="CCD Problem Act"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.5.1"
 assigningAuthorityName="IHE Concern Entry"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.5.2"
 assigningAuthorityName="IHE Problem Concern Entry"/>
              <id root="e24f1132-3cae-4811-9460-2a375117e714"/>
              <code nullFlavor="NA"/>
              <effectiveTime>
                <low value="1972"/>
                <high value="2008"/>
              </effectiveTime>
            </act>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 10: Active Problems Section example

Admission Medication History Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.20`]

The admission medication history section shall contain a narrative description of the relevant medications administered to a patient prior to admission to a facility. It shall include entries for medication administration as described in the Entry Content Module.

1. Conforms to *CDA Section*
2. **SHALL** contain [1..1] `code/@code` = "42346-7" *MEDICATIONS ON ADMISSION* (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)

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

```
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.20"
 assigningAuthorityName="IHE Admission Medication History Section"/>
          <code code="42346-7" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="MEDICATIONS ON ADMISSION"/>
          <title>MEDICATIONS ON ADMISSION</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 11: Admission Medication History Section example

Advance Directives Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.34`]

The advance directive section shall contain a narrative description of the list of documents that define the patient's expectations and requests for care along with the locations of the documents.

1. Conforms to *CCD Advance Directives Section* template (templateId: `2.16.840.1.113883.10.20.1.1`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="2.16.840.1.113883.10.20.1.1"
 assigningAuthorityName="CCD Advance Directives Section"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.34"
 assigningAuthorityName="IHE Advance Directives Section"/>
          <code code="42348-3" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Advance directives"/>
          <title>Advance directives</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 12: Advance Directives Section example

Allergies Reactions Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.13`]

The adverse and other adverse reactions section shall contain a narrative description of the substance intolerances and the associated adverse reactions suffered by the patient.

1. Conforms to *CCD Alerts Section* template (templateId: `2.16.840.1.113883.10.20.1.2`)

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

```
        <section>
          <templateId root="2.16.840.1.113883.10.20.1.2"
 assigningAuthorityName="CCD Alerts Section"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.13"
 assigningAuthorityName="IHE Allergies Reactions Section"/>
          <code code="48765-2" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Allergies, adverse reactions, alerts"/>
          <title>Allergies, adverse reactions, alerts</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 13: Allergies Reactions Section example

Assessment And Plan Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.1.13.2.5`]

The assessment and plan section shall contain a narrative description of the assessment of the patient condition and expectations for care including proposals, goals, and order requests for monitoring, tracking, or improving the condition of the patient.

1. Conforms to *CDA Section*
2. **SHALL** contain [1..1] `code/@code` = "51847-2" *ASSESSMENT AND PLAN* (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.13.2.5"
 assigningAuthorityName="IHE Assessment And Plan Section"/>
          <code code="51847-2" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="ASSESSMENT AND PLAN"/>
          <title>ASSESSMENT AND PLAN</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 14: Assessment And Plan Section example

Care Plan Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.31`]

The care plan section shall contain a narrative description of the expectations for care including proposals, goals, and order requests for monitoring, tracking, or improving the condition of the patient.

1. Conforms to *CCD Plan Of Care Section* template (templateId: `2.16.840.1.113883.10.20.1.10`)

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

```
        <section>
          <templateId root="2.16.840.1.113883.10.20.1.10"
 assigningAuthorityName="CCD Plan Of Care Section"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.31"
 assigningAuthorityName="IHE Care Plan Section"/>
          <code code="18776-5" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Treatment plan"/>
          <title>Treatment plan</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 15: Care Plan Section example

Chief Complaint Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1`]

This contains a narrative description of the patient's chief complaint.

1. Conforms to *CDA Section*
2. **SHALL** contain [1..1] `code/@code` = "10154-3" *CHIEF COMPLAINT* (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1"
 assigningAuthorityName="IHE Chief Complaint Section"/>
          <code code="10154-3" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="CHIEF COMPLAINT"/>
          <title>CHIEF COMPLAINT</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 16: Chief Complaint Section example

Coded Advance Directives Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.35`]

1. Conforms to *Advance Directives Section* template (templateId: `1.3.6.1.4.1.19376.1.5.3.1.3.34`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="2.16.840.1.113883.10.20.1.1"
 assigningAuthorityName="CCD Advance Directives Section"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.34"
 assigningAuthorityName="IHE Advance Directives Section"/>
```

```
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.35"
 assigningAuthorityName="IHE Coded Advance Directives Section"/>
          <code code="42348-3" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Advance directives"/>
          <title>Advance directives</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 17: Coded Advance Directives Section example

Coded Results Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.28`]

The results section shall contain a narrative description of the relevant diagnostic procedures the patient received in the past. It shall include entries for procedures and references to procedure reports when known as described in the Entry Content Modules.

1. Conforms to *CDA Section*
2. **SHALL** contain [1..1] `code/@code` = "30954-2" *STUDIES SUMMARY* (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.28"
 assigningAuthorityName="IHE Coded Results Section"/>
          <code code="30954-2" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="STUDIES SUMMARY"/>
          <title>STUDIES SUMMARY</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 18: Coded Results Section example

Coded Surgeries Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.12`]

The list of surgeries section shall include entries for procedures and references to procedure reports when known as described in the Entry Content Modules.

1. Conforms to *Surgeries Section* template (templateId: `1.3.6.1.4.1.19376.1.5.3.1.3.11`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="2.16.840.1.113883.10.20.1.12"
 assigningAuthorityName="CCD Procedures Section"/>
```

```
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.11"
 assigningAuthorityName="IHE Surgeries Section"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.12"
 assigningAuthorityName="IHE Coded Surgeries Section"/>
          <code code="47519-4" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="History of procedures"/>
          <title>History of procedures</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 19: Coded Surgeries Section example

Coded Vital Signs Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2`]

The vital signs section contains coded measurement results of a patient's vital signs.

1. Conforms to *Vital Signs Section* template (templateId: `1.3.6.1.4.1.19376.1.5.3.1.3.25`)
2. **SHALL** contain [1..*] `entry`, such that it
   a. contains *Vital Signs Organizer* (templateId: `1.3.6.1.4.1.19376.1.5.3.1.4.13.1`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="2.16.840.1.113883.10.20.1.16"
 assigningAuthorityName="CCD Vital Signs Section"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.25"
 assigningAuthorityName="IHE Vital Signs Section"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2"
 assigningAuthorityName="IHE Coded Vital Signs Section"/>
          <code code="8716-3" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Vital signs"/>
          <title>Vital signs</title>
          <entry>
            <organizer moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.1.32"
 assigningAuthorityName="CCD Result Organizer"/>
              <templateId root="2.16.840.1.113883.10.20.1.35"
 assigningAuthorityName="CCD Vital Signs Organizer"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13.1"
 assigningAuthorityName="IHE Vital Signs Organizer"/>
              <id root="d09a5880-5ada-4d99-a5e2-2fe0219f09e5"/>
              <code code="46680005" codeSystem="2.16.840.1.113883.6.96"
 codeSystemName="SNOMEDCT" displayName="Vital signs"/>
              <statusCode code="completed"/>
              <effectiveTime>
                <low value="1972"/>
                <high value="2008"/>
              </effectiveTime>
            </organizer>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
```

```
</ClinicalDocument>
```

Figure 20: Coded Vital Signs Section example

Discharge Diagnosis Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.7`]

The discharge diagnosis section shall contain a narrative description of the conditions that need to be monitored after discharge from the hospital and those that were resolved during the hospital course. It shall include entries for patient conditions as described in the Entry Content Module.

1. Conforms to *CDA Section*
2. **SHALL** contain [1..1] `code/@code` = "11535-2" *HOSPITAL DISCHARGE DX* (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.7"
 assigningAuthorityName="IHE Discharge Diagnosis Section"/>
          <code code="11535-2" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="HOSPITAL DISCHARGE DX"/>
          <title>HOSPITAL DISCHARGE DX</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 21: Discharge Diagnosis Section example

Encounter History Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.1.5.3.3`]

The encounter history section contains coded entries describing the patient history of encounters.

1. Conforms to *CCD Encounters Section* template (templateId: `2.16.840.1.113883.10.20.1.3`)
2. **SHALL** contain [1..*] `entry`, such that it
   a. contains *Encounter Entry* (templateId: `1.3.6.1.4.1.19376.1.5.3.1.4.14`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="2.16.840.1.113883.10.20.1.3"
 assigningAuthorityName="CCD Encounters Section"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.5.3.3"
 assigningAuthorityName="IHE Encounter History Section"/>
          <code code="46240-8" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="History of encounters"/>
          <title>History of encounters</title>
        </section>
      </component>
```

```
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 22: Encounter History Section example

Family Medical History Section

[Section: templateId 1.3.6.1.4.1.19376.1.5.3.1.3.14]

The family history section shall contain a narrative description of 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. Conforms to *CCD Family History Section* template (templateId: 2.16.840.1.113883.10.20.1.4)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="2.16.840.1.113883.10.20.1.4"
 assigningAuthorityName="CCD Family History Section"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.14"
 assigningAuthorityName="IHE Family Medical History Section"/>
          <code code="10157-6" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="History of family member diseases"/>
          <title>History of family member diseases</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 23: Family Medical History Section example

History Of Past Illness Section

[Section: templateId 1.3.6.1.4.1.19376.1.5.3.1.3.8]

The History of Past Illness section shall contain a narrative description of the conditions the patient suffered in the past. It shall include entries for problems as described in the Entry Content Modules.

1. Conforms to *CDA Section*
2. **SHALL** contain [1..1] code/@code = "11348-0" *HISTORY OF PAST ILLNESS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.8"
 assigningAuthorityName="IHE History Of Past Illness Section"/>
          <code code="11348-0" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="HISTORY OF PAST ILLNESS"/>
          <title>HISTORY OF PAST ILLNESS</title>
        </section>
      </component>
    </structuredBody>
```

```
  </component>
</ClinicalDocument>
```

Figure 24: History Of Past Illness Section example

History Of Present Illness

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.4`]

The history of present illness section shall contain a narrative description of the sequence of events preceding the patient's current complaints.

1. Conforms to *CDA Section*
2. **SHALL** contain [1..1] `code/@code` = "10164-2" *HISTORY OF PRESENT ILLNESS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.4"
 assigningAuthorityName="CDT History Of Present Illness"/>
          <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>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 25: History Of Present Illness example

Hospital Admission Diagnosis Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.3`]

The hospital admitting diagnosis section shall contain a narrative description of the primary reason for admission to a hospital facility. It shall include entries for observations as described in the Entry Content Modules.

1. Conforms to *CDA Section*
2. **SHALL** contain [1..1] `code/@code` = "46241-6" *HOSPITAL ADMISSION DX* (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.3"
 assigningAuthorityName="IHE Hospital Admission Diagnosis Section"/>
          <code code="46241-6" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="HOSPITAL ADMISSION DX"/>
          <title>HOSPITAL ADMISSION DX</title>
        </section>
      </component>
    </structuredBody>
  </component>
```

```
</ClinicalDocument>
```

Figure 26: Hospital Admission Diagnosis Section example

Hospital Course Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.5`]

The hospital course section shall contain a narrative description of the sequence of events from admission to discharge in a hospital facility.

1. Conforms to *CDA Section*
2. **SHALL** contain [1..1] `code/@code` = "8648-8" *HOSPITAL COURSE* (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.5"
 assigningAuthorityName="IHE Hospital Course Section"/>
          <code code="8648-8" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="HOSPITAL COURSE"/>
          <title>HOSPITAL COURSE</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 27: Hospital Course Section example

Hospital Discharge Medications Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.22`]

The hospital discharge medications section shall contain a narrative description of the medications requested (ordered) to be administered to the patient after discharge from the hospital. It shall include entries for medication requests as described in the Entry Content Module.

1. Conforms to *CDA Section*
2. **SHALL** contain [1..1] `code/@code` = "10183-2" *HOSPITAL DISCHARGE MEDICATIONS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.22"
 assigningAuthorityName="IHE Hospital Discharge Medications Section"/>
          <code code="10183-2" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="HOSPITAL DISCHARGE MEDICATIONS"/>
          <title>HOSPITAL DISCHARGE MEDICATIONS</title>
        </section>
      </component>
    </structuredBody>
  </component>
```

```
</ClinicalDocument>
```

Figure 28: Hospital Discharge Medications Section example

Immunizations Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.23`]

The immunizations section shall contain a narrative description of the immunizations administered to the patient in the past. It shall include entries for medication administration as described in the Entry Content Modules.

1. Conforms to *CCD Immunizations Section* template (templateId: `2.16.840.1.113883.10.20.1.6`)
2. **SHALL** contain [1..*] `entry`, such that it
   a. contains *Immunization* (templateId: `1.3.6.1.4.1.19376.1.5.3.1.4.12`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="2.16.840.1.113883.10.20.1.6"
 assigningAuthorityName="CCD Immunizations Section"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.23"
 assigningAuthorityName="IHE Immunizations Section"/>
          <code code="11369-6" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="History of immunizations"/>
          <title>History of immunizations</title>
          <entry>
            <substanceAdministration classCode="SBADM">
              <templateId root="2.16.840.1.113883.10.20.1.24"
 assigningAuthorityName="CCD Medication Activity"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.12"
 assigningAuthorityName="IHE Immunization"/>
              <id root="a2da2bf9-c0c6-4c1a-99ab-976a8622e1ac"/>
              <statusCode/>
            </substanceAdministration>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 29: Immunizations Section example

Medical Devices Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.1.5.3.5`]

The medical devices section contains narrative text describing the patient history of medical device use.

1. Conforms to *CCD Medical Equipment Section* template (templateId: `2.16.840.1.113883.10.20.1.7`)

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

```
          <templateId root="2.16.840.1.113883.10.20.1.7"
 assigningAuthorityName="CCD Medical Equipment Section"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.5.3.5"
 assigningAuthorityName="IHE Medical Devices Section"/>
          <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>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 30: Medical Devices Section example

Medications Administered Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.21`]

The medications administered section shall contain a narrative description of the relevant medications administered to a patient during the course of an encounter. It shall include entries for medication administration as described in the Entry Content Module.

1. Conforms to *CDA Section*
2. **SHALL** contain [1..1] `code/@code` = "18610-6" *MEDICATION ADMINISTERED* (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.21"
 assigningAuthorityName="IHE Medications Administered Section"/>
          <code code="18610-6" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="MEDICATION ADMINISTERED"/>
          <title>MEDICATION ADMINISTERED</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 31: Medications Administered Section example

Medications Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.19`]

The medications section shall contain a description of the relevant medications for the patient, e.g. an ambulatory prescription list. It shall include entries for medications as described in the Entry Content Module.

1. Conforms to *CCD Medications Section* template (templateId: `2.16.840.1.113883.10.20.1.8`)

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

```
          <templateId root="2.16.840.1.113883.10.20.1.8"
 assigningAuthorityName="CCD Medications Section"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.19"
 assigningAuthorityName="IHE Medications Section"/>
          <code code="10160-0" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="History of medication use"/>
          <title>History of medication use</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 32: Medications Section example

Payers Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.1.5.3.7`]

The Payers section contains data on the patient's payers, whether a 'third party' insurance, self-pay, other payer or guarantor, or some combination.

1. Conforms to *CCD Payers Section* template (templateId: `2.16.840.1.113883.10.20.1.9`)
2. **SHOULD** contain [1..*] `entry`, such that it
   a. contains *Coverage Entry* (templateId: `1.3.6.1.4.1.19376.1.5.3.1.4.17`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="2.16.840.1.113883.10.20.1.9"
 assigningAuthorityName="CCD Payers Section"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.5.3.7"
 assigningAuthorityName="IHE Payers Section"/>
          <code code="48768-6" codeSystem="2.16.840.1.113883.6.1"
 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"
 assigningAuthorityName="CCD Coverage Activity"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.17"
 assigningAuthorityName="IHE Coverage Entry"/>
              <id root="c9cf17ea-9625-48ed-b43c-2a79ef1177e1"/>
              <code code="48768-6" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Payment sources"/>
              <statusCode code="completed"/>
            </act>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 33: Payers Section example

Physical Exam Narrative Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.24`]

The physical exam section shall contain a narrative description of the patient's physical findings.

1. Conforms to *CDA Section*
2. **SHALL** contain [1..1] `code/@code` = "29545-1" *PHYSICAL EXAMINATION* (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.24"
 assigningAuthorityName="IHE Physical Exam Narrative Section"/>
          <code code="29545-1" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="PHYSICAL EXAMINATION"/>
          <title>PHYSICAL EXAMINATION</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 34: Physical Exam Narrative Section example

Physical Exam Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.1.9.15`]

The physical exam section shall contain only the required and optional subsections performed.

1. Conforms to *Physical Exam Narrative Section* template (templateId: `1.3.6.1.4.1.19376.1.5.3.1.3.24`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.24"
 assigningAuthorityName="IHE Physical Exam Narrative Section"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.9.15"
 assigningAuthorityName="IHE Physical Exam Section"/>
          <code code="29545-1" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="PHYSICAL EXAMINATION"/>
          <title>PHYSICAL EXAMINATION</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 35: Physical Exam Section example

Reason For Referral Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.1`]

The reason for referral section shall contain a narrative description of the reason that the patient is being referred.

1. Conforms to *CDA Section*
2. **SHALL** contain [1..1] `code/@code` = "42349-1" *REASON FOR REFERRAL* (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.1"
 assigningAuthorityName="IHE Reason For Referral Section"/>
          <code code="42349-1" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="REASON FOR REFERRAL"/>
          <title>REASON FOR REFERRAL</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 36: Reason For Referral Section example

Review Of Systems Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.18`]

The review of systems section shall contain a narrative description of the responses the patient gave to a set of routine questions on the functions of each anatomic body system.

1. Conforms to *CDA Section*
2. **SHALL** contain [1..1] `code/@code` = "10187-3" *REVIEW OF SYSTEMS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.18"
 assigningAuthorityName="CDT Review Of Systems Section IHE"/>
          <code code="10187-3" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="REVIEW OF SYSTEMS"/>
          <title>REVIEW OF SYSTEMS</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 37: Review Of Systems Section example

Social History Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.16`]

The social history section shall contain a narrative description of the person's beliefs, home life, community life, work life, hobbies, and risky habits.

1. Conforms to *CCD Social History Section* template (templateId: `2.16.840.1.113883.10.20.1.15`)

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

```
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="2.16.840.1.113883.10.20.1.15"
 assigningAuthorityName="CCD Social History Section"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.16"
 assigningAuthorityName="IHE Social History Section"/>
          <code code="29762-2" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Social history"/>
          <title>Social history</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 38: Social History Section example

Surgeries Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.11`]

The list of surgeries section shall contain a narrative description of the diagnostic and therapeutic operative procedures and associated anesthetic techniques the patient received in the past.

1. Conforms to *CCD Procedures Section* template (templateId: `2.16.840.1.113883.10.20.1.12`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="2.16.840.1.113883.10.20.1.12"
 assigningAuthorityName="CCD Procedures Section"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.11"
 assigningAuthorityName="IHE Surgeries Section"/>
          <code code="47519-4" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="History of procedures"/>
          <title>History of procedures</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 39: Surgeries Section example

Vital Signs Section

[Section: templateId `1.3.6.1.4.1.19376.1.5.3.1.3.25`]

The vital signs section shall contain a narrative description of the measurement results of a patient's vital signs.

1. Conforms to *CCD Vital Signs Section* template (templateId: `2.16.840.1.113883.10.20.1.16`)

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

```
  <component>
    <structuredBody>
      <component>
        <section>
          <templateId root="2.16.840.1.113883.10.20.1.16"
 assigningAuthorityName="CCD Vital Signs Section"/>
          <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.25"
 assigningAuthorityName="IHE Vital Signs Section"/>
          <code code="8716-3" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Vital signs"/>
          <title>Vital signs</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 40: Vital Signs Section example

Chapter 4

CLINICAL STATEMENT TEMPLATES

Topics:

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 Intolerance

[Observation: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.6`]

1. Conforms to *Problem Entry* template (templateId: `1.3.6.1.4.1.19376.1.5.3.1.4.5`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <entry>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.1.28"
 assigningAuthorityName="CCD Problem Observation"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.5"
 assigningAuthorityName="IHE Problem Entry"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.6"
 assigningAuthorityName="IHE Allergy Intolerance"/>
              <code/>
              <text/>
              <statusCode code="completed"/>
              <effectiveTime>
                <low value="1972"/>
                <high value="2008"/>
              </effectiveTime>
              <value xsi:type="CD"/>
            </observation>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 41: Allergy Intolerance example

Allergy Intolerance Concern

[Act: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.5.3`]

This entry is a specialization of the Concern Entry, wherein the subject of the concern is focused on an allergy or intolerance.

1. Conforms to *Concern Entry* template (templateId: `1.3.6.1.4.1.19376.1.5.3.1.4.5.1`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <entry>
            <act classCode="ACT" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.1.27"
 assigningAuthorityName="CCD Problem Act"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.5.1"
 assigningAuthorityName="IHE Concern Entry"/>
```

```
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.5.3"
 assigningAuthorityName="IHE Allergy Intolerance Concern"/>
              <id root="a807d58f-b9cc-49e4-b0ce-753d4cf611db"/>
              <code nullFlavor="NA"/>
              <effectiveTime>
                <low value="1972"/>
                <high value="2008"/>
              </effectiveTime>
            </act>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 42: Allergy Intolerance Concern example

Combination Medication

[SubstanceAdministration: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.11`]

1. Conforms to *Medication* template (templateId: `1.3.6.1.4.1.19376.1.5.3.1.4.7`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <entry>
            <substanceAdministration classCode="SBADM">
              <templateId root="2.16.840.1.113883.10.20.1.24"
 assigningAuthorityName="CCD Medication Activity"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.7"
 assigningAuthorityName="IHE Medication"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.11"
 assigningAuthorityName="IHE Combination Medication"/>
              <id root="85937ac7-9e48-4269-a055-a9f941665061"/>
              <statusCode/>
            </substanceAdministration>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 43: Combination Medication example

Comment

[Act: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.2`]

1. Conforms to *CDA Act*
2. **SHALL** contain [1..1] `@classCode` = "ACT"
3. **SHALL** contain [1..1] `@moodCode` = "EVN"
4. **SHALL** contain [1..1] `code/@code` = "48767-8" *Annotation Comment* (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)

5. **SHALL** contain [0..1] `statusCode/@code` = "completed" (CodeSystem: 2.16.840.1.113883.5.14 ActStatus STATIC V3NE08)
6. **SHALL** contain [0..1] `text`

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <entry>
            <act classCode="ACT" moodCode="EVN">
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.2"
 assigningAuthorityName="IHE Comment"/>
              <code code="48767-8" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Annotation Comment"/>
              <text/>
              <statusCode code="completed"/>
            </act>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 44: Comment example

Concern Entry

[Act: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.5.1`]

1. Conforms to *CCD Problem Act* template (templateId: `2.16.840.1.113883.10.20.1.27`)
2. **SHALL** contain [1..1] `effectiveTime`

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <entry>
            <act classCode="ACT" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.1.27"
 assigningAuthorityName="CCD Problem Act"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.5.1"
 assigningAuthorityName="IHE Concern Entry"/>
              <id root="cf644da2-0067-4899-86f5-2f0ce015ad7b"/>
              <code nullFlavor="NA"/>
              <effectiveTime>
                <low value="1972"/>
                <high value="2008"/>
              </effectiveTime>
            </act>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 45: Concern Entry example

Conditional Dose

[SubstanceAdministration: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.10`]

1. Conforms to *Medication* template (templateId: `1.3.6.1.4.1.19376.1.5.3.1.4.7`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <entry>
            <substanceAdministration classCode="SBADM">
              <templateId root="2.16.840.1.113883.10.20.1.24"
 assigningAuthorityName="CCD Medication Activity"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.7"
 assigningAuthorityName="IHE Medication"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.10"
 assigningAuthorityName="IHE Conditional Dose"/>
              <id root="7d61edeb-eaa7-4fda-904f-7bf50437ec9e"/>
              <statusCode/>
            </substanceAdministration>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 46: Conditional Dose example

Coverage Entry

[Act: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.17`]

1. Conforms to *CCD Coverage Activity* template (templateId: `2.16.840.1.113883.10.20.1.20`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <entry>
            <act classCode="ACT" moodCode="DEF">
              <templateId root="2.16.840.1.113883.10.20.1.20"
 assigningAuthorityName="CCD Coverage Activity"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.17"
 assigningAuthorityName="IHE Coverage Entry"/>
              <id root="f5226919-df2b-47c3-bfcf-e979124d4ff1"/>
              <code code="48768-6" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Payment sources"/>
              <statusCode code="completed"/>
            </act>
          </entry>
        </section>
      </component>
    </structuredBody>
```

```
  </component>
</ClinicalDocument>
```

Figure 47: Coverage Entry example

Encounter Activity

[Encounter: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.14`]

1. Conforms to *CCD Encounters Activity* template (templateId: `2.16.840.1.113883.10.20.1.21`)
2. Conforms to *Encounter Entry* template (templateId: `1.3.6.1.4.1.19376.1.5.3.1.4.14`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <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"
 assigningAuthorityName="CCD Encounters Activity"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.14"/>
              <id root="e32eb1de-4f3d-468a-b551-b06c17e49d4e"/>
              <code codeSystem="2.16.840.1.113883.5.4"
 codeSystemName="ActEncounterCode"/>
              <text/>
              <effectiveTime>
                <low value="1972"/>
                <high value="2008"/>
              </effectiveTime>
            </encounter>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 48: Encounter Activity example

Encounter Entry

[Encounter: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.14`]

1. Conforms to *CDA Encounter*
2. **SHALL** contain [1..1] `@classCode` = "ENC"
3. **SHOULD** contain [0..1] `code` (CodeSystem: 2.16.840.1.113883.5.4 ActEncounterCode STATIC)
   - Developers should take care to check that rational combinations of encounter.code and encounter.moodCode are used , but this profile does not restrict any combination.
4. **SHALL** contain [1..*] `id`
5. **SHALL** contain [1..1] `text`

Figure 49: Encounter Entry example

Encounter Plan Of Care

[Encounter: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.14`]

1. Conforms to *CCD Plan Of Care Activity Encounter* template (templateId: `2.16.840.1.113883.10.20.1.25`)
2. Conforms to *Encounter Entry* template (templateId: `1.3.6.1.4.1.19376.1.5.3.1.4.14`)
3. **SHALL** satisfy:

```
self.moodCode = vocab::x_DocumentEncounterMood::ARQ
  or self.moodCode = vocab::x_DocumentEncounterMood::PRMS
```

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <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="bdfc1c2d-8019-488c-900f-f40f8330499b"/>
              <code codeSystem="2.16.840.1.113883.5.4"
 codeSystemName="ActEncounterCode"/>
              <text/>
            </encounter>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 50: Encounter Plan Of Care example

Immunization

[SubstanceAdministration: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.12`]

1. Conforms to *CCD Medication Activity* template (templateId: `2.16.840.1.113883.10.20.1.24`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <entry>
            <substanceAdministration classCode="SBADM">
              <templateId root="2.16.840.1.113883.10.20.1.24"
 assigningAuthorityName="CCD Medication Activity"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.12"
 assigningAuthorityName="IHE Immunization"/>
              <id root="e16c5b22-5e5f-416c-97fd-0e7e09e5fb69"/>
              <statusCode/>
            </substanceAdministration>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
```

```
</ClinicalDocument>
```

Figure 51: Immunization example

Medication

[SubstanceAdministration: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.7`]

This content module describes the general structure for a medication. All medication administration acts will be derived from this content module.

1. Conforms to *CCD Medication Activity* template (templateId: `2.16.840.1.113883.10.20.1.24`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <entry>
            <substanceAdministration classCode="SBADM">
              <templateId root="2.16.840.1.113883.10.20.1.24"
 assigningAuthorityName="CCD Medication Activity"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.7"
 assigningAuthorityName="IHE Medication"/>
              <id root="9dd72a52-6c64-4385-9d5a-92ae9cf25284"/>
              <statusCode/>
            </substanceAdministration>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 52: Medication example

Normal Dose

[SubstanceAdministration: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.7.1`]

1. Conforms to *Medication* template (templateId: `1.3.6.1.4.1.19376.1.5.3.1.4.7`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <entry>
            <substanceAdministration classCode="SBADM">
              <templateId root="2.16.840.1.113883.10.20.1.24"
 assigningAuthorityName="CCD Medication Activity"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.7"
 assigningAuthorityName="IHE Medication"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.7.1"
 assigningAuthorityName="IHE Normal Dose"/>
              <id root="43018ba5-f274-4662-b4ca-4f2dee720a3a"/>
              <statusCode/>
            </substanceAdministration>
```

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

Figure 53: Normal Dose example

Observation Request Entry

[Observation: templateId `1.3.6.1.4.1.19376.1.5.3.1.1.20.3.1`]

1. Conforms to *CCD Plan Of Care Activity Observation* template (templateId: `2.16.840.1.113883.10.20.1.25`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <entry>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.1.25"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.20.3.1"
 assigningAuthorityName="IHE Observation Request Entry"/>
              <id root="6512e6e9-27f8-4528-8080-bc2254efd8ad"/>
            </observation>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 54: Observation Request Entry example

Payer Entry

[Act: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.18`]

1. Conforms to *CCD Policy Activity* template (templateId: `2.16.840.1.113883.10.20.1.26`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <entry>
            <act classCode="ACT" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.1.26"
 assigningAuthorityName="CCD Policy Activity"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.18"
 assigningAuthorityName="IHE Payer Entry"/>
              <id root="bef44db7-1211-4ee3-aa81-cafe54387377"/>
              <code/>
              <statusCode code="completed"/>
```

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

Figure 55: Payer Entry example

Problem Concern Entry

[Act: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.5.2`]

This entry is a specialization of the Concern Entry, wherein the subject of the concern is focused on a problem.

1. Conforms to *Concern Entry* template (templateId: `1.3.6.1.4.1.19376.1.5.3.1.4.5.1`)
2. **SHALL** contain [1..*] `entryRelationship`, such that it
   a. contains *Problem Entry* (templateId: `1.3.6.1.4.1.19376.1.5.3.1.4.5`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <entry>
            <act classCode="ACT" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.1.27"
 assigningAuthorityName="CCD Problem Act"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.5.1"
 assigningAuthorityName="IHE Concern Entry"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.5.2"
 assigningAuthorityName="IHE Problem Concern Entry"/>
              <id root="cf34f8e8-6798-482f-be0a-bc1c384af2c5"/>
              <code nullFlavor="NA"/>
              <effectiveTime>
                <low value="1972"/>
                <high value="2008"/>
              </effectiveTime>
              <entryRelationship>
                <observation classCode="OBS" moodCode="EVN">
                  <templateId root="2.16.840.1.113883.10.20.1.28"
 assigningAuthorityName="CCD Problem Observation"/>
                  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.5"
 assigningAuthorityName="IHE Problem Entry"/>
                  <code/>
                  <text/>
                  <statusCode code="completed"/>
                  <effectiveTime>
                    <low value="1972"/>
                    <high value="2008"/>
                  </effectiveTime>
                  <value xsi:type="CD"/>
                </observation>
              </entryRelationship>
            </act>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
```

```
</ClinicalDocument>
```

Figure 56: Problem Concern Entry example

Problem Entry

[Observation: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.5`]

1. Conforms to *CCD Problem Observation* template (templateId: `2.16.840.1.113883.10.20.1.28`)
2. **SHALL** contain [1..1] `text`
3. **SHALL** contain [1..1] `value`, where its data type is CD

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <entry>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.1.28"
 assigningAuthorityName="CCD Problem Observation"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.5"
 assigningAuthorityName="IHE Problem Entry"/>
              <code/>
              <text/>
              <statusCode code="completed"/>
              <effectiveTime>
                <low value="1972"/>
                <high value="2008"/>
              </effectiveTime>
              <value xsi:type="CD"/>
            </observation>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 57: Problem Entry example

Procedure Entry Plan Of Care Activity Procedure

[Procedure: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.19`]

1. Conforms to *CCD Plan Of Care Activity Procedure* template (templateId: `2.16.840.1.113883.10.20.1.25`)
2. Conforms to *Procedure Entry*

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <entry>
            <procedure>
              <templateId root="2.16.840.1.113883.10.20.1.25"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.19"/>
```

```
              <id root="a3dc3ac2-a007-4491-9fb5-9699001a45a6"/>
            </procedure>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 58: Procedure Entry Plan Of Care Activity Procedure example

Procedure Entry Procedure Activity Procedure

[Procedure: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.19`]

1. Conforms to *CCD Procedure Activity Procedure* template (templateId: `2.16.840.1.113883.10.20.1.29`)
2. Conforms to *Procedure Entry*

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <entry>
            <procedure>
              <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"/>
              <statusCode code="completed"/>
            </procedure>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 59: Procedure Entry Procedure Activity Procedure example

Simple Observation

[Observation: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.13`]

The simple observation entry is meant to be an abstract representation of many of the observations used in this specification. It can be made concrete by the specification of a few additional constraints, namely the vocabulary used for codes, and the value representation. A simple observation may also inherit constraints from other specifications (e.g., ASTM/HL7 Continuity of Care Document).

1. Conforms to *CDA Observation*
2. **SHALL** contain [1..*] `id`
3. **SHALL** contain [1..1] `statusCode/@code` = "completed" (CodeSystem: 2.16.840.1.113883.5.14 ActStatus STATIC V3NE08)

Figure 60: Simple Observation example

Split Dose

[SubstanceAdministration: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.9`]

1. Conforms to *Medication* template (templateId: `1.3.6.1.4.1.19376.1.5.3.1.4.7`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <entry>
            <substanceAdministration classCode="SBADM">
              <templateId root="2.16.840.1.113883.10.20.1.24"
 assigningAuthorityName="CCD Medication Activity"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.7"
 assigningAuthorityName="IHE Medication"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.9"
 assigningAuthorityName="IHE Split Dose"/>
              <id root="4c849888-9a56-4813-ba95-d22e5e294906"/>
              <statusCode/>
            </substanceAdministration>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 61: Split Dose example

Tapered Dose

[SubstanceAdministration: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.8`]

This template identifier is used to identify medication administration events that require special processing to handle tapered dosing. The parent template is 1.3.6.1.4.1.19376.1.5.3.1.4.7. A tapered dose is often used for certain medications where abrupt termination of the medication can have negative consequences. Tapered dosages may be done by adjusting the dose frequency, the dose amount, or both.

When merely the dose frequency is adjusted, (e.g., Prednisone 5mg b.i.d. for three days, then 5mg. daily for three days, and then 5mg every other day), then only one medication entry is needed, multiple frequency specifications recorded in <effectiveTime> elements. When the dose varies (eg. Prednisone 15mg daily for three days, then 10 mg daily for three days, the 5 mg daily for three days), subordinate medication entries should be created for each distinct dosage.

1. Conforms to *Medication* template (templateId: `1.3.6.1.4.1.19376.1.5.3.1.4.7`)

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <entry>
            <substanceAdministration classCode="SBADM">
              <templateId root="2.16.840.1.113883.10.20.1.24"
 assigningAuthorityName="CCD Medication Activity"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.7"
 assigningAuthorityName="IHE Medication"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.8"
 assigningAuthorityName="IHE Tapered Dose"/>
              <id root="55d0584e-ccc6-4e03-a5b8-c3bccc8e17e8"/>
              <statusCode/>
            </substanceAdministration>
```

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

Figure 62: Tapered Dose example

Vital Sign Observation

[Observation: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.13.2`]

1. Conforms to *CCD Result Observation* template (templateId: `2.16.840.1.113883.10.20.1.31`)
2. Conforms to *Simple Observation* template (templateId: `1.3.6.1.4.1.19376.1.5.3.1.4.13`)
3. **SHALL** contain [1..1] `code` (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)
4. **SHALL** contain [1..1] `value`, where its data type is PQ
5. **MAY** contain [0..*] `interpretationCode`
6. **MAY** contain [0..*] `methodCode`
7. **MAY** contain [0..*] `targetSiteCode`

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <entry>
            <observation classCode="OBS" moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.1.31"
 assigningAuthorityName="CCD Result Observation"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13"
 assigningAuthorityName="IHE Simple Observation"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13.2"
 assigningAuthorityName="IHE Vital Sign Observation"/>
              <id root="b2961665-cb51-44dc-bf8c-b8b7514ddd31"/>
              <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/
>
              <statusCode code="completed"/>
              <effectiveTime>
                <low value="1972"/>
                <high value="2008"/>
              </effectiveTime>
              <value xsi:type="PQ"/>
              <interpretationCode/>
              <methodCode/>
              <targetSiteCode/>
            </observation>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 63: Vital Sign Observation example

Vital Signs Organizer

[Organizer: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.13.1`]

1. Conforms to *CCD Vital Signs Organizer* template (templateId: `2.16.840.1.113883.10.20.1.35`)
2. **SHALL** contain [1..1] `code/@code` = "46680005" *Vital signs* (CodeSystem: 2.16.840.1.113883.6.96 SNOMEDCT STATIC 20080731)
3. **SHALL** contain [1..1] `statusCode/@code` = "completed" (CodeSystem: 2.16.840.1.113883.5.14 ActStatus STATIC V3NE08)
4. **SHALL** contain [1..*] `component`, such that it
   a. contains *Vital Sign Observation* (templateId: `1.3.6.1.4.1.19376.1.5.3.1.4.13.2`)
5. **SHALL** contain [1..1] `effectiveTime`
6. **SHALL** contain [1..1] `author`, such that it
   a. contains *CDA Author*

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <component>
    <structuredBody>
      <component>
        <section>
          <entry>
            <organizer moodCode="EVN">
              <templateId root="2.16.840.1.113883.10.20.1.32"
 assigningAuthorityName="CCD Result Organizer"/>
              <templateId root="2.16.840.1.113883.10.20.1.35"
 assigningAuthorityName="CCD Vital Signs Organizer"/>
              <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13.1"
 assigningAuthorityName="IHE Vital Signs Organizer"/>
              <id root="2696026c-dc28-4538-8f9b-24c0055c6b2d"/>
              <code code="46680005" codeSystem="2.16.840.1.113883.6.96"
 codeSystemName="SNOMEDCT" displayName="Vital signs"/>
              <statusCode code="completed"/>
              <effectiveTime>
                <low value="1972"/>
                <high value="2008"/>
              </effectiveTime>
              <component>
                <observation classCode="OBS" moodCode="EVN">
                  <templateId root="2.16.840.1.113883.10.20.1.31"
 assigningAuthorityName="CCD Result Observation"/>
                  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13"
 assigningAuthorityName="IHE Simple Observation"/>
                  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.13.2"
 assigningAuthorityName="IHE Vital Sign Observation"/>
                  <id root="7e5e9419-c81f-4e65-ae89-993e5ef01624"/>
                  <code codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC"/>
                  <statusCode code="completed"/>
                  <effectiveTime>
                    <low value="1972"/>
                    <high value="2008"/>
                  </effectiveTime>
                  <value xsi:type="PQ"/>
                  <interpretationCode/>
                  <methodCode/>
                  <targetSiteCode/>
                </observation>
              </component>
            </organizer>
          </entry>
        </section>
```

```
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 64: Vital Signs Organizer example

Chapter 5

OTHER CLASSES

Topics:

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

Healthcare Providers Pharmacies

[Performer1: templateId `1.3.6.1.4.1.19376.1.5.3.1.2.3`]

1. Conforms to *CDA Performer1*

Figure 65: Healthcare Providers Pharmacies example

Language Communication

[LanguageCommunication: templateId `1.3.6.1.4.1.19376.1.5.3.1.2.1`]

1. Conforms to *CDA Language Communication*

Figure 66: Language Communication example

Procedure Entry

1.

Figure 67: Procedure Entry example

Product Entry

[ManufacturedProduct: templateId `1.3.6.1.4.1.19376.1.5.3.1.4.7.2`]

1. Conforms to *CCD Product* template (templateId: `2.16.840.1.113883.10.20.1.53`)

Figure 68: Product Entry example

Chapter 6

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© (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)*
- HL7 Implementation Guide for CDA Release 2 CDA for Public Health Case Reports (PHCR) Informative Standard October 2009. Available through *HL7* .
- HL7 Implementation Guide for CDA Release 2: NHSN Healthcare Associated Infection (HAI) Reports, Release 2 Draft Standard for Trial Use January 2009 Available at: *NHSN Healthcare Associated Infection (HAI) Reports*
- Dolin RH, Alschuler L, Boyer S, Beebe C, Behlen FM, Biron PV, Shabo A, (Editors). HL7 Clinical Document Architecture, Release 2.0. ANSI-approved HL7 Standard; May 2005. Ann Arbor, Mich.: Health Level Seven, Inc. Available through *HL7* or if an HL7 member with the following link: *CDA Release 2 Normative Web Edition.*
- *LOINC®* : Logical Observation Identifiers Names and Codes, Regenstrief Institute.
- *SNOMED CT®* : SNOMED Clinical Terms SNOMED International Organization.
- Extensible Markup Language, *www.w3.org/XML* .
- Dolin RH, Alschuler L, Boyer S, Beebe C, Behlen FM, Biron PV, Shabo A., HL7 Clinical Document Architecture, Release 2. J Am Med Inform Assoc. 2006;13:30-39. Available at: *http://www.jamia.org/cgi/reprint/13/1/30* .
- Using SNOMED CT in HL7 Version 3; Implementation Guide, Release 1.5. Available through *HL7* or if an HL7 member with the following link: *Using SNOMED CT in HL7 Version 3*