

Implementation Guide for CDA Release 2 Health Story - Common Data Types (CDT) (U.S. Realm)



**DRAFT: FOR DEVELOPMENT USE ONLY
(Consolidated Developer Documentation)**

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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*
- *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 HL7 Health Story 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 guide is a combination of several Health Story specifications for History & Physical, Consultation Note, and others.

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 `templateIds` are required for conformance.

Recipient Responsibilities

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

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

Conventions Used in This Guide

Conformance Requirements

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

Template name

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

Description of the template will be here

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

Figure 1: Template name and "conforms to" appearance

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

The following cardinality indicators may be interpreted as follows:

- 0..1 as zero to one present
- 1..1 as one and only one present

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

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

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

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

Figure 2: Template-based conformance statements example

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

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

Figure 3: CCD conformance statements example

Keywords

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

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

XML Examples

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

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

Figure 4: ClinicalDocument example

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

Chapter

2

DOCUMENT TEMPLATES

Topics:

- [*Consultation Note*](#)
- [*General Header Constraints*](#)
- [*History And Physical*](#)
- [*Level One Conformance*](#)
- [*Level Three Conformance*](#)
- [*Level Two Conformance*](#)

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

Consultation Note

[ClinicalDocument: templateId 2.16.840.1.113883.10.20.4]

1. Conforms to *RIM Infrastructure Root*
2. Conforms to *RIM Act*
3. Conforms to *CDA Clinical Document*
4. Conforms to *General Header Constraints* template (templateId: 2.16.840.1.113883.10.20.3)
5. [CDT] **CONF-CO-2: SHALL** contain [1..1] code, which **SHALL** be selected from ValueSet *ConsultDocumentTypeCodes* DYNAMIC
6. [CDT] **SHALL** contain [1..1] confidentialityCode
7. [CDT] **CONF-HP-23: SHALL** contain [1..1] effectiveTime
8. [CDT] **SHALL** contain [1..1] id
9. [CDT] **CONF-HP-24: SHALL** contain [1..1] languageCode
10. [CDT] **SHALL** contain [1..1] realmCode/@code = "US"
11. [CDT] **CONF-HP-22: SHALL** contain [1..1] title
12. [CDT] **SHALL** contain [1..1] typeId
13. [CDT] **CONF-CO-27: SHALL** contain [1..1] component, such that it
 - a. contains *History Of Present Illness* (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.4)
14. [CDT] **CONF-CO-28: SHALL** contain [1..1] component, such that it
 - a. contains *Physical Examination Section* (templateId: 2.16.840.1.113883.10.20.2.10)
15. [CDT] **CONF-CO-32: MAY** contain [0..1] component, such that it
 - a. contains *CCD Problem Section* (templateId: 2.16.840.1.113883.10.20.1.11)
16. [CDT] **CONF-CO-33: MAY** contain [0..1] component, such that it
 - a. contains *CCD Procedures Section* (templateId: 2.16.840.1.113883.10.20.1.12)
17. [CDT] **CONF-CO-34: MAY** contain [0..1] component, such that it
 - a. contains *Past Medical History Section Consult* (templateId: 2.16.840.1.113883.10.20.4.9)
18. [CDT] **CONF-CO-35: MAY** contain [0..1] component, such that it
 - a. contains *CCD Immunizations Section* (templateId: 2.16.840.1.113883.10.20.1.6)
19. [CDT] **CONF-CO-36: MAY** contain [0..1] component, such that it
 - a. contains *CCD Medications Section* (templateId: 2.16.840.1.113883.10.20.1.8)
20. [CDT] **CONF-CO-37: MAY** contain [0..1] component, such that it
 - a. contains *CCD Alerts Section* (templateId: 2.16.840.1.113883.10.20.1.2)
21. [CDT] **CONF-CO-38: MAY** contain [0..1] component, such that it
 - a. contains *CCD Social History Section* (templateId: 2.16.840.1.113883.10.20.1.15)
22. [CDT] **CONF-CO-39: MAY** contain [0..1] component, such that it
 - a. contains *CCD Family History Section* (templateId: 2.16.840.1.113883.10.20.1.4)
23. [CDT] **MAY** contain [0..1] component, such that it
 - a. contains *Review Of Systems Section* (templateId: 2.16.840.1.113883.10.20.4.10)
24. [CDT] **CONF-CO-42: MAY** contain [0..1] component, such that it
 - a. contains *CCD Vital Signs Section* (templateId: 2.16.840.1.113883.10.20.1.16)
25. [CDT] **CONF-CO-43: MAY** contain [0..1] component, such that it
 - a. contains *General Status Section* (templateId: 2.16.840.1.113883.10.20.2.5)
26. [CDT] **CONF-CO-44: MAY** contain [0..1] component, such that it
 - a. contains *Diagnostic Findings*

27. [CDT] **CONF-HP-16: SHALL** satisfy: The extension attribute of the typeId element SHALL be POCD_HD000040.
28. [CDT] **CONF-HP-17: SHALL** satisfy: The ClinicalDocument/id element SHALL be present. The ClinicalDocument/id/@root attribute SHALL be a syntactically correct UUID or OID.
29. [CDT] **CONF-HP-18: SHALL** satisfy: UUIDs SHALL be represented in the form XXXXXXXX-XXXX-XXXX-XXXXXXXXXXXXXXXXXX, where each X is a character from the set [A-Fa-f0-9].
30. [CDT] **CONF-HP-19: SHALL** satisfy: OIDs SHALL be represented in dotted decimal notation, where each decimal number is either 0, or starts with a nonzero digit. More formally, an OID SHALL be in the form ([0-2])([1-9][0-9]*|0))+.
31. [CDT] **CONF-HP-20: SHALL** satisfy: OIDs SHALL be no more than 64 characters in length.
32. [CDT] **CONF-HP-25: SHALL** satisfy: languageCode SHALL be in the form nn, or nn-CC.
33. [CDT] **CONF-HP-26: SHALL** satisfy: The nn portion of languageCode SHALL be a legal ISO-639-1 language code in lowercase.
34. [CDT] **CONF-HP-27: SHALL** satisfy: The CC portion languageCode, if present, SHALL be an ISO-3166 country code in uppercase.
35. [CDT] **CONF-HP-28: SHALL** satisfy: Both setId and versionNumber SHALL be present or both SHALL be absent.
36. [CDT] **CONF-HP-29: SHALL** satisfy: The @extension and/or @root of setId and id SHALL be different when both are present.
37. [CDT] **CONF-HP-30: SHALL** satisfy: A copyTime element SHALL NOT be present.
38. [CDT] **CONF-CO-3: MAY** satisfy: Implementations MAY use local codes in translation elements to specify a local code that is equivalent to the document type. An example of this is shown below.
39. [CDT] **CONF-CO-4: SHALL** satisfy: If pre-coordinated document type codes are used, values used in the assignedAuthor/code and assignedAuthor/author/functionCode elements SHALL NOT conflict with ClinicalDocument/code.
40. [CDT] **CONF-CO-5: SHALL** satisfy: If pre-coordinated document type codes are used, values used in encompassingEncounter/location/healthCareFacility/code SHALL NOT conflict with ClinicalDocument/code.
41. [CDT] **CONF-CO-26: SHALL** satisfy: A Consultation Note contains either ReasonForReferral or ReasonForVisit, but not both.

```
<?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="2.16.840.1.113883.10.20.4" assigningAuthorityName="CDT
Consultation Note"/>
  <id root="cf9a3390-b0af-4587-8acb-14f109ecc094"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <title/>
  <effectiveTime/>
  <confidentialityCode/>
  <languageCode/>
  <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>
      <component>
        <section>
          <templateId root="2.16.840.1.113883.10.20.2.10"
assigningAuthorityName="CDT Physical Examination Section"/>
          <code code="29545-1" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="PHYSICAL FINDINGS"/>

```

```

        <title>PHYSICAL FINDINGS</title>
      </section>
    </component>
    <component>
      <section>
        <templateId root="2.16.840.1.113883.10.20.1.11"
assigningAuthorityName="CCD Problem Section"/>
        <code code="11450-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Problem list"/>
        <title>Problem list</title>
      </section>
    </component>
    <component>
      <section>
        <templateId root="2.16.840.1.113883.10.20.1.12"
assigningAuthorityName="CCD Procedures 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>
    <component>
      <section>
        <templateId root="2.16.840.1.113883.10.20.4.9"
assigningAuthorityName="CDT Past Medical History Section Consult"/>
        <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>
    <component>
      <section>
        <templateId root="2.16.840.1.113883.10.20.1.6"
assigningAuthorityName="CCD 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>
      </section>
    </component>
    <component>
      <section>
        <templateId root="2.16.840.1.113883.10.20.1.8"
assigningAuthorityName="CCD 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>
    <component>
      <section>
        <templateId root="2.16.840.1.113883.10.20.1.2"
assigningAuthorityName="CCD Alerts 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>
    <component>
      <section>
        <templateId root="2.16.840.1.113883.10.20.1.15"
assigningAuthorityName="CCD 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>
</component>
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.1.4"
    assigningAuthorityName="CCD Family 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>
</component>
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.4.10"
    assigningAuthorityName="CDT Review Of Systems Section"/>
    <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>
</component>
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.1.16"
    assigningAuthorityName="CCD 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>
</component>
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.2.5"
    assigningAuthorityName="CDT General Status Section"/>
    <code code="10210-3" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="GENERAL STATUS, PHYSICAL FINDINGS"/>
    <title>GENERAL STATUS, PHYSICAL FINDINGS</title>
  </section>
</component>
</component>
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.1.14"
    assigningAuthorityName="CCD Results Section"/>
    <templateId assigningAuthorityName="CDT Diagnostic Findings"/>
    <code code="30954-2" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Relevant diagnostic tests and/or
    laboratory data"/>
    <title>Relevant diagnostic tests and/or laboratory data</title>
  </section>
</component>
</structuredBody>
</component>
</ClinicalDocument>

```

Figure 5: Consultation Note example

General Header Constraints

[ClinicalDocument: templateId 2.16.840.1.113883.10.20.3]

This section describes constraints that apply to the H and P Note and to other types of CDA documents defined for general exchange. The template defined here should be reused wherever these general header constraints are applied.

1. Conforms to *RIM Infrastructure Root*

2. Conforms to [RIM Act](#)
3. Conforms to [CDA Clinical Document](#)
4. [CDT] **CONF-HP-21: SHALL** contain [1..1] code
5. [CDT] **SHALL** contain [1..1] confidentialityCode
6. [CDT] **CONF-HP-23: SHALL** contain [1..1] effectiveTime
7. [CDT] **SHALL** contain [1..1] id
8. [CDT] **CONF-HP-24: SHALL** contain [1..1] languageCode
9. [CDT] **SHALL** contain [1..1] realmCode/@code = "US"
10. [CDT] **CONF-HP-22: SHALL** contain [1..1] title
11. [CDT] **SHALL** contain [1..1] typeId
12. [CDT] **CONF-HP-16: SHALL** satisfy: The extension attribute of the typeId element SHALL be POCD_HD000040.
13. [CDT] **CONF-HP-17: SHALL** satisfy: The ClinicalDocument/id element SHALL be present. The ClinicalDocument/id/@root attribute SHALL be a syntactically correct UUID or OID.
14. [CDT] **CONF-HP-18: SHALL** satisfy: UUIDs SHALL be represented in the form XXXXXXXX-XXXX-XXXX-XXXXXXXXXXXXXXXXXX, where each X is a character from the set [A-Fa-f0-9].
15. [CDT] **CONF-HP-19: SHALL** satisfy: OIDs SHALL be represented in dotted decimal notation, where each decimal number is either 0, or starts with a nonzero digit. More formally, an OID SHALL be in the form ([0-2])([1-9][0-9]*(0))+.
16. [CDT] **CONF-HP-20: SHALL** satisfy: OIDs SHALL be no more than 64 characters in length.
17. [CDT] **CONF-HP-25: SHALL** satisfy: languageCode SHALL be in the form nn, or nn-CC.
18. [CDT] **CONF-HP-26: SHALL** satisfy: The nn portion of languageCode SHALL be a legal ISO-639-1 language code in lowercase.
19. [CDT] **CONF-HP-27: SHALL** satisfy: The CC portion languageCode, if present, SHALL be an ISO-3166 country code in uppercase.
20. [CDT] **CONF-HP-28: SHALL** satisfy: Both setId and versionNumber SHALL be present or both SHALL be absent.
21. [CDT] **CONF-HP-29: SHALL** satisfy: The @extension and/or @root of setId and id SHALL be different when both are present.
22. [CDT] **CONF-HP-30: SHALL** satisfy: A copyTime element SHALL NOT be present.

```
<?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"/>
  <id root="86f1f1b2-359f-4b50-8c83-1baa88e76d94"/>
  <code/>
  <title/>
  <effectiveTime/>
  <confidentialityCode/>
  <languageCode/>
</ClinicalDocument>
```

Figure 6: General Header Constraints example

History And Physical

[ClinicalDocument: templateId 2.16.840.1.113883.10.20.2]

1. Conforms to [RIM Infrastructure Root](#)
2. Conforms to [RIM Act](#)
3. Conforms to [CDA Clinical Document](#)
4. Conforms to [General Header Constraints](#) template (templateId: 2.16.840.1.113883.10.20.3)
5. [CDT] **CONF-HP-54: SHALL** contain [1..1] code, which **SHALL** be selected from ValueSet 2.16.840.1.113883.1.11.20.22 [HPDocumentType](#) DYNAMIC
6. [CDT] **SHALL** contain [1..1] confidentialityCode
7. [CDT] **CONF-HP-23: SHALL** contain [1..1] effectiveTime

8. [CDT] **SHALL** contain [1..1] id
9. [CDT] **CONF-HP-24: SHALL** contain [1..1] languageCode
10. [CDT] **SHALL** contain [1..1] realmCode/@code = "US"
11. [CDT] **CONF-HP-22: SHALL** contain [1..1] title
12. [CDT] **SHALL** contain [1..1] typeId
13. [CDT] **CONF-HP-76: SHALL** contain [1..1] component, such that it
 - a. contains *History Of Present Illness* (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.4)
 - This section describes the history related to the chief complaint. It contains the historical details leading up to and pertaining to the patient's current complaint or reason for seeking medical care.
14. [CDT] **CONF-HP-77: SHALL** contain [1..1] component, such that it
 - a. contains *Past Medical History Section* (templateId: 2.16.840.1.113883.10.20.2.9)
 - This section describes the past medical history for the patient. It may contain information about past procedures or other illnesses that might have a bearing on the patient's current illness. Since past medical history can include past surgical history and other procedures, the Procedure History section may be included under the Past Medical History section or it may stand alone as its own section. By the same token, problems can be recorded in a standalone Problems section or in a nested Problems section. Wherever used, procedures and problems should conform to the CCD template for CDA entries cited in the Problems section.
15. [CDT] **CONF-HP-79: SHALL** contain [1..1] component, such that it
 - a. contains *CCD Medications Section* (templateId: 2.16.840.1.113883.10.20.1.8)
 - The Medications section defines a patient's current medications and pertinent medication history. In this case, the LOINC displayName is not appropriate for the title of this section. The title should include the word "Medications." At a minimum, the currently active medications should be listed with an entire medication history as an option, particularly when the document is used for comprehensive data export. The section may also include a patient's prescription history and enable the determination of the source of a medication list, e.g., from a pharmacy system versus from the patient.
16. [CDT] **CONF-HP-80: SHALL** contain [1..1] component, such that it
 - a. contains *CCD Alerts Section* (templateId: 2.16.840.1.113883.10.20.1.2)
 - This section is used to list and describe any medication allergies, adverse reactions, idiosyncratic reactions, anaphylaxis/anaphylactoid reactions to food items, and metabolic variations or adverse reactions/allergies to other substances (such as latex, iodine, tape adhesives) used to assure the safety of health care delivery. In general, environmental allergies, even if severe, should not be included in the Alerts section since they constitute a medical problem and should be listed in the problem list and past medical history, even if directly related to the presenting problem.
17. [CDT] **CONF-HP-81: SHALL** contain [1..1] component, such that it
 - a. contains *CCD Social History Section* (templateId: 2.16.840.1.113883.10.20.1.15)
 - This section contains data defining the patient's occupational, personal (i.e., lifestyle), social, and environmental history and health risk factors, as well as administrative data such as marital status, race, ethnicity, and religious affiliation. Social history can have a significant influence on a patient's physical, psychological, and emotional health and wellbeing, so should be considered in the development of a complete health record.
18. [CDT] **CONF-HP-82: SHALL** contain [1..1] component, such that it
 - a. contains *CCD Family History Section* (templateId: 2.16.840.1.113883.10.20.1.4)
 - This section contains data defining the patient's genetic relatives in terms of relevant health-risk factors that have a potential impact on the patient's health care profile.
19. [CDT] **CONF-HP-83: SHALL** contain [1..1] component, such that it
 - a. contains *Review Of Systems Section IHE* (templateId: 1.3.6.1.4.1.19376.1.5.3.1.3.18)
 - The review of systems is a relevant collection of symptoms and function systematically gathered by a clinician. It includes symptoms the patient is currently experiencing, some of which were not elicited during

the history of present illness, as well as a potentially large number of pertinent negatives, e.g., symptoms that the patient was specifically asked if they had experienced or were currently experiencing, but had denied experiencing.

20. [CDT] **CONF-HP-84: SHALL** contain [1..1] component, such that it
 - a. contains *Physical Examination Section* (templateId: 2.16.840.1.113883.10.20.2.10)
21. [CDT] **CONF-HP-86: SHALL** contain [1..1] component, such that it
 - a. contains *Vital Signs Section* (templateId: 2.16.840.1.113883.10.20.2.4)
22. [CDT] **CONF-HP-88: SHALL** contain [1..1] component, such that it
 - a. contains *General Status Section* (templateId: 2.16.840.1.113883.10.20.2.5)
23. [CDT] **CONF-HP-90: SHALL** contain [1..1] component, such that it
 - a. contains *Diagnostic Findings*
 - This section contains the results of observations generated by laboratories, imaging procedures, and other procedures. The scope includes hematology, chemistry, serology, virology, toxicology, microbiology, plain x-ray, ultrasound, CT, MRI, angiography, echocardiography, nuclear medicine, pathology, and procedure observations. The section often includes notable results such as abnormal values or relevant trends, and could contain all results for the period of time being documented. In some situations, such as in the emergency department and pending surgery, diagnostic findings are not available when a History and Physical is released. As explained in Section 4.1 Section Descriptions above, a required section for which no content is available must contain some indication that no content is available. Laboratory results are typically generated by laboratories providing analytic services in areas such as chemistry, hematology, serology, histology, cytology, anatomic pathology, microbiology, and/or virology. These observations are based on analysis of specimens obtained from the patient and submitted to the laboratory. Imaging results are typically generated by a clinician reviewing the output of an imaging procedure, such as where a cardiologist reports the left ventricular ejection fraction based on the review of a cardiac echocardiogram. Procedure results are typically generated by a clinician wanting to provide more granular information about component observations made during the performance of a procedure, such as where a gastroenterologist reports the size of a polyp observed during a colonoscopy.
24. [CDT] **CONF-HP-93: MAY** contain [0..1] component, such that it
 - a. contains *CCD Problem Section* (templateId: 2.16.840.1.113883.10.20.1.11)
 - This section lists and describes all relevant clinical problems at the time the History and Physical is generated. At a minimum, all pertinent current and historical problems should be listed. This section is optional because the information contained in it may also appear in the Past Medical History section or the History of Present Illness section. When a problem list is inserted into either of these sections, it should use the CCD template.
25. [CDT] **CONF-HP-94: MAY** contain [0..1] component, such that it
 - a. contains *CCD Procedures Section* (templateId: 2.16.840.1.113883.10.20.1.12)
26. [CDT] **CONF-HP-96: MAY** contain [0..1] component, such that it
 - a. contains *CCD Immunizations Section* (templateId: 2.16.840.1.113883.10.20.1.6)
 - The Immunizations section provides a patient's pertinent immunization history. The Immunizations section is optional, however it is recommended that it be present when such information is available.
27. [CDT] **CONF-HP-16: SHALL** satisfy: The extension attribute of the typeId element SHALL be POCD_HD000040.
28. [CDT] **CONF-HP-17: SHALL** satisfy: The ClinicalDocument/id element SHALL be present. The ClinicalDocument/id/@root attribute SHALL be a syntactically correct UUID or OID.
29. [CDT] **CONF-HP-18: SHALL** satisfy: UUIDs SHALL be represented in the form XXXXXXXX-XXXX-XXXX-XXXXXXXXXXXXXXXXXX, where each X is a character from the set [A-Fa-f0-9].
30. [CDT] **CONF-HP-19: SHALL** satisfy: OIDs SHALL be represented in dotted decimal notation, where each decimal number is either 0, or starts with a nonzero digit. More formally, an OID SHALL be in the form ([0-2])([1-9][0-9]*[0])+.
31. [CDT] **CONF-HP-20: SHALL** satisfy: OIDs SHALL be no more than 64 characters in length.
32. [CDT] **CONF-HP-25: SHALL** satisfy: languageCode SHALL be in the form nn, or nn-CC.

33. [CDT] **CONF-HP-26: SHALL** satisfy: The nn portion of languageCode SHALL be a legal ISO-639-1 language code in lowercase.
34. [CDT] **CONF-HP-27: SHALL** satisfy: The CC portion languageCode, if present, SHALL be an ISO-3166 country code in uppercase.
35. [CDT] **CONF-HP-28: SHALL** satisfy: Both setId and versionNumber SHALL be present or both SHALL be absent.
36. [CDT] **CONF-HP-29: SHALL** satisfy: The @extension and/or @root of setId and id SHALL be different when both are present.
37. [CDT] **CONF-HP-30: SHALL** satisfy: A copyTime element SHALL NOT be present.
38. [CDT] **CONF-HP-55: MAY** satisfy: Implementations MAY use local codes in translation elements to specify a local code that is equivalent to the document type.
39. [CDT] **CONF-HP-56: SHALL** satisfy: If pre-coordinated document type codes are used, values used in the assignedAuthor/code and assignedAuthor/author/functionCode elements SHALL NOT conflict with ClinicalDocument/code.
40. [CDT] **CONF-HP-57: SHALL** satisfy: If pre-coordinated document type codes are used, values used in encompassingEncounter/location/healthCareFacility/code SHALL NOT conflict with ClinicalDocument/code.
41. [CDT] **CONF-HP-92: SHALL** satisfy: Either combined Assessment + Plan section is included, or separate Assessment section and Plan section included, but not both combined and separate sections.
42. [CDT] **CONF-HP-91: SHALL** satisfy: When Assessment section or Plan section is included, then both sections SHALL be included.
43. [CDT] **CONF-HP-75: SHALL** satisfy: Either combined Reason for Visit and Chief Complaint section is included, or separate Reason for Visit section and Chief Complaint section included, but not both combined and separate sections.
44. [CDT] **CONF-HP-74: SHALL** satisfy: When Reason for Visit section or Chief Complaint section is included, then both sections SHALL be included.

```
<?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="2.16.840.1.113883.10.20.2" assigningAuthorityName="CDT
  History And Physical"/>
  <id root="0db6bcl2-2ccd-472c-bbdf-fc89f7dc3318"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <title/>
  <effectiveTime/>
  <confidentialityCode/>
  <languageCode/>
  <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>
      <component>
        <section>
          <templateId root="2.16.840.1.113883.10.20.2.9"
            assigningAuthorityName="CDT Past Medical History 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>
```

```

    <section>
      <templateId root="2.16.840.1.113883.10.20.1.8"
assigningAuthorityName="CCD 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>
  <component>
    <section>
      <templateId root="2.16.840.1.113883.10.20.1.2"
assigningAuthorityName="CCD Alerts 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>
  <component>
    <section>
      <templateId root="2.16.840.1.113883.10.20.1.15"
assigningAuthorityName="CCD 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>
  <component>
    <section>
      <templateId root="2.16.840.1.113883.10.20.1.4"
assigningAuthorityName="CCD Family 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>
  <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>
  <component>
    <section>
      <templateId root="2.16.840.1.113883.10.20.2.10"
assigningAuthorityName="CDT Physical Examination Section"/>
      <code code="29545-1" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="PHYSICAL FINDINGS"/>
      <title>PHYSICAL FINDINGS</title>
    </section>
  </component>
  <component>
    <section>
      <templateId root="2.16.840.1.113883.10.20.2.4"
assigningAuthorityName="CDT 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>
  <component>
    <section>

```



```

    <templateId root="2.16.840.1.113883.10.20.2.5"
    assigningAuthorityName="CDT General Status Section"/>
    <code code="10210-3" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="GENERAL STATUS, PHYSICAL FINDINGS"/>
    <title>GENERAL STATUS, PHYSICAL FINDINGS</title>
  </section>
</component>
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.1.14"
    assigningAuthorityName="CCD Results Section"/>
    <templateId assigningAuthorityName="CDT Diagnostic Findings"/>
    <code code="30954-2" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Relevant diagnostic tests and/or
    laboratory data"/>
    <title>Relevant diagnostic tests and/or laboratory data</title>
  </section>
</component>
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.1.11"
    assigningAuthorityName="CCD Problem Section"/>
    <code code="11450-4" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Problem list"/>
    <title>Problem list</title>
  </section>
</component>
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.1.12"
    assigningAuthorityName="CCD Procedures 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>
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.1.6"
    assigningAuthorityName="CCD 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>
  </section>
</component>
</structuredBody>
</component>
</ClinicalDocument>

```

Figure 7: History And Physical example

Level One Conformance

[ClinicalDocument: templateId 2.16.840.1.113883.10.20.10]

1. Conforms to [RIM Infrastructure Root](#)
2. Conforms to [RIM Act](#)
3. Conforms to [CDA Clinical Document](#)
4. Conforms to [General Header Constraints](#) template (templateId: 2.16.840.1.113883.10.20.3)
5. [CDT] **CONF-HP-21: SHALL** contain [1..1] code
6. [CDT] **SHALL** contain [1..1] confidentialityCode

7. [CDT] **CONF-HP-23: SHALL** contain [1..1] effectiveTime
8. [CDT] **SHALL** contain [1..1] id
9. [CDT] **CONF-HP-24: SHALL** contain [1..1] languageCode
10. [CDT] **SHALL** contain [1..1] realmCode/@code = "US"
11. [CDT] **CONF-HP-22: SHALL** contain [1..1] title
12. [CDT] **SHALL** contain [1..1] typeId
13. [CDT] **CONF-HP-16: SHALL** satisfy: The extension attribute of the typeId element SHALL be POCD_HD000040.
14. [CDT] **CONF-HP-17: SHALL** satisfy: The ClinicalDocument/id element SHALL be present. The ClinicalDocument/id/@root attribute SHALL be a syntactically correct UUID or OID.
15. [CDT] **CONF-HP-18: SHALL** satisfy: UUIDs SHALL be represented in the form XXXXXXXX-XXXX-XXXX-XXXXXXXXXXXXXXXX, where each X is a character from the set [A-Fa-f0-9].
16. [CDT] **CONF-HP-19: SHALL** satisfy: OIDs SHALL be represented in dotted decimal notation, where each decimal number is either 0, or starts with a nonzero digit. More formally, an OID SHALL be in the form ([0-2])([1-9][0-9]*[0])+.
17. [CDT] **CONF-HP-20: SHALL** satisfy: OIDs SHALL be no more than 64 characters in length.
18. [CDT] **CONF-HP-25: SHALL** satisfy: languageCode SHALL be in the form nn, or nn-CC.
19. [CDT] **CONF-HP-26: SHALL** satisfy: The nn portion of languageCode SHALL be a legal ISO-639-1 language code in lowercase.
20. [CDT] **CONF-HP-27: SHALL** satisfy: The CC portion languageCode, if present, SHALL be an ISO-3166 country code in uppercase.
21. [CDT] **CONF-HP-28: SHALL** satisfy: Both setId and versionNumber SHALL be present or both SHALL be absent.
22. [CDT] **CONF-HP-29: SHALL** satisfy: The @extension and/or @root of setId and id SHALL be different when both are present.
23. [CDT] **CONF-HP-30: SHALL** satisfy: A copyTime element SHALL NOT be present.

```
<?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="2.16.840.1.113883.10.20.10" assigningAuthorityName="CDT
  Level One Conformance"/>
  <id root="b15c7d05-ea3a-48f1-94d7-4a56d2933090"/>
  <code/>
  <title/>
  <effectiveTime/>
  <confidentialityCode/>
  <languageCode/>
</ClinicalDocument>
```

Figure 8: Level One Conformance example

Level Three Conformance

[ClinicalDocument: templateId 2.16.840.1.113883.10.20.30]

1. Conforms to [RIM Infrastructure Root](#)
2. Conforms to [RIM Act](#)
3. Conforms to [CDA Clinical Document](#)
4. Conforms to [General Header Constraints](#) template (templateId: 2.16.840.1.113883.10.20.3)
5. Conforms to [Level One Conformance](#) template (templateId: 2.16.840.1.113883.10.20.10)
6. Conforms to [Level Two Conformance](#) template (templateId: 2.16.840.1.113883.10.20.20)
7. [CDT] **CONF-HP-21: SHALL** contain [1..1] code

8. [CDT] **SHALL** contain [1..1] confidentialityCode
9. [CDT] **CONF-HP-23: SHALL** contain [1..1] effectiveTime
10. [CDT] **SHALL** contain [1..1] id
11. [CDT] **CONF-HP-24: SHALL** contain [1..1] languageCode
12. [CDT] **SHALL** contain [1..1] realmCode/@code = "US"
13. [CDT] **CONF-HP-22: SHALL** contain [1..1] title
14. [CDT] **SHALL** contain [1..1] typeId
15. [CDT] **CONF-HP-16: SHALL** satisfy: The extension attribute of the typeId element SHALL be POCD_HD000040.
16. [CDT] **CONF-HP-17: SHALL** satisfy: The ClinicalDocument/id element SHALL be present. The ClinicalDocument/id/@root attribute SHALL be a syntactically correct UUID or OID.
17. [CDT] **CONF-HP-18: SHALL** satisfy: UUIDs SHALL be represented in the form XXXXXXXX-XXXX-XXXX-XXXXXXXXXXXXXXXX, where each X is a character from the set [A-Fa-f0-9].
18. [CDT] **CONF-HP-19: SHALL** satisfy: OIDs SHALL be represented in dotted decimal notation, where each decimal number is either 0, or starts with a nonzero digit. More formally, an OID SHALL be in the form ([0-2])([1-9][0-9]*0))+.
19. [CDT] **CONF-HP-20: SHALL** satisfy: OIDs SHALL be no more than 64 characters in length.
20. [CDT] **CONF-HP-25: SHALL** satisfy: languageCode SHALL be in the form nn, or nn-CC.
21. [CDT] **CONF-HP-26: SHALL** satisfy: The nn portion of languageCode SHALL be a legal ISO-639-1 language code in lowercase.
22. [CDT] **CONF-HP-27: SHALL** satisfy: The CC portion languageCode, if present, SHALL be an ISO-3166 country code in uppercase.
23. [CDT] **CONF-HP-28: SHALL** satisfy: Both setId and versionNumber SHALL be present or both SHALL be absent.
24. [CDT] **CONF-HP-29: SHALL** satisfy: The @extension and/or @root of setId and id SHALL be different when both are present.
25. [CDT] **CONF-HP-30: SHALL** satisfy: A copyTime element SHALL NOT be present.

```
<?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="2.16.840.1.113883.10.20.10" assigningAuthorityName="CDT
  Level One Conformance"/>
  <templateId root="2.16.840.1.113883.10.20.20" assigningAuthorityName="CDT
  Level Two Conformance"/>
  <templateId root="2.16.840.1.113883.10.20.30" assigningAuthorityName="CDT
  Level Three Conformance"/>
  <id root="46a430e5-d9d9-4e82-86bc-739ee8edbebl"/>
  <code/>
  <title/>
  <effectiveTime/>
  <confidentialityCode/>
  <languageCode/>
</ClinicalDocument>
```

Figure 9: Level Three Conformance example

Level Two Conformance

[ClinicalDocument: templateId 2.16.840.1.113883.10.20.20]

1. Conforms to [RIM Infrastructure Root](#)
2. Conforms to [RIM Act](#)
3. Conforms to [CDA Clinical Document](#)

4. Conforms to *General Header Constraints* template (templateId: 2.16.840.1.113883.10.20.3)
5. Conforms to *Level One Conformance* template (templateId: 2.16.840.1.113883.10.20.10)
6. [CDT] **CONF-HP-21: SHALL** contain [1..1] code
7. [CDT] **SHALL** contain [1..1] confidentialityCode
8. [CDT] **CONF-HP-23: SHALL** contain [1..1] effectiveTime
9. [CDT] **SHALL** contain [1..1] id
10. [CDT] **CONF-HP-24: SHALL** contain [1..1] languageCode
11. [CDT] **SHALL** contain [1..1] realmCode/@code = "US"
12. [CDT] **CONF-HP-22: SHALL** contain [1..1] title
13. [CDT] **SHALL** contain [1..1] typeId
14. [CDT] **CONF-HP-16: SHALL** satisfy: The extension attribute of the typeId element SHALL be POCD_HD000040.
15. [CDT] **CONF-HP-17: SHALL** satisfy: The ClinicalDocument/id element SHALL be present. The ClinicalDocument/id/@root attribute SHALL be a syntactically correct UUID or OID.
16. [CDT] **CONF-HP-18: SHALL** satisfy: UUIDs SHALL be represented in the form XXXXXXXX-XXXX-XXXX-XXXXXXXXXXXXXXXX, where each X is a character from the set [A-Fa-f0-9].
17. [CDT] **CONF-HP-19: SHALL** satisfy: OIDs SHALL be represented in dotted decimal notation, where each decimal number is either 0, or starts with a nonzero digit. More formally, an OID SHALL be in the form ([0-2])([1-9][0-9]*0))+.
18. [CDT] **CONF-HP-20: SHALL** satisfy: OIDs SHALL be no more than 64 characters in length.
19. [CDT] **CONF-HP-25: SHALL** satisfy: languageCode SHALL be in the form nn, or nn-CC.
20. [CDT] **CONF-HP-26: SHALL** satisfy: The nn portion of languageCode SHALL be a legal ISO-639-1 language code in lowercase.
21. [CDT] **CONF-HP-27: SHALL** satisfy: The CC portion languageCode, if present, SHALL be an ISO-3166 country code in uppercase.
22. [CDT] **CONF-HP-28: SHALL** satisfy: Both setId and versionNumber SHALL be present or both SHALL be absent.
23. [CDT] **CONF-HP-29: SHALL** satisfy: The @extension and/or @root of setId and id SHALL be different when both are present.
24. [CDT] **CONF-HP-30: SHALL** satisfy: A copyTime element SHALL NOT be present.

```
<?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="2.16.840.1.113883.10.20.10" assigningAuthorityName="CDT
  Level One Conformance"/>
  <templateId root="2.16.840.1.113883.10.20.20" assigningAuthorityName="CDT
  Level Two Conformance"/>
  <id root="3a80f3e2-b4da-453f-9163-bb5e6ccf8a85"/>
  <code/>
  <title/>
  <effectiveTime/>
  <confidentialityCode/>
  <languageCode/>
</ClinicalDocument>
```

Figure 10: Level Two Conformance example

Chapter

3

SECTION TEMPLATES

Topics:

- *Assessment And Plan Section*
- *Assessment Section*
- *Chief Complaint Section*
- *Diagnostic Findings*
- *General Status Section*
- *History Of Present Illness*
- *Past Medical History Section*
- *Past Medical History Section Consult*
- *Physical Examination Section*
- *Plan Section*
- *Reason For Referral Section*
- *Reason For Visit And Chief Complaint Section*
- *Reason For Visit Section*
- *Reason For Visit Section Consult*
- *Review Of Systems Section*
- *Review Of Systems Section IHE*
- *Vital Signs Section*

Assessment And Plan Section

[Section: templateId 2.16.840.1.113883.10.20.2.7]

1. Conforms to [RIM Infrastructure Root](#)
2. Conforms to [RIM Act](#)
3. Conforms to [CDA Section](#)
4. [CDT] **CONF-HP-92: SHALL** contain [1..1] code/@code = "51847-2" *Assessment + 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="2.16.840.1.113883.10.20.2.7"/>
          <code code="51847-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Assessment + Plan"/>
          <title>Assessment + Plan</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 11: Assessment And Plan Section example

Assessment Section

[Section: templateId 2.16.840.1.113883.10.20.2.7]

1. Conforms to [RIM Infrastructure Root](#)
2. Conforms to [RIM Act](#)
3. Conforms to [CDA Section](#)
4. [CDT] **CONF-HP-91: SHALL** contain [1..1] code/@code = "51848-0" *Assessment* (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="2.16.840.1.113883.10.20.2.7"/>
          <code code="51848-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Assessment"/>
          <title>Assessment</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 12: Assessment Section example

Chief Complaint Section

[Section: templateId 2.16.840.1.113883.10.20.2.8]

1. Conforms to [RIM Infrastructure Root](#)
2. Conforms to [RIM Act](#)
3. Conforms to [CDA Section](#)
4. [CDT] **CONF-HP-74: 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="2.16.840.1.113883.10.20.2.8"/>
          <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 13: Chief Complaint Section example

Diagnostic Findings

[Section: templateId null]

This section contains the results of observations generated by laboratories, imaging procedures, and other procedures. The scope includes hematology, chemistry, serology, virology, toxicology, microbiology, plain x-ray, ultrasound, CT, MRI, angiography, cardiac echo, nuclear medicine, pathology, and procedure observations. The section usually includes notable results such as abnormal values or relevant trends, and may contain all results for the period of time being documented. In some situations, such in an emergency department diagnostic findings may not be available when a Consultation Note is released. As explained in 4.1 Section Descriptions above, a required section for which no content is available must contain some indication of such. Laboratory results are typically generated by laboratories providing analytic services in areas such as chemistry, hematology, serology, histology, cytology, anatomic pathology, microbiology, and/or virology. These observations are based on analysis of specimens obtained from the patient and submitted to the laboratory. Imaging results are typically generated by a clinician reviewing the output of an imaging procedure, such as where a cardiologist reports the left ventricular ejection fraction based on the review of a cardiac echo. Procedure results are typically generated by a clinician wanting to provide more granular information about component observations made during the performance of a procedure, such as where a gastroenterologist reports the size of a polyp observed during a colonoscopy.

1. Conforms to [RIM Infrastructure Root](#)
2. Conforms to [RIM Act](#)
3. Conforms to [CDA Section](#)
4. Conforms to [CCD Results Section](#) template (templateId: 2.16.840.1.113883.10.20.1.14)
5. [CCD] **SHALL** contain [1..1] code/@code = "30954-2" *Relevant diagnostic tests and/or laboratory data* (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)
6. [CDT] **SHALL** contain [1..1] title
7. [CCD] **SHOULD** contain [1..*] entry, such that it
 - a. contains [CCD Result Organizer](#) (templateId: 2.16.840.1.113883.10.20.1.32)
8. [CCD] **SHALL** contain [1..1] text
9. [CCD] **SHOULD** satisfy: Contains a case-insensitive language-insensitive string containing 'results'.

```
<?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="2.16.840.1.113883.10.20.1.14"
            assigningAuthorityName="CCD Results Section"/>
          <templateId assigningAuthorityName="CDT Diagnostic Findings"/>
          <code code="30954-2" codeSystem="2.16.840.1.113883.6.1"
            codeSystemName="LOINC" displayName="Relevant diagnostic tests and/or
            laboratory data"/>
          <title>Relevant diagnostic tests and/or laboratory data</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 14: Diagnostic Findings example

General Status Section

[Section: templateId 2.16.840.1.113883.10.20.2.5]

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

1. Conforms to [RIM Infrastructure Root](#)
2. Conforms to [RIM Act](#)
3. Conforms to [CDA Section](#)
4. [CDT] **CONF-HP-89: SHALL** contain [1..1] code/@code = "10210-3" *GENERAL STATUS, PHYSICAL FINDINGS* (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="2.16.840.1.113883.10.20.2.5"
            assigningAuthorityName="CDT General Status Section"/>
          <code code="10210-3" codeSystem="2.16.840.1.113883.6.1"
            codeSystemName="LOINC" displayName="GENERAL STATUS, PHYSICAL FINDINGS"/>
          <title>GENERAL STATUS, PHYSICAL FINDINGS</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 15: General Status Section example

History Of Present Illness

[Section: templateId 1.3.6.1.4.1.19376.1.5.3.1.3.4]

Conforms to IHE PCC template.

1. Conforms to [RIM Infrastructure Root](#)
2. Conforms to [RIM Act](#)
3. Conforms to [CDA Section](#)
4. [CDT] **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 16: History Of Present Illness example

Past Medical History Section

[Section: templateId 2.16.840.1.113883.10.20.2.9]

This section describes the past medical history for the patient. It may contain information about past procedures or other illnesses that might have a bearing on the patient's current illness. Since past medical history can include past surgical history and other procedures, the Procedure History section may be included under the Past Medical History section or it may stand alone as its own section. By the same token, problems can be recorded in a standalone Problems section or in a nested Problems section. Wherever used, procedures and problems should conform to the CCD template for CDA entries cited in the respective sections.

1. Conforms to [RIM Infrastructure Root](#)
2. Conforms to [RIM Act](#)
3. Conforms to [CDA Section](#)
4. [CDT] **CONF-HP-78: SHALL** contain [1..1] code/@code = "11348-0" *HISTORY OF PAST ILLNESS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)
5. [CDT] **SHALL** contain [1..1] text
6. [CDT] **SHOULD** satisfy: Contains clinical statements.

```
<?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="2.16.840.1.113883.10.20.2.9"
            assigningAuthorityName="CDT Past Medical History 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 17: Past Medical History Section example

Past Medical History Section Consult

[Section: templateId 2.16.840.1.113883.10.20.4.9]

This section describes the past medical history for the patient. It may contain information about past procedures or other illnesses that might have a bearing on the patient's current illness. Since past medical history can include past surgical history and other procedures, the Procedure History section may be included under the Past Medical History section or it may stand alone as its own section. By the same token, problems can be recorded in a standalone Problems section or in a nested Problems section. Wherever used, procedures and problems should conform to the CCD template for CDA entries cited in the respective sections.

1. Conforms to [RIM Infrastructure Root](#)
2. Conforms to [RIM Act](#)
3. Conforms to [CDA Section](#)
4. [CDT] **SHALL** contain [1..1] code/@code = "11348-0" *HISTORY OF PAST ILLNESS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)
5. [CDT] **SHALL** contain [1..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>
          <templateId root="2.16.840.1.113883.10.20.4.9"
            assigningAuthorityName="CDT Past Medical History Section Consult"/>
          <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 18: Past Medical History Section Consult example

Physical Examination Section

[Section: templateId 2.16.840.1.113883.10.20.2.10]

The Physical Examination section includes direct observations made by the clinician. The examination may include the use of simple instruments and may also describe simple maneuvers performed directly on the patient's body. This section only includes observations made by the examining clinician using inspection, palpation, auscultation, and percussion; it does not include laboratory or imaging findings. The exam may be limited to pertinent body systems based on the patient's chief complaint or it may include a comprehensive examination. The examination may be reported as a collection of random clinical statements or it may be reported categorically. Categorical report formats may be divided into multiple subsections, including Vital Signs, General Status, and any of the subsections listed in Appendix D: List of Additional Physical Examination Subsections. Note that Vital Signs can be a top-level section or subsection of Physical Exam. The physical findings included in this section describe direct observations made by the clinician divided by organ or body system and may be included under appropriate subsections to Physical Exam. Systems are typically listed cephalic to caudal (i.e., starting with the head) and may include all body systems or only those pertinent to the chief complaint. The head, eyes, ears, nose, throat, mouth, and teeth may be described separately or combined into a single subsection labeled "HEENT." Other subsections may include Skin, Neck, Lymph Nodes, Thorax (Chest) and Lungs, Cardiovascular, Breasts, Abdomen, Pelvic, Genitourinary, Musculoskeletal,

Extremities including Peripheral Vascular, and Neurologic. A detailed Mental Status Examination may be included when pertinent. The Physical Examination section may contain multiple nested subsections: Vital Signs, General Status, and those listed in Appendix D: List of Additional Physical Examination Subsections.

1. Conforms to [RIM Infrastructure Root](#)
2. Conforms to [RIM Act](#)
3. Conforms to [CDA Section](#)
4. [CDT] **CONF-HP-85: SHALL** contain [1..1] code/@code = "29545-1" *PHYSICAL FINDINGS* (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="2.16.840.1.113883.10.20.2.10"
            assigningAuthorityName="CDT Physical Examination Section"/>
          <code code="29545-1" codeSystem="2.16.840.1.113883.6.1"
            codeSystemName="LOINC" displayName="PHYSICAL FINDINGS"/>
          <title>PHYSICAL FINDINGS</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 19: Physical Examination Section example

Plan Section

[Section: templateId 2.16.840.1.113883.10.20.2.7]

1. Conforms to [RIM Infrastructure Root](#)
2. Conforms to [RIM Act](#)
3. Conforms to [CDA Section](#)
4. [CDT] **CONF-HP-91: SHALL** contain [1..1] code/@code = "18776-5" *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="2.16.840.1.113883.10.20.2.7"/>
          <code code="18776-5" codeSystem="2.16.840.1.113883.6.1"
            codeSystemName="LOINC" displayName="Plan"/>
          <title>Plan</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 20: Plan Section example

Reason For Referral Section

[Section: templateId 2.16.840.1.113883.10.20.4.8]

1. Conforms to [RIM Infrastructure Root](#)
2. Conforms to [RIM Act](#)
3. Conforms to [CDA Section](#)
4. [CDT] **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="2.16.840.1.113883.10.20.4.8"/>
          <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 21: Reason For Referral Section example

Reason For Visit And Chief Complaint Section

[Section: templateId 2.16.840.1.113883.10.20.2.8]

1. Conforms to [RIM Infrastructure Root](#)
2. Conforms to [RIM Act](#)
3. Conforms to [CDA Section](#)
4. [CDT] **CONF-HP-75; SHALL** contain [1..1] code/@code = "46239-0" *Reason for visit + 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="2.16.840.1.113883.10.20.2.8"/>
          <code code="46239-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Reason for visit + Chief complaint"/>
          <title>Reason for visit + Chief complaint</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 22: Reason For Visit And Chief Complaint Section example

Reason For Visit Section

[Section: templateId 2.16.840.1.113883.10.20.2.8]

1. Conforms to [RIM Infrastructure Root](#)
2. Conforms to [RIM Act](#)
3. Conforms to [CDA Section](#)
4. [CDT] **CONF-HP-74: SHALL** contain [1..1] code/@code = "29299-5" *Reason for visit* (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="2.16.840.1.113883.10.20.2.8"/>
          <code code="29299-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Reason for visit"/>
          <title>Reason for visit</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 23: Reason For Visit Section example

Reason For Visit Section Consult

[Section: templateId 2.16.840.1.113883.10.20.4.8]

1. Conforms to [RIM Infrastructure Root](#)
2. Conforms to [RIM Act](#)
3. Conforms to [CDA Section](#)
4. [CDT] **SHALL** contain [1..1] code/@code = "29299-5" *REASON FOR VISIT* (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="2.16.840.1.113883.10.20.4.8"/>
          <code code="29299-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="REASON FOR VISIT"/>
          <title>REASON FOR VISIT</title>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 24: Reason For Visit Section Consult example

Review Of Systems Section

[Section: templateId 2.16.840.1.113883.10.20.4.10]

The review of systems is a relevant collection of symptoms and functions systematically gathered by a clinician. It includes symptoms the patient is currently experiencing, some of which were not elicited during the history of present

illness, as well as a potentially large number of pertinent negatives, e.g., symptoms that the patient was specifically asked if they had experienced or were currently experiencing, but had denied experiencing.

1. Conforms to [RIM Infrastructure Root](#)
2. Conforms to [RIM Act](#)
3. Conforms to [CDA Section](#)
4. [CDT] **CONF-CO-41: 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="2.16.840.1.113883.10.20.4.10"
            assigningAuthorityName="CDT Review Of Systems Section"/>
          <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 25: Review Of Systems Section example

Review Of Systems Section IHE

[Section: templateId 1.3.6.1.4.1.19376.1.5.3.1.3.18]

The review of systems is a relevant collection of symptoms and function systematically gathered by a clinician. It includes symptoms the patient is currently experiencing, some of which were not elicited during the history of present illness, as well as a potentially large number of pertinent negatives, e.g., symptoms that the patient was specifically asked if they had experienced or were currently experiencing, but had denied experiencing.

1. Conforms to [RIM Infrastructure Root](#)
2. Conforms to [RIM Act](#)
3. Conforms to [CDA Section](#)
4. [CDT] **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 26: Review Of Systems Section IHE example

Vital Signs Section

[Section: templateId 2.16.840.1.113883.10.20.2.4]

The Vital Signs section contains measured vital signs at the time of the examination. Measurements may include some or all of the following: blood pressure, heart rate, respiratory rate, body temperature, and pulse oximetry. Comments on relative trends may be appropriate, but not required. This section can be a first-level section or nested under Physical Exam.

1. Conforms to *RIM Infrastructure Root*
2. Conforms to *RIM Act*
3. Conforms to *CDA Section*
4. [CDT] **CONF-HP-87: SHALL** contain [1..1] code/@code = "8716-3" *VITAL SIGNS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC STATIC 2.26)
5. [CDT] **SHALL** contain [1..1] text
6. [CDT] **CONF-HP-87: SHOULD** contain [0..1] entry, such that it
 - a. contains *CCD Vital Signs Organizer* (templateId: 2.16.840.1.113883.10.20.1.35)
7. [CDT] **CONF-HP-87: SHOULD** satisfy: Contains clinical statements.

```
<?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="2.16.840.1.113883.10.20.2.4"
            assigningAuthorityName="CDT 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"/>
              <id root="85736784-6f35-42af-982b-0b9a9a272922"/>
              <code/>
              <statusCode/>
            </organizer>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Figure 27: Vital Signs Section example

Chapter

4

CLINICAL STATEMENT TEMPLATES

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.

Chapter

5

OTHER CLASSES

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

Chapter

6

VALUE SETS

Topics:

- [Consult Document Type Codes](#)
- [HP Document Type](#)
- [Personal Relationship Role Type](#)

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

Consult Document Type Codes

[OID null from code system: LOINC]

OID: null

Name: null

Code System: 2.16.840.1.113883.6.1

Code System Name: LOINC

LOINC codes whose scale is DOC, and whose type of service (component) is Consultation Note. Document type codes for "Blood Bank Consultation," "Confirmatory Consultation Note," or those codes giving "Hospital Consultation" as type of service (18841-7 and 8647-0) are not allowed as document type codes. In their place, the code 34104-0 with types of service = Consultation Note and setting = hospital should be used.

HP Document Type

[OID 2.16.840.1.113883.1.11.20.22 from code system: LOINC]

OID: 2.16.840.1.113883.1.11.20.22

Name: null

Code System: 2.16.840.1.113883.6.1

Code System Name: LOINC

Valid codes are those whose scale is DOC and whose type of service is some variation of History and Physical.

Personal Relationship Role Type

[OID null from code system: RoleCode]

Provides more information about the link between two people in a personal relationship.

OID: null

Name: null

Code System: 2.16.840.1.113883.5.111

Code System Name: RoleCode

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](#)

