CDAR2_IG_PROGNOTE_DSTU_R1_2011JAN

HL7 Implementation Guide for Clinical Document Architecture, Release 2: Progress Note, Release 1

HL7 Draft Standard for Trial Use

January 2011

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Revision History

Rev	Date	By Whom	Changes	Notes
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1 INTRODUCTION

1.1 Purpose

This document describes constraints on the Clinical Document Architecture (CDA) header and body elements for a Progress Note.

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

Taber's[1] medical dictionary defines a Progress Note as "An ongoing record of a patient's illness and treatment. Physicians, nurses, consultants, and therapists record their notes concerning the progress or lack of progress made by the patient between the time of the previous note and the most recent note."

Mosby's[2] medical dictionary defines a Progress Note as "Notes made by a nurse, physician, social worker, physical therapist, and other health care professionals that describe the patient's condition and the treatment given or planned."

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

1.2 Audience

The audience for this document includes software developers and consultants responsible for implementation of U.S.-realm Electronic Health Record (EHR) systems, Personal Health Record (PHR) systems, dictation/transcription systems, and document management applications; and local, regional, and national health information exchange networks who wish to create and/or process CDA documents developed according to this specification.

1.3 Approach

In the development of this specification, we reviewed existing draft and final specifications or implementation guides for similar artifacts in the U.S.:

- Clinical LOINC® document and section codes
- HL7 Clinical Document Architecture, Release 2 Normative Web Edition, 2005
- CDA Release 2 – CCD: Continuity of Care Document (CCD)
- HL7 Implementation Guide for CDA Release 2: History and Physical (H&P) Notes
- HL7 Implementation Guide for CDA Release 2: Care Record Summary
- HL7 Implementation Guide for CDA Release 2: Procedure Note
- Non-CDA sample documents supplied by participating providers and vendors

[1] Taber's Cyclopedic Medical Dictionary, 21st Edition, F.A. Davis Company. http://www.tabers.com
[2] Mosby's Medical Dictionary, 8th edition. © 2009, Elsevier.

In addition, M*Modal provided statistical analysis of approximately 25,000 sample Progress Notes. The HL7 Structured Documents Work Group reviewed the design. While current divergent industry practices cannot be perfectly reflected in any consensus model, we designed this specification to increase consistency with minimal disruption to current practice and workflow.

1.4 Organization of This Guide

The requirements of this Draft Standard for Trial Use (DSTU) are on track to become normative after a trial period and will be subject to change under the policies for DSTU per the HL7 Governance and Operations Manual. This guide contains the following major sections:

- General Header Constraints
- Header Constraints Specific to a Progress Note
- Required Sections
- Optional Sections

Each major section or subsection of the document provides both a narrative overview and related CDA Release 2 (R2) constraints.

1.5 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 template in question.

1.5.1 Originator Responsibilities: General Case

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.

1.5.2 Recipient Responsibilities: General Case

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`).

1.6 Conventions Used in This Guide

1.6.1 Conformance Requirements

The conformance statements are numbered sequentially and listed within the body of the DSTU as follows:

CONF-ex1: Conformance requirements original to this DSTU are numbered CONF-PRGN-1, CONF-PRGN-2, etc.

1.6.2 Vocabulary Conformance

Formalisms for value-set constraints are based on the latest recommendations from the HL7 Vocabulary Committee. Value-set constraints can be "**STATIC**," meaning that they are bound to a specified version of a value set, or "**DYNAMIC**," meaning that they are bound to the most current version of a value set. A simplified constraint is used when binding is to a single code.

Syntax for vocabulary binding to **DYNAMIC** or **STATIC** value sets:

A (`pathname of coded element`) element (**SHALL** | **SHOULD** | **MAY**) be present where the value of (`pathname of coded element`) is selected from Value Set `valueSetOID localValueSetName` [**DYNAMIC** | **STATIC** (`valueSetEffectiveDate`)].

CONF-ex2: A `code` element **SHALL** be present where the value of `@code` is selected from Value Set `2.16.840.1.113883.19.3 LoincDocumentTypeCode` **DYNAMIC**.

CONF-ex3: A `code` element **SHALL** be present where the value of `@code` is selected from Value Set `2.16.840.1.113883.19.3 LoincDocumentTypeCode` **STATIC** `20061017`.

Syntax for vocabulary binding to a single code:

A (`pathname of coded element`) element (**SHALL** | **SHOULD** | **MAY**) be present where the value of (`pathname of coded element`) is `code [displayName] codeSystemOID [codeSystemName]` **STATIC**.

CONF-ex4: A `code` element **SHALL** be present where the value of `@code` is `34133-9 Summarization of episode note 2.16.840.1.113883.6.1 LOINC` **STATIC**.

1.6.3 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

1.6.4 XPath Notation

Instead of the traditional dotted notation used by HL7 to represent RIM classes, this document uses XPath notation in conformance statements and elsewhere to identify the Extensible Markup Language (XML) elements and attributes within the CDA document instance to which various constraints are applied. The implicit context of these expressions is the root of the document. This notation provides a mechanism for identifying parts of an XML document that will be familiar to developers.

Note that the XPath constraints are explicit. If the guide says a standard code must be at `code@code`, that is what is meant.

There is a discrepancy in the implementation of the translation element versus the description in Data Types R1. The R1 data type requires the original code in the root, while this implementation guide specifies the standard code in the root. This is resolved in R2.

1.6.5 XML Examples

XML examples appear in figures in this document in `this monospace font.` Portions of the XML content may be omitted from the content for brevity, marked by an ellipsis (. . .) as shown in the example below.

Figure 1: ClinicalDocument example

```
<ClinicalDocument xmins="urn:h17-org:v3">
  ...
</ClinicalDocument>
```

1.7 Scope

This implementation guide is a conformance profile, as described in the Refinement and Localization section of the HL7 Version 3 standards. The base standard for this implementation guide is the HL7 Clinical Document Architecture, Release 2.0. As defined in that document, this implementation guide is both an annotation profile and a localization profile. CDA R2 is not fully described in this guide, so implementers must be familiar with the requirements of the base specification.

As an annotation profile, portions of this guide summarize or explain the base standard; therefore, some requirements stated here originate not in this DSTU but in the base specification. Requirements that do not add further constraints to the base standard and that can be validated through CDA.xsd do not have corresponding conformance statements in this DSTU.

This DSTU is the eighth in a series of implementation guides being developed in part through the efforts of Health Story (formerly CDA4CDT), where the CDA architecture is defined down to CDA Level 2 granularity with reuse of previously created entry-level templates where appropriate. We will compile these implementation guides into a single guide for normative balloting at the conclusion of the DSTU trial period. More information on Health Story is at www.healthstory.com.

This specification defines additional constraints on CDA header and body elements used in a Progress Note document in the U.S. realm. The general header constraints for

a Progress Note are from the History and Physical Note Implementation Guide (see also the Header section in this guide).

Where no constraints are stated in this guide, Progress Note instances are subject to and are to be created in accordance with the base CDA R2 specification. Where, for instance, the CDA R2 specification declares an attribute to be optional and the Progress Note specification includes no additional constraints, that attribute remains optional for use in a Progress Note instance.

1.7.1 Levels of Constraint

This DSTU identifies the required and optional clinical content within the document. The DSTU specifies three levels of conformance requirements:

- Level 1 requirements specify constraints upon the CDA header and the content of the document.
- Level 2 requirements specify constraints at the section level of the `structuredBody` of the `ClinicalDocument` element of the CDA document.
- Level 3 requirements specify constraints at the entry level within a section. All Level 3 entries in this implementation guide are references to CCD or IHE. They are optional.

Note that these levels are rough indications of what a recipient can expect in terms of machine-processable coding and content reuse. They do not reflect the level or type of clinical content; many additional distinctions in reusability could be defined.

Conformance to the DSTU carries with it an implicit adherence to Level 1, which asserts header element constraints. Conformance to the DSTU at Level 1 (whether specified or implicit) asserts header element constraints, but allows a non-XML body or an XML body that may or may not conform to additional templates defined herein. Likewise, conformance to the DSTU at Level 2 does not require conformance to entry-level templates, but does assert conformance to header- and section-level templates. In all cases, required clinical content must be present. For example, a CDA Progress Note carrying the `templateId` that asserts conformance with Level 1 may use a PDF or HTML format for the body of the document that records the required clinical content.

1.7.2 Future Work

Future work includes the definition of increasingly refined (granular) machine-verifiable processing structures. We will perform this work in conjunction with other HL7 work groups and in cooperation with professional societies and other Standards Development Organizations (SDOs). There are many parallel efforts to create CDA implementation guides and standards based on CDA. Future work will address libraries of templates, including those defined and reused here, and refinement of the document type hierarchy.

Consolidation of related specifications for the History and Physical Note, Consultation Note, Operative Note, Procedure Note, and others may lead to consolidation of requirements into a single publication providing guidance across a range of document types.

Finally, collaboration across HL7 affiliates should lead to the integration of this U.S.-realm implementation guide into an international Progress Note implementation guide.

1.8 Content of this Package

The following files comprise this package:

Table 1: Content of the Package

Filename	Description
CDAR2_IG_PROGNOTE_R1_DSTU_2011JAN.doc	Implementation Guide
Progress_Note.xml	Progress Note Sample File
cda.xsl	CDA stylesheet

2 HEADER

The History and Physical (H&P) Note DSTU defined a set of general constraints against the CDA header. This specification reuses the template defined there—the CDA General Header Constraints template.

Note that elements reused here may be further constrained within this implementation guide. For example, general constraints limit the document type code to the LOINC document type vocabulary. The section on ClinicalDocument/code further constrains the document type code for Progress Note documents.

The Progress Note requires two document-level `templateIds`: one asserts use of the CDA General Header Constraints template and the other asserts conformance with the specific constraints of the Progress Note (CONF-PRGN-1 and CONF-PRGN-2).

2.1 CDA General Header Constraints

CONF-PRGN-1: A document conforming to the CDA General Header Constraints template **SHALL** include the `ClinicalDocument/templateId 2.16.840.1.113883.10.20.3.`

Figure 2: ClinicalDocument general header constraints templateId example

```
<ClinicalDocument xmlns= "urn:hl7-org:v3">
  <typeId extension="POCD_HD000040" root="2.16.840.1.113883.1.3"/>
  <!-- indicates conformance with CDA general header constraints -->
  <templateId root="2.16.840.1.113883.10.20.3"/>
  <!-- indicates conformance with the Progress Note DSTU -->
  <templateId root="2.16.840.1.113883.10.20.21.1"/>
  <id extension="996-756-495" root="2.16.840.1.113883.19.5"/>
  <code code="11506-3" codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        displayName="Progress Note"/>
  <title>Progress Note</title>
  <effectiveTime value="20050329224411+0500"/>
  <confidentialityCode code="N" codeSystem="2.16.840.1.113883.5.25"/>
  <languageCode code="en-US"/>
  <setId extension="1977719" root="2.16.840.1.113883.19"/>
  <versionNumber value="1"/>
    ...
</ClinicalDocument>
```

The general constraints apply to:

- Clinical document and associated metadata
- ID, type ID
- Level of constraint
- Code, title
- Set ID and version number
- Effective time, confidentiality code
- Language code, realm code

- Participants
- Record target (patient)
- Author
- Authenticator and legal authenticator
- Custodian
- Data enterer (transcriptionist)
- Informant
- Health care providers
- Personal relations and unrelated persons
- Information recipient (entered in “cc” field)
- Participant telephone number

2.2 Header Constraints Specific to a Progress Note

This section describes additional header constraints specific to Progress Notes.

2.2.1 ClinicalDocument/templateId

Conformant CDA Progress Notes must carry the document-level `templateId` asserting conformance with this DSTU as well as the `templateId` for the CDA General Header Constraints template.

The following asserts conformance to the Progress Note DSTU.

CONF-PRGN-2: `ClinicalDocument/templateId` element **SHALL** be present with the value `2.16.840.1.113883.10.20.21.1`.

Figure 3: ClinicalDocument/templateId example

```
<!-- indicates conformance with CDA General Header Constraints template -->
<templateId root="2.16.840.1.113883.10.20.3"/>
<!-- conforms to the Progress Note DSTU -->
<templateId root="2.16.840.1.113883.10.20.21.1"/>
```

2.2.2 ClinicalDocument/code

CDA R2 states that LOINC must be used for the document type code unless no appropriate code is available, in which case an alternative vocabulary can be used. (This is the coded with extensions, CWE, coding strength.) This implementation guide recommends use of a single document type code, 11506-3, “Subsequent evaluation note”, using post-coordination for author or performer, setting, or specialty .

The Progress Note LOINC Document Codes table shows the preferred LOINC code and the full list of pre-coordinated codes available within LOINC for Progress Notes, as of publication of this implementation guide. This is a **DYNAMIC** value set; LOINC may add to or deprecate these codes.

The table lists all codes that have the scale DOC (document) and a 'component' referring to "subsequent evaluation notes". When these pre-coordinated codes are used, any coded values describing the author or performer of the service act or the practice setting must be consistent with the LOINC document type. Note: The LOINC display name is "Subsequent evaluation note" and is equivalent to Progress Note.

CONF-PRGN-3: The value of `ClinicalDocument/code` **SHALL** be selected from Value Set `2.16.840.1.113883.11.20.8.1 ProgressNoteDocumentTypeCode` **DYNAMIC**.

Table 2: Progress Note LOINC Document Codes

Value Set: ProgressNoteDocumentTypeCode 2.16.840.1.113883.11.20.8.1 Code System: LOINC 2.16.840.1.113883.6.1			
LOINC Code	**Type of Service 'Component'**	**Setting 'System'**	**Specialty/Training/ Professional Level 'Method_Type'**
Preferred code			
11506-3	Subsequent evaluation note	{Setting}	{Provider}
Additional codes			
18733-6	Subsequent evaluation note	{Setting}	Attending physician
18762-5	Subsequent evaluation note	{Setting}	Chiropractor
28569-2	Subsequent evaluation note	{Setting}	Consulting physician
28617-9	Subsequent evaluation note	{Setting}	Dentistry
34900-1	Subsequent evaluation note	{Setting}	General medicine
34904-3	Subsequent evaluation note	{Setting}	Mental health
18764-1	Subsequent evaluation note	{Setting}	Nurse practitioner
28623-7	Subsequent evaluation note	{Setting}	Nursing
11507-1	Subsequent evaluation note	{Setting}	Occupational therapy
11508-9	Subsequent evaluation note	{Setting}	Physical therapy
11509-7	Subsequent evaluation note	{Setting}	Podiatry
28627-8	Subsequent evaluation note	{Setting}	Psychiatry
11510-5	Subsequent evaluation note	{Setting}	Psychology
28656-7	Subsequent evaluation note	{Setting}	Social service
11512-1	Subsequent evaluation note	{Setting}	Speech therapy
34126-3	Subsequent evaluation note	Critical care unit	{Provider}
15507-7	Subsequent evaluation note	Emergency …	{Provider}
34129-7	Subsequent evaluation note	Home health	{Provider}
34125-5	Subsequent evaluation note	Home health care	Case manager
34130-5	Subsequent evaluation note	Hospital	{Provider}
34131-3	Subsequent evaluation note	Outpatient	{Provider}
34124-8	Subsequent evaluation note	Outpatient	Cardiology
34127-1	Subsequent evaluation note	Outpatient	Dental hygienist
34128-9	Subsequent evaluation note	Outpatient	Dentistry
34901-9	Subsequent evaluation note	Outpatient	General medicine
34132-1	Subsequent evaluation note	Outpatient	Pharmacy

Figure 4: ClinicalDocument/code example

```
<code codeSystem="2.16.840.1.113883.6.1"
      codeSystemName="LOINC" code="11056-3"
      displayName="Subsequent evaluation note"/>
<title>Progress Note</title>
```

2.2.3 serviceEvent

A `serviceEvent` further specializes the `act` inherent in the `ClinicalDocument/code`.

In a Progress Note, a `serviceEvent` can represent the event of writing the Progress Note. The `serviceEvent/effectiveTime` is the time period the note documents.

CONF-PRGN-4: A Progress Note **SHOULD** contain a `serviceEvent` element

CONF-PRGN-5: A `serviceEvent`, recording the time period the note documents, **SHALL** include a `templateId` element where the value for `@root` is `2.16.840.1.113883.10.20.21.3.1`.

CONF-PRGN-6: The value of `ClinicalDocument/documentationOf/serviceEvent/@classCode` **SHALL** be `PCPR Care Provision 2.16.840.1.113883.5.6 ActClass` **STATIC.**

When you know only the date for documenting the time, place the date in both the `low` and `high` elements. However, if you know the date and the duration of the documentation, use `serviceEvent/effectiveTime/low` with a `width` element.

CONF-PRGN-7: The `serviceEvent/effectiveTime` element **SHOULD** be present with `effectiveTime/low` element and **SHALL** include `effectiveTime/high` element if a `width` element is not present. The `serviceEvent/effectiveTime` element **SHALLL** be accurate to the day, and **MAY** be accurate to the second.

An implementer can specialize the Progress Note by including the `serviceEvent/performer/functionCode`. As specified in CDA R2, the `functionCode` is drawn from the `ParticipationFunction` (`2.16.840.1.113883.5.88`) code system. The sample file included with this DSTU contains an example.

Figure 5: serviceEvent example

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

2.2.4 componentOf

The Progress Note is always associated with an encounter by the `componentOf/encompassingEncounter` element in the header.

CONF-PRGN-8: The `componentOf` element **SHALL** be present.

CONF-PRGN-9: The `encompassingEncounter` element **SHALL** have an `id` element.

The `effectiveTime` element for an `encompassingEncounter` represents the time or time interval in which the encounter took place. A single encounter may contain multiple Progress Notes; hence the `effectiveTime` elements for a Progress Note (recorded in `serviceEvent`) and for an encounter (recorded in `encompassingEncounter`) represent different time intervals.

CONF-PRGN-10: The `encompassingEncounter` element **SHALL** have an `effectiveTime` element.

CONF-PRGN-11: The `effectiveTime` element **SHALL** include a `low` element.

All visits take place at a specific location. When available, the location ID is included in the `encompassingEncounter/location/healthCareFacility/id` element.

CONF-PRGN-12: The `encompassingEncounter` element **SHOULD** have an `encompassingEncounter/location/healthCareFacility/id` element.

Figure 6: componentOf example

```
<componentOf>
 <encompassingEncounter>
    <id extension="9937012" root="2.16.840.1.113883.19"/>
    <effectiveTime>
      <low value="20050329"/>
      <high value="20050329"/>
    </effectiveTime>
    <location>
      <healthCareFacility>
        <id root="2.16.540.1.113883.19.2"/>
      </healthCareFacility>
    </location>
  </encompassingEncounter>
</componentOf>
```

2.3 Rendering Header Information for Human Presentation

Metadata carried in the header may already be available for rendering from electronic health records (EHRs) or other sources external to the document; therefore, there is normally no strict requirement to render directly from the document. An example of this would be a doctor using an EHR that already contains the patient's name, date of birth, current address, and phone number. When a CDA document is rendered within that EHR, those pieces of information may not need to be displayed since they are already known and displayed within the EHR's user interface.

Good practice would recommend that the following be present whenever the document is viewed:

- Document title and document dates
- Service and encounter types, and date ranges as appropriate
- Names of all persons along with their roles, participations, participation date ranges, identifiers, address, and telecommunications information
- Names of selected organizations along with their roles, participations, participation date ranges, identifiers, address, and telecommunications information
- Date of birth and administrative gender for recordTarget(s)

3 BODY

The scope of the Health Story project is to define a set of frequently used clinical documents in Level 2 CDA format—reusing CCD or other implementation guide entry-level templates when possible—but not to define new clinical statement entries. These DSTUs will then be implemented and their success evaluated before being balloted as normative standards.

Note, therefore, that this document represents as sections certain elements that otherwise might best be described as clinical statement entries within a section. This allows some ability to machine-process key Progress Note data elements for implementers who are not yet ready to implement Level 3 CDA. The fact that clinical statement entries are not described does not preclude a knowledgeable implementer from defining and implementing them.

This implementation guide defines required and optional sections.

All `section` elements in the body of the document must have a `code` and some nonblank text or one or more subsections, even if the purpose of the text is only to indicate that information is unknown.

CONF-PRGN-13: LOINC codes **SHALL** be used with the sections in a Progress Note. See the LOINC Codes for Sections table; other sections not listed in that table **MAY** be present as well. The exact text of the section names is not mandated.

CONF-PRGN-14: All sections **MAY** occur in any order and **MAY** be nested under other sections according to local policy.

CONF-PRGN-15: Sections and subsections **SHALL** have a title and the title **SHALL NOT** be empty.

CONF-PRGN-16: All sections **SHALL** include a narrative block and **SHOULD** include clinical statements.

Note that the table below shows component names in all caps per ASTM's Standard Specifications for Healthcare Document Formats (E2184.02).

Table 3: LOINC Codes for Sections

Section Name	Required/ Optional	Code	Component Name
Assessment and Plan	R*	18776-5	PLAN OF TREATMENT
		51848-0	ASSESSMENT
		51847-2	ASSESSMENT AND PLAN
Allergies	O	48765-2	ALLERGIES, ADVERSE REACTIONS, ALERTS
Chief Complaint	O	10154-3	CHIEF COMPLAINT
Medications	O	10160-0	HISTORY OF MEDICATION USE
Objective	O	61149-1	OBJECTIVE DATA
Additional Objective Sections			
Interventions	O	62387-6	INTERVENTIONS
Physical Examination	O	29545-1	PHYSICAL FINDINGS
Results	O	30954-2	RELEVANT DIAGNOSTIC TESTS AND/OR LABORATORY DATA
Vital Signs	O	8716-3	VITAL SIGNS
Problems	O	11450-4	PROBLEM LIST
Review of Systems	O	10187-3	REVIEW OF SYSTEMS
Subjective	O	61150-9	SUBJECTIVE DATA

* A Progress Note must have a Plan section and an Assessment section or an Assessment and Plan section.

3.1 Required Sections: Assessment and Plan

The work group identified required sections in a Progress Note based on a statistical frequency analysis and best practice.

A Progress Note must contain a Plan section and an Assessment section or an Assessment and Plan section. It currently has no other required sections.

CONF-PRGN-17: A Progress Note **SHALL** include the sections listed as Required (R) in the LOINC Codes for Sections table.

Assessment and Plan 51847-2/51848-0/18776-5

All constraints from these sections are derived from the Procedure Note Assessment and Plan sections and the CCD Plan of Care section; all conformance requirements are included below. “Assessment” and “Assessment and Plan” use the Procedure Note `templateIds`, and the “Plan” section uses the CCD Plan of Care `templateId`.

Because each section may contain different information when fully encoded, the Procedure Note introduced a `templateId` for each LOINC code, rather than one `templateId` for all three sections as used in the History and Physical Note.

A Progress Note contains either discrete sections for Assessment and for Plan or a single section combining the two (Assessment and Plan). The sections may be combined or separated to meet local policy requirements.

The **Assessment** section (also called impression or diagnoses) represents the clinician's conclusions and working assumptions that will guide treatment of the patient. The assessment formulates a specific plan or set of recommendations. The assessment may be a list of specific disease entities or a narrative block.

The **Plan** section contains data that defines pending orders, interventions, encounters, services, and procedures for the patient. It is limited to prospective, unfulfilled, or incomplete orders and requests only. All active, incomplete, or pending orders, appointments, referrals, procedures, services, or any other pending event of clinical significance to the current care of the patient should be listed unless constrained due to privacy issues. The plan may also contain information about ongoing care of the patient and information regarding goals and clinical reminders. Clinical reminders are placed here to provide prompts for disease prevention and management, patient safety, and health-care quality improvements, including widely accepted performance measures. The plan may also indicate that patient education was given or will be provided.

CONF-PRGN-18: When the Assessment and Plan are recorded separately, there **SHALL** be a section where the value for `section/code` **SHALL** be `51848-0 ASSESSMENT 2.16.840.1.113883.6.1 LOINC` **STATIC** and the `templateId` **SHALL** be `2.16.840.1.113883.10.20.18.2.13`; **AND** there **SHALL** be a section where the value for `section/code` **SHALL** be `18776-5 PLAN 2.16.840.1.113883.6.1 LOINC` **STATIC** and the `templateId` **SHALL** be `2.16.840.1.113883.10.20.1.10;` **AND** there **SHALL NOT** be a section where the value for `section/code` is `51847-2 ASSESSMENT AND PLAN 2.16.840.1.113883.6.1 LOINC` **STATIC**.

CONF-PRGN-19: When the Assessment and Plan and are recorded together, the value for `section/code` **SHALL** be `51847-2 ASSESSMENT AND PLAN 2.16.840.1.113883.6.1 LOINC` **STATIC** and the `templateId` **SHALL** be `2.16.840.1.113883.10.20.18.2.14`; **AND** there **SHALL NOT** be a section where the value for `section/code` is `51848-0 ASSESSMENT`; **AND** there **SHALL NOT** be a section where the value for `section/code` is `18776-5 PLAN`.

CONF-PRGN-20: The Assessment, Plan, and Assessment and Plan section(s) **MAY** contain clinical statements. If present, the clinical statements **SHALL** conform to the CCD Plan of care activities template (`2.16.840.1.113883.10.20.1.25`).

Figure 7: Assessment and plan section example

```
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.18.2.14"/>
    <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
          code="51847-2" displayName="ASSESSMENT AND PLAN"/>
    <title>ASSESSMENT AND PLAN</title>
    <text>
      <list listType="ordered">
        <item> Sigmoid diverticulosis, moderate. High fiber diet</item>
        <item> Internal hemorrhoids. Treat conservatively with Canasa
               suppositories </item>
        <item> Colon polyp, 6mm, ascending colon, removed by snare. Patient to
               call for results </item>
      </list>
    </text>
    <entry typeCode="DRIV">
      <observation classCode="OBS" moodCode="RQO">
        <!-- Plan of Activity activity template -->
        <templateId root="2.16.840.1.113883.10.20.1.25"/>
         <id root="9a6d1bac-17d3-4195-89a4-1121bc809b4c"/>
        <code code="310634005" codeSystem="2.16.840.1.113883.6.96"
          displayName="Colonoscopy"/>
        <statusCode code="new"/>
        <effectiveTime><center value="20000421"/></effectiveTime>
      </observation>
    </entry>
  </section>
</component>
```

3.2 Optional Sections

A Progress Note may include sections not specified in this guide. The sections described below, if present, must conform to the requirements shown.

CONF-PRGN-21: A Progress Note **SHOULD** include the sections listed as Optional (O) in the LOINC Codes for Sections table.

3.2.1 Allergies 48765-2

All constraints from this section are derived from the CCD Alerts section.

The Allergies section lists and describes any medication allergies, adverse reactions, idiosyncratic reactions, anaphylaxis/anaphylactoid reactions to food items, and metabolic variations or adverse reactions/allergies to other substances (such as latex, iodine, tape adhesives) used to assure the safety of health care delivery. In general, environmental allergies, even if severe, should not be included in the Allergies section of a procedure note 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.

CONF-PRGN-22: A Progress Note **MAY** contain exactly one and **SHALL NOT** contain more than one Allergies section (`templateId 2.16.840.1.113883.10.20.1.2`). See the CCD Alerts section for additional requirements.

Figure 8: Allergies section example

```
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.1.2"/>
    <code code="48765-2" codeSystem="2.16.840.1.113883.6.1"
         codeSystemName="LOINC"
         displayName="ALLERGIES, ADVERSE REACTIONS, ALERTS"/>
    <title>ALLERGIES AND ADVERSE REACTIONS</title>
    <text>
      <list listType="ordered">
        <item>Levaquin</item>
        <item>Lorazepam</item>
        <item>Peanuts</item>
      </list>
    </text>
    <entry typeCode="DRIV">
      <act classCode="ACT" moodCode="EVN">
        <!-- Problem act template -->
        <templateId root="2.16.840.1.113883.10.20.1.27"/>
        <id root="36e3e930-7b14-11db-9fe1-0800200c9a66"/>
        <code nullFlavor="NA"/>
        <entryRelationship typeCode="SUBJ">
          <observation classCode="OBS" moodCode="EVN">
            <!-- Alert observation template -->
            <templateId root="2.16.840.1.113883.10.20.1.18"/>
            <id root="4adc1020-7b14-11db-9fe1-0800200c9a66"/>
            <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
            ...
          </observation>
        </entryRelationship>
      </act>
    </entry>
  </section>
</component>
```

3.2.2 Chief Complaint 10154-3

All constraints from this section are derived from the Procedure Note Chief Complaint section. The Procedure Note Chief Complaint section is equivalent to the IHE Chief Complaint section; either `templateId` is acceptable.

The Chief Complaint section records the patient's chief complaint (the patient's own description). This is the initial comment to the provider that helps form a diagnosis. This section is more common for outpatient visits.

CONF-PRGN-23: A Progress Note **MAY** contain exactly one and **SHALL NOT** contain more than one Chief Complaint section (`templateId` `2.16.840.1.113883.10.20.18.2.16` or `1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1`). See the Procedure Note Chief Complaint or IHE Chief Complaint section for more requirements.

Figure 9: Chief complaint section example

```
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.18.2.16"/>
    <code code="10154-3" codeSystem="2.16.840.1.113883.6.1"
         codeSystemName="LOINC"
         displayName="CHIEF COMPLAINT"/>
    <title>CHIEF COMPLAINT</title>
    <text>
      Back Pain
    </text>
  </section>
</component>
```

3.2.3 Medications 10160-0

All constraints from this section are from the CCD Medications section.

The Medications section defines a patient's current medications and pertinent medication history. At a minimum, the currently active medications should be listed with an entire medication history as an option.

CONF-PRGN-24: The Progress Note **MAY** contain exactly one and **SHALL NOT** contain more than one Medications section (`templateId 2.16.840.1.113883.10.20.1.8`). See the CCD Medications section for more requirements.

Figure 10: Medications section example with Level 3 coding

```
<!--Note: this simple coding of medications reflects what we might expect to see
in a dictated note. For a complete sample of medications encoding, see CCD  -->
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.1.8"/>
    <code codeSystem="2.16.840.1.113883.6.1"
          codeSystemName="LOINC"
          code="10160-0"
          displayName="HISTORY OF MEDICATION USE"/>
    <title>CURRENT MEDICATION HISTORY</title>
    <text>
      <list listType="ordered">
        <item><content ID="m1">Lisinopril 5 mg</content> 1 tablet once a day
        </item>
        <item><content ID="m2">Atenolol 25 mg</content> 1 tablet once a day
        </item>
      </list>
    </text>
```

```
    <entry>
      <substanceAdministration classCode="SBADM" moodCode="EVN">
        <consumable>
          <manufacturedProduct>
            <manufacturedLabeledDrug>
              <code codeSystem="2.16.840.1.113883.6.88"
                    codeSystemName="RxNorm"
                    code="203644"
                    displayName="LISINOPRIL (PRINIVIL)--PO 5MG TAB">
                <originalText>
                  <reference value="#m1"/>
                </originalText>
              </code>
            </manufacturedLabeledDrug>
          </manufacturedProduct>
        </consumable>
      </substanceAdministration>
    </entry>
    <entry>
      <substanceAdministration classCode="SBADM" moodCode="EVN">
        <consumable>
          <manufacturedProduct>
            <manufacturedLabeledDrug>
              <code codeSystem="2.16.840.1.113883.6.88"
                    codeSystemName="RxNorm"
                    code="197380" displayName="ATENOLOL--PO 25MG TAB">
                <originalText>
                  <reference value="#m2"/>
                </originalText>
              </code>
            </manufacturedLabeledDrug>
          </manufacturedProduct>
        </consumable>
      </substanceAdministration>
    </entry>
  </section>
</component>
```

3.2.4 Objective 61149-1

The Objective section contains data about the patient gathered through tests, measures, or observations that produce a quantified or categorized result. It includes important and relevant positive and negative test results, physical findings, review of systems, and other measurements and observations.

CONF-PRGN-25: A Progress Note **MAY** contain exactly one and **SHALL NOT** contain more than one Objective section (`templateId 2.16.840.1.113883.10.20.21.2.1`).

CONF-PRGN-26: A `section/code` element **SHALL** be present where the value for `@code` is `61149-1 OBJECTIVE DATA 2.16.840.1.113883.6.1 LOINC` **STATIC**.

Figure 11: Objective section example

```
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.21.2.1"/>
    <code code="61149-1 " codeSystem="2.16.840.1.113883.6.1"
      codeSystemName="LOINC"
      displayName="OBJECTIVE DATA "/>
    <title>OBJECTIVE DATA</title>
    <text>
      <list listType="ordered">
        <item>Chest: clear to ausc. No rales, normal breath sounds</item>
        <item>Heart: RR, PMI in normal location and no heave or evidence of
              cardiomegaly,normal heart sounds, no murm or gallop</item>
      </list>
    </text>
  </section>
</component>
```

3.2.5 Objective: Additional Sections

These additional objective sections may be subsections of the Objective section or may stand alone in their own sections.

3.2.5.1 Interventions 62387-6

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

Interventions can be encoded using the CCD Procedure Activity.

CONF-PRGN-27: A Progress Note **MAY** contain exactly one and **SHALL NOT** contain more than one Interventions section (`templateId 2.16.840.1.113883.10.20.21.2.3`).

CONF-PRGN-28: A `section/code` element **SHALL** be present where the value for `@code` is `62387-6 INTERVENTIONS PROVIDED 2.16.840.1.113883.6.1 LOINC` **STATIC**.

CONF-PRGN-29: The Interventions section **MAY** contain clinical statements. If present, the clinical statements **SHOULD** conform to the CCD Procedure Activity template (`2.16.840.1.113883.10.20.1.29`)

Figure 12: Interventions section example

```
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.21.2.3"/>
    <code code="62387-6" codeSystem="2.16.840.1.113883.6.1"
      codeSystemName="LOINC"
      displayName="INTERVENTIONS"/>
    <title>INTERVENTIONS PROVIDED</title>
    <text>
      <list listType="ordered">
        <item>Therapeutic exercise intervention: knee
               extension, 3 sets, 10 repetitions, 10-lb weight. </item>
        <item>Therapeutic exercise intervention: arm curl, 3 sets, 10
               repetitions, 15-lb weight </item>
      </list>
    </text>
  </section>
</component>
```

3.2.5.2 Physical Examination 29545-1

All constraints from this section are from H&P Note Physical Examination section.

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 includes only observations made by the examining clinician using inspection, palpation, auscultation, and percussion; it does not include laboratory or imaging findings. The exam may be limited to pertinent body systems based on the patient's chief complaint or it may include a comprehensive examination. The examination may be reported as a collection of random clinical statements or it may be reported categorically. Categorical report formats may be divided into multiple subsections, including Vital Signs, General Status, and any of the subsections in Additional Physical Examination Subsections. Note that Vital Signs can be a top-level section or a subsection of Physical Examination.

CONF-PRGN-30: A Progress Note **MAY** contain exactly one and **SHALL NOT** contain more than one Physical Examination section (`templateId 2.16.840.1.113883.10.20.2.10`). See the H&P Note Physical Examination section for more requirements.

Figure 13: Physical examination section example

```
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.2.10"/>
    <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
        code="29545-1" displayName="PHYSICAL FINDINGS"/>
    <title>PHYSICAL EXAMINATION</title>
    <text>
      <paragraph>All normal to examination.</paragraph>
    </text>
  </section>
</component>
```

3.2.5.3 Results 30954-2

All constraints from this section are from the CCD Results section.

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.

Laboratory results are typically generated by laboratories providing analytic services in areas such as chemistry, hematology, serology, histology, cytology, anatomic pathology, microbiology, and/or virology. These observations are based on analysis of specimens obtained from the patient and submitted to the laboratory.

Imaging results are typically generated by a clinician reviewing the output of an imaging procedure, such as where a cardiologist reports the left ventricular ejection fraction based on the review of a cardiac echocardiogram.

Procedure results are typically generated by a clinician to provide more granular information about component observations made during the performance of a procedure, such as where a gastroenterologist reports the size of a polyp observed during a colonoscopy.

CONF-PRGN-31: A Progress Note **MAY** contain exactly one and **SHALL NOT** contain more than one Results section (`templateId 2.16.840.1.113883.10.20.1.14`). See the CCD Results section for more requirements.

Figure 14: Results section example

```
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.1.14"/>
    <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
          code="30954-2"
          displayName="RELEVANT DIAGNOSTIC TESTS AND/OR LABORATORY DATA"/>
    <title>RESULTS</title>
    <text>
      <table border="1" width="100%">
        <thead>
          <tr><th> </th><th>March 23, 2000</th><th>April 06,
            2000</th></tr>
        </thead>
        <tbody>
          <tr><td colspan="3">
            <contentstyleCode="BoldItalics">Hematology</content>
          </td></tr>
          <tr>
            <td>HGB (M 13-18 g/dl; F 12-16
              g/dl)</td><td>13.2</td><td> </td>
          </tr>
          <tr><td>WBC (4.3-10.8 10+3/ul)</td><td>6.7</td><td> </td></tr>
          <tr><td>PLT (135-145 meq/l)</td><td>123*</td><td> </td></tr>
          <tr><td colspan="3">
            <contentstyleCode="BoldItalics">Chemistry</content>
          </td></tr>
          <tr><td>NA (135-145meq/l)</td><td> </td><td>140</td></tr>
          <tr><td>K (3.5-5.0 meq/l)</td><td> </td><td>4.0</td></tr>
          <tr><td>CL (98-106 meq/l)</td><td> </td><td>102</td></tr>
          <tr><td>HCO3 (18-23 meq/l)</td><td> </td><td>35*</td></tr>
        </tbody>
      </table>
    </text>
    <entry typeCode="DRIV">
      <!-- Result organizer template -->
      <organizer classCode="BATTERY" moodCode="EVN">
        <templateId root="2.16.840.1.113883.10.20.1.32"/>
        <id root="7d5a02b0-67a4-11db-bd13-0800200c9a66"/>
        <code code="43789009" codeSystem="2.16.840.1.113883.6.96"
          displayName="CBC WO DIFFERENTIAL"/>
        <statusCode code="completed"/>
        <effectiveTime value="200003231430"/>
        <component>
          <observation classCode="OBS" moodCode="EVN">
            <!-- Result observation template -->
            <templateId root="2.16.840.1.113883.10.20.1.31"/>
            <id root="107c2dc0-67a5-11db-bd13-0800200c9a66"/>
            <code code="30313-1" codeSystem="2.16.840.1.113883.6.1"
              displayName="HGB"/>
            <statusCode code="completed"/>
            <effectiveTime value="200003231430"/>
            <value xsi:type="PQ" value="13.2" unit="g/dl"/>
            <interpretationCode code="N" codeSystem="2.16.840.1.113883.5.83"/>
```

```
            <referenceRange>
              <observationRange>
                <text>M 13-18 g/dl; F 12-16 g/dl</text>
              </observationRange>
            </referenceRange>
          </observation>
        </component>
          ...
      </organizer>
    </entry>
  </section>
</component>
```

3.2.5.4 Vital Signs 8716-3

Constraints from this section are derived from the H&P Vital Signs section.

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 are not required. This section can be a first-level section or nested under Physical Examination.

CONF-PRGN-32: A Progress Note **MAY** contain exactly one and **SHALL NOT** contain more than one Vital Signs section (`templateId 2.16.840.1.113883.10.20.2.4`). See the H&P Vital Signs section for more requirements.

Figure 15: Vital signs section example

```
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.2.4"/>
    <code code="10187-3" codeSystem="2.16.840.1.113883.6.1"
         codeSystemName="LOINC"
         displayName="VITAL SIGNS"/>
    <title>VITAL SIGNS</title>
    <text>
      <paragraph>Heart Rate: 78, Respiratory Rate: 12, Temp (degF): 96.7,
        Oxygen Sat (%): 100.</paragraph>
      <paragraph>Non-invasive Blood Pressure: Systolic: 107, Diastolic: 51
        Mean: 64.</paragraph>
    </text>
    <entry typeCode="DRIV">
      <organizer classCode="CLUSTER" moodCode="EVN">
        <!-- Vital signs organizer template -->
        <templateId root="2.16.840.1.113883.10.20.1.35"/>
        <id root="c6f88320-67ad-11db-bd13-0800200c9a66"/>
        <code code="46680005" codeSystem="2.16.840.1.113883.6.96"
          displayName="Vital signs"/>
        <statusCode code="completed"/>
        <effectiveTime value="19991114"/>
```

```
        <component>
          <observation classCode="OBS" moodCode="EVN">
            <!-- Result observation template -->
            <templateId root="2.16.840.1.113883.10.20.1.31"/>
            <id root="c6f88321-67ad-11db-bd13-0800200c9a66"/>
            <code code="50373000" codeSystem="2.16.840.1.113883.6.96"
              displayName="Body height"/>
            <statusCode code="completed"/>
            <effectiveTime value="19991114"/>
            <value xsi:type="PQ" value="177" unit="cm"/>
            <interpretationCode code="N"
              codeSystem="2.16.840.1.113883.5.83"/>
            <referenceRange>
              <observationRange>
                <value xsi:type="IVL_PQ">
                  <low value="160" unit="cm"/>
                  <high value="190" unit="cm"/>
                </value>
              </observationRange>
            </referenceRange>
          </observation>
        </component>
       ...
      </organizer>
    </entry>
  </section>
</component>
```

3.2.6 Problems 11450-4

All constraints from this section are from the CCD Problems section.

This section lists and describes all relevant clinical problems at the time the Progress Note is generated. At a minimum, all pertinent current and historical problems should be listed.

CONF-PRGN-33: The Progress Note **MAY** contain exactly one and **SHALL NOT** contain more than one Problems section (`templateId 2.16.840.1.113883.10.20.1.11`) See the CCD Problems section for more requirements.

Figure 16: Problem section example

```
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.1.11"/>
    <code code="11450-4" codeSystem="2.16.840.1.113883.6.1"
         codeSystemName="LOINC"
         displayName="PROBLEMS"/>
    <title>PROBLEMS</title>
    <text>
      <list listType="ordered">
        <item>Pneumonia: Resolved in March 1998 </item>
        <item>...</item>
      </list>
    </text>
```

```
    <entry typeCode="DRIV">
      <act classCode="ACT" moodCode="EVN">
        <!-- Problem act template -->
        <templateId root="2.16.840.1.113883.10.20.1.27"/>
        <id root="ec8a6ff8-ed4b-4f7e-82c3-e98e58b45de7"/>
        <code nullFlavor="NA"/>
        <entryRelationship typeCode="SUBJ">
          <observation classCode="OBS" moodCode="EVN">
            <!-- Problem observation template -->
            <templateId root="2.16.840.1.113883.10.20.1.28"/>
            <id root="ab1791b0-5c71-11db-b0de-0800200c9a66"/>
            <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
            <statusCode code="completed"/>
            <effectiveTime>
              <low value="199803"/>
            </effectiveTime>
            <value xsi:type="CD" code="233604007"
              codeSystem="2.16.840.1.113883.6.96" displayName="Pneumonia"/>
            <entryRelationship typeCode="REFR">
              <observation classCode="OBS" moodCode="EVN">
                <!-- Problem status observation template -->
                <templateId root="2.16.840.1.113883.10.20.1.50"/>
                <code code="33999-4" codeSystem="2.16.840.1.113883.6.1"
                  displayName="Status"/>
                <statusCode code="completed"/>
                <value xsi:type="CE" code="413322009"
                  codeSystem="2.16.840.1.113883.6.96" displayName="Resolved"/>
              </observation>
            </entryRelationship>
          </observation>
        </entryRelationship>
      </act>
    </entry>
  </section>
</component>
```

3.2.7 Review of Systems 10187-3

Constraints from this section are derived from the H&P Review of Systems section.

The Review of Systems section contains a relevant collection of symptoms and functions systematically gathered by a clinician. It includes symptoms the patient is currently experiencing, some of which were not elicited during the history of present illness, as well as a potentially large number of pertinent negatives, for example, symptoms that the patient denied experiencing.

CONF-PRGN-34: A Progress Note **MAY** contain exactly one and **SHALL NOT** contain more than one Review of Systems section (`templateId 1.3.6.1.4.1.19376.1.5.3.1.3.18`). See the H&P Review of Systems section for more requirements.

Figure 17: Review of systems section example

```
<component>
  <section>
    <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.18"/>
    <code code="10187-3" codeSystem="2.16.840.1.113883.6.1"
         codeSystemName="LOINC"
         displayName="REVIEW OF SYSTEMS"/>
    <title>REVIEW OF SYSTEMS</title>
    <text>
      <paragraph>
         Patient denies recent history of fever or malaise. Positive
         For weakness and shortness of breath. One episode of melena. No recent
        headaches. Positive for osteoarthritis in hips, knees and hands.
      </paragraph>
    </text>
  </section>
</component>
```

3.2.8 Subjective 61150-9

The Subjective section describes in a narrative format the patient's current condition and/or interval changes as reported by the patient or by the patient's guardian or another informant.

CONF-PRGN-35: A Progress Note **MAY** contain exactly one and **SHALL NOT** contain more than one Subjective section (`templateId 2.16.840.1.113883.10.20.21.2.2`).

CONF-PRGN-36: A `section/code` element **SHALL** be present where the value for `@code` is `61150-9 SUBJECTIVE DATA 2.16.840.1.113883.6.1 LOINC` **STATIC**.

Figure 18: Subjective section example

```
<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.21.2.2"/>
    <code code="61150-9" codeSystem="2.16.840.1.113883.6.1"
         codeSystemName="LOINC"
         displayName="SUBJECTIVE DATA"/>
    <title>SUBJECTIVE DATA</title>
    <text>
      <paragraph>
         I have used the peripheral nerve stimulator in my back for five days.
        While using it I found that I was able to do physical activity
        without pain. However, afterwards for one day, I would feel pain but
        then it would go away. I also noticed that I didn't have to take the
        Vicodin as much. I took 2 less Vicodin per day and 2 less tramadol
        everyday. I have not lain in my bed in a year and a half. I sleep in
        a recliner.
      </paragraph>
    </text>
  </section>
</component>
```

4 REFERENCES

- ASTM's Standard Specifications for Healthcare Document Formats (E2184.02) (Headings and subheadings used in the health care industry and associated with specific report types). http://www.astm.org/cgi-bin/SoftCart.exe/DATABASE.CART/REDLINE_PAGES/E2184.htm?L+memberstore+psnw2999
- LOINC®: Logical Observation Identifiers Names and Codes, Regenstrief Institute. http://www.loinc.org
- *CCD: Continuity of Care Document (CCD) ASTM/HL7*. http://www.hl7.org/documentcenter/ballots/2007JAN/downloads/CDAR2_IMPL_CCD_I2_2007JAN.zip
- *CDA: Clinical Document Architecture Release 2: Clinical Document Architecture (CDA) Release 2*, May 2005. http://www.hl7.org/v3ballot/html/infrastructure/cda/cda.htm
- *HL7 Implementation Guide for CDA Release 2: Care Record Summary*, Release 1, June 2006. http://www.hl7.org/documentcenter/public/standards/informative/crs.zip (membership required)
- *HL7 Implementation Guide for CDA Release 2: History and Physical (H&P) Notes*, DSTU Release 1, July 2008. http://www.hl7.org/documentcenter/ballots/2007SEP/support/CDAR2_HPRPT_DSTU_2008AUG.zip
- *HL7 Implementation Guide for CDA Release 2: Procedure Note* DSTU Release 1, July 2010. http://www.hl7.org/documentcenter/public/standards/dstu/CDAR2_IG_PROCNOTE_DSTU_R1_2010JUL.zip

APPENDIX A — ACRONYMS AND ABBREVIATIONS

ADA	American Dental Association
AHDI	Association for Healthcare Documentation Integrity
AHIMA	American Health Information Management Association
ASTM	originally known as American Society for Testing and Materials
CCD	Continuity of Care Document
CDA	Clinical Document Architecture
CHOP	Children's Hospital of Philadelphia
CRS	Care Record Summary
DSTU	Draft Standard for Trial Use
EHR	Electronic health record
H&P	History and Physical
HITSP	Health Information Technology Standards Panel
HL7	Health Level Seven
IHE	Integrating the Healthcare Enterprise
IHTSDO	International Health Terminology Standard Development Organisation
LOINC	Logical Observation Identifiers Names and Codes
MTIA	Medical Transcription Industry Association
PCC	Patient Care Coordination
PHR	Personal Health Record
R1, R2	Release 1, Release 2
RIM	Reference Information Model
SDO	Standards Development Organization
SDWG	Structured Documents Working Group
SNOMED CT	Systematized Nomenclature of Medicine, Clinical Terms
XML	Extensible Markup Language

APPENDIX B — TEMPLATE IDS IN THIS GUIDE

Table 4: TemplateIds in This Guide

Template ID	Source	Description
2.16.840.1.113883.10.20.1.18	CCD	Alert Observation
2.16.840.1.113883.10.20.1.2	CCD	Allergies Section
2.16.840.1.113883.10.20.3	H&P Note	Asserts conformance to CDA general header constraints
2.16.840.1.113883.10.20.21.1	New	Asserts conformance to header constraints specific to a Progress Note
2.16.840.1.113883.10.20.18.2.14	Procedure Note	Assessment and Plan Section
2.16.840.1.113883.10.20.18.2.13	Procedure Note	Assessment Section
2.16.840.1.113883.10.20.18.2.16	Procedure Note	Chief Complaint Section
1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1	IHE	Chief Complaint Section
2.16.840.1.113883.10.20.2.5	H&P Note	General Status Section
2.16.840.1.113883.10.20.21.2.3	New	Interventions Section
2.16.840.1.113883.10.20.1.8	CCD	Medications Section
2.16.840.1.113883.10.20.21.2.1	New	Objective Section
2.16.840.1.113883.10.20.2.10	H&P Note	Physical Examination Section
2.16.840.1.113883.10.20.1.25	CCD	Plan of Care Activities
2.16.840.1.113883.10.20.1.10	CCD	Plan Section
2.16.840.1.113883.10.20.1.27	CCD	Problem Act
2.16.840.1.113883.10.20.1.11	CCD	Problems Section
2.16.840.1.113883.10.20.1.14	CCD	Results Section
1.3.6.1.4.1.19376.1.5.3.1.3.18	H&P Note	Review of Systems Section
2.16.840.1.113883.10.20.21.3.1	New	Service Event in Header
2.16.840.1.113883.10.20.21.2.2	New	Subjective Section
2.16.840.1.113883.10.20.2.4	H&P Note	Vital Signs Section

APPENDIX C — OBJECT IDENTIFIERS IN THIS GUIDE

Table 5: Object Idenifiers (OIDs) in This Guide

OID	Description
Code Systems	
2.16.840.1.113883.5.6	ActClass
2.16.840.1.113883.6.1	LOINC
2.16.840.1.113883.5.88	ParticipationFunction
2.16.840.1.113883.6.96	SNOMED CT
Value Sets	
2.16.840.1.113883.11.20.8.1	ProgressNoteDocumentTypeCode

APPENDIX D — ADDITIONAL PHYSICAL EXAMINATION SUBSECTIONS

Below is the list of additional optional subsections that may be used under the Physical Examination section. Most of the codes for these subsections are included in the HL7 document *CDAR2AIS0004R030, Additional Information Specification 0004: Clinical Reports Attachment*, which also lists General Status (10210-3) and Vital Signs (8716-3), defined in this guide in the appendix on External References.

Table 6: Additional Physical Examination Subsections

LOINC Code	Component Name
10190-7	MENTAL STATUS
11451-2	PSYCHIATRIC FINDINGS
10199-8	HEAD, PHYSICAL FINDINGS
10197-2	EYE, PHYSICAL FINDINGS
10195-6	EAR, PHYSICAL FINDINGS
10203-8	NOSE, PHYSICAL FINDINGS
11393-6	EARS & NOSE & MOUTH & THROAT, PHYSICAL FINDINGS
10201-2	MOUTH & THROAT & TEETH, PHYSICAL FINDINGS
51850-6	HEAD & EARS & EYES & NOSE & THROAT, PHYSICAL FINDINGS
11411-6	NECK, PHYSICAL FINDINGS
10207-9	THORAX & LUNGS, PHYSICAL FINDINGS
11391-0	CHEST, PHYSICAL FINDINGS
11392-8	CHEST WALL, PHYSICAL FINDINGS
10200-4	HEART, PHYSICAL FINDINGS
10193-1	BREASTS, PHYSICAL FINDINGS
10192-3	BACK, PHYSICAL FINDINGS
10191-5	ABDOMEN, PHYSICAL FINDINGS
10204-6	PELVIS, PHYSICAL FINDINGS
11403-3	GROIN, PHYSICAL FINDINGS
10198-0	GENITOURINARY TRACT, PHYSICAL FINDINGS
11400-9	GENITALIA, PHYSICAL FINDINGS
11401-7	GENITALIA FEMALE, PHYSICAL FINDINGS
11402-5	GENITALIA MALE, PHYSICAL FINDINGS
11388-6	BUTTOCKS, PHYSICAL FINDINGS
10205-3	RECTUM, PHYSICAL FINDINGS
10196-4	EXTREMITIES, PHYSICAL FINDINGS
11413-2	SHOULDER, PHYSICAL FINDINGS
11387-8	AXILLA, PHYSICAL FINDINGS
11386-0	UPPER ARM, PHYSICAL FINDINGS
11394-4	ELBOW, PHYSICAL FINDINGS
11398-5	FOREARM, PHYSICAL FINDINGS

LOINC Code	Component Name
11415-7	WRIST, PHYSICAL FINDINGS
11404-1	HAND, PHYSICAL FINDINGS
11406-6	HIP, PHYSICAL FINDINGS
11414-0	THIGH, PHYSICAL FINDINGS
11407-4	KNEE, PHYSICAL FINDINGS
11389-4	CALF, PHYSICAL FINDINGS
11385-2	ANKLE, PHYSICAL FINDINGS
11397-7	FOOT, PHYSICAL FINDINGS
10209-5	BALANCE+COORDINATION, PHYSICAL FINDINGS
10212-9	STRENGTH PHYSICAL FINDINGS
10211-1	SENSATION, PHYSICAL FINDINGS
10206-1	SKIN, PHYSICAL FINDINGS
10194-9	DEEP TENDON REFLEXES, PHYSICAL FINDINGS
10208-7	VESSELS, PHYSICAL FINDINGS
11384-5	PHYSICAL EXAMINATION BY ORGAN SYSTEMS
11447-0	HEMATOLOGIC+LYMPHATIC+IMMUNOLOGIC PHYSICAL FINDINGS
11390-2	CARDIOVASCULAR SYSTEM, PHYSICAL FINDINGS
11399-3	GASTROINTESTINAL SYSTEM, PHYSICAL FINDINGS
10202-0	NEUROLOGIC SYSTEM, PHYSICAL FINDINGS
11410-8	MUSCULOSKELETAL SYSTEM, PHYSICAL FINDINGS

APPENDIX E — EXTERNALLY DEFINED CONSTRAINTS

This appendix lists all of the external conformance statements referenced from the body of this document. For a complete description of these constraints, please refer to the original specifications.

CCD Constraints

The following constraints are from the final publication of CCD dated April 1, 2007. Any discrepancy between this and the original is inadvertent, and in all cases the CCD source takes precedence.

Alert Observation (Template ID: 2.16.840.1.113883.10.20.1.18)

CCD-CONF-262: An alert observation (templateId 2.16.840.1.113883.10.20.1.18) **SHALL** be represented with **Observation**.

CCD-CONF-263: The value for "**Observation / @moodCode**" in an alert observation **SHALL** be "EVN" 2.16.840.1.113883.5.1001 ActMood **STATIC**.

CCD-CONF-264: An alert observation **SHALL** include exactly one **Observation / statusCode**.

CCD-CONF-265: The value for "**Observation / statusCode**" in an alert observation **SHALL** be "completed" 2.16.840.1.113883.5.14 ActStatus **STATIC**.

CCD-CONF-266: An alert observation **MAY** 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).

CCD-CONF-267: The value for "**Observation / value"** in an alert observation **MAY** be selected from ValueSet 2.16.840.1.113883.1.11.20.4 AlertTypeCode **STATIC** 20061017.

CCD-CONF-268: The absence of known allergies **SHOULD** be represented in an alert observation by valuing **Observation / value** with 160244002 "No known allergies" 2.16.840.1.113883.6.96 SNOMED CT **STATIC**.

CCD-CONF-269: An alert observation **SHALL** contain one or more sources of information, as defined in section ***5.2 Source***.

Alerts Section (Template ID: 2.16.840.1.113883.10.20.1.2)

This section is used to list and describe any allergies, adverse reactions, and alerts that are pertinent to the patient's current or past medical history. At a minimum, currently active and any relevant historical allergies and adverse reactions should be listed.

CCD-CONF-256: **CCD SHOULD** contain exactly one and **SHALL NOT** contain more than one Alerts section (templateId 2.16.840.1.113883.10.20.1.2). The Alerts section **SHALL** contain a narrative block, and **SHOULD** contain clinical statements. Clinical statements **SHOULD** include one or more problem acts (templateId 2.16.840.1.113883.10.20.1.27). A problem act **SHOULD** include one or more alert observations (templateId 2.16.840.1.113883.10.20.1.18).

CCD-CONF-257: The absence of known allergies, adverse reactions, or alerts **SHALL** be explicitly asserted.

CCD-CONF-258: The alert section **SHALL** contain **Section / code.**

CCD-CONF-259: The value for "**Section / code**" **SHALL** be "48765-2" "Allergies, adverse reactions, alerts" 2.16.840.1.113883.6.1 LOINC **STATIC**.

CCD-CONF-260: The alert section **SHALL** contain **Section / title.**

CCD-CONF-261: **Section / title SHOULD** be valued with a case-insensitive language-insensitive text string containing "alert" and/or "allergies and adverse reactions".

Medications Section (Template ID: 2.16.840.1.113883.10.20.1.8)

The Medications section defines a patient's current medications and pertinent medication history. At a minimum, the currently active medications should be listed, with an entire medication history as an option, particularly when the summary document is used for comprehensive data export. The section may also include a patient's prescription history, and enables the determination of the source of a medication list (e.g. from a pharmacy system vs. from the patient).

CCD-CONF-298: **CCD SHOULD** contain exactly one and **SHALL NOT** contain more than one Medications section (templateId 2.16.840.1.113883.10.20.1.8). The Medications section **SHALL** contain a narrative block, and **SHOULD** contain clinical statements. Clinical statements **SHOULD** include one or more medication activities (templateId 2.16.840.1.113883.10.20.1.24) and/or supply activities (templateId 2.16.840.1.113883.10.20.1.34).

CCD-CONF-299: The absence of known medications **SHALL** be explicitly asserted.

Plan of Care Activities (Template ID: 2.16.840.1.113883.10.20.1.25)

CCD-CONF-485: A plan of care activity (templateId 2.16.840.1.113883.10.20.1.25) **SHALL** be represented with **Act, Encounter, Observation, Procedure, SubstanceAdministration,** or **Supply**.

CCD-CONF-486: A plan of care activity **SHALL** contain at least one **[Act | Encounter | Observation | Procedure | SubstanceAdministration | Supply] / id**.

CCD-CONF-487: A plan of care activity **SHALL** contain exactly one **[Act | Encounter | Observation | Procedure | SubstanceAdministration | Supply] / @moodCode**.

CCD-CONF-488: The value for "**[Act | Encounter | Procedure] / @moodCode**" in a plan of care activity **SHALL** be ["INT" (intent) | "ARQ" (appointment request) | "PRMS" (promise) | "PRP" (proposal) | "RQO" (request)] 2.16.840.1.113883.5.1001 ActMood **STATIC**.

CCD-CONF-489: The value for "**[SubstanceAdministration | Supply] / @moodCode**" in a plan of care activity **SHALL** be ["INT" (intent) | "PRMS" (promise) | "PRP" (proposal) | "RQO" (request)] 2.16.840.1.113883.5.1001 ActMood **STATIC**.

CCD-CONF-490: The value for "**Observation / @moodCode**" in a plan of care activity **SHALL** be ["INT" (intent) | "PRMS" (promise) | "PRP" (proposal) | "RQO" (request) | "GOL" (goal)] 2.16.840.1.113883.5.1001 ActMood **STATIC**.

CCD-CONF-491: A plan of care activity **SHALL** contain one or more sources of information, as defined in section ***5.2 Source***.

Problem Act (Template ID: 2.16.840.1.113883.10.20.1.27)

CCD-CONF-145: A problem act (templateId 2.16.840.1.113883.10.20.1.27) **SHALL** be represented with **Act**.

CCD-CONF-146: The value for "**Act / @classCode**" in a problem act **SHALL** be "ACT" 2.16.840.1.113883.5.6 ActClass **STATIC**.

CCD-CONF-147: The value for "**Act / @moodCode**" in a problem act **SHALL** be "EVN" 2.16.840.1.113883.5.1001 ActMood **STATIC**.

CCD-CONF-148: A problem act **SHALL** contain at least one **Act / id**.

CCD-CONF-149: The value for "**Act / code / @NullFlavor**" in a problem act **SHALL** be "NA" "Not applicable" 2.16.840.1.113883.5.1008 NullFlavor **STATIC**.

CCD-CONF-150: A problem act **MAY** contain exactly one **Act / effectiveTime**, to indicate the timing of the concern (e.g. the interval of time for which the problem is a concern).

CCD-CONF-151: A problem act **SHALL** contain one or more **Act / entryRelationship**.

CCD-CONF-152: A problem act **MAY** reference a problem observation, alert observation (see section ***3.8 Alerts***) or other clinical statement that is the subject of concern, by setting the value for "**Act / entryRelationship / @typeCode**" to be "SUBJ" 2.16.840.1.113883.5.1002 ActRelationshipType STATIC.

CCD-CONF-153: The target of a problem act with **Act / entryRelationship / @typeCode="**SUBJ**" SHOULD** be a problem observation (in the Problem section) or alert observation (in the Alert section, see section ***3.8 Alerts***), but **MAY** be some other clinical statement.

Problems Section (Template ID: 2.16.840.1.113883.10.20.1.11)

CCD-CONF-140: CCD **SHOULD** contain exactly one and **SHALL NOT** contain more than one Problems section (templateId 2.16.840.1.113883.10.20.1.11). The Problems section **SHALL** contain a narrative block, and **SHOULD** contain clinical statements. Clinical statements **SHOULD** include one or more problem acts (templateId 2.16.840.1.113883.10.20.1.27). A problem act **SHOULD** include one or more problem observations (templateId 2.16.840.1.113883.10.20.1.28).

CCD-CONF-141: The Problems section **SHALL** contain **Section** / **code**.

CCD-CONF-142: The value for "**Section** / **code**" **SHALL** be "11450-4" "Problem list" 2.16.840.1.113883.6.1 LOINC **STATIC**.

CCD-CONF-143: The Problems section **SHALL** contain **Section** / **title**.

CCD-CONF-144: **Section** / **title SHOULD** be valued with a case-insensitive language-insensitive text string containing "problems."

CCD-CONF-145: A problem act (templateId 2.16.840.1.113883.10.20.1.27) **SHALL** be represented with **Act**.

CCD-CONF-146: The value for "**Act**/ **@classCode**" in a problem act **SHALL** be "ACT" 2.16.840.1.113883.5.6 ActClass **STATIC**.

CCD-CONF-147: The value for "**Act**/ **@moodCode**" in a problem act **SHALL** be "EVN" 2.16.840.1.113883.5.1001 ActMood **STATIC**.

CCD-CONF-148: A problem act **SHALL** contain at least one **Act**/ **id**.

CCD-CONF-149: The value for "**Act**/ **code** / **@NullFlavor**" in a problem act **SHALL** be "NA" "Not applicable" 2.16.840.1.113883.5.1008 NullFlavor **STATIC**.

CCD-CONF-150: A problem act **MAY** contain exactly one **Act**/ **effectiveTime**, to indicate the timing of the concern (e.g. the interval of time for which the problem is a concern).

CCD-CONF-151: A problem act **SHALL** contain one or more **Act**/ **entryRelationship**.

CCD-CONF-152: A problem act **MAY** reference a problem observation, alert observation (see section ***3.9 Alerts***) or other clinical statement that is the subject of concern, by setting the value for "**Act**/ **entryRelationship** / **@typeCode**" to be "SUBJ" 2.16.840.1.113883.5.1002 ActRelationshipType **STATIC**.

CCD-CONF-153: The target of a problem act with **Act** / **entryRelationship** / **@typeCode="SUBJ"** **SHOULD** be a problem observation (in the Problems section) or alert observation (in the Alerts section, see section ***3.9 Alerts***), but **MAY** be some other clinical statement.

CCD-CONF-154: A problem observation (templateId 2.16.840.1.113883.10.20.1.28) **SHALL** be represented with **Observation**.

CCD-CONF-155: The value for "**Observation** / **@moodCode**" in a problem observation **SHALL** be "EVN" 2.16.840.1.113883.5.1001 ActMood **STATIC**.

CCD-CONF-156: A problem observation **SHALL** include exactly one **Observation** / **statusCode**.

CCD-CONF-157: The value for "**Observation** / **statusCode**" in a problem observation **SHALL** be "completed" 2.16.840.1.113883.5.14 ActStatus **STATIC**.

CCD-CONF-158: 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).

CCD-CONF-159: The value for "**Observation** / **code**" in a problem observation **MAY** be selected from ValueSet 2.16.840.1.113883.1.11.20.14 ProblemTypeCode **STATIC** 20061017.

CCD-CONF-160: The value for "**Observation** / **entryRelationship** / **@typeCode**" in a problem observation **MAY** be "SUBJ" "Subject" 2.16.840.1.113883.5.1002 ActRelationshipType **STATIC** to reference an age observation (templateId 2.16.840.1.113883.10.20.1.38).

CCD-CONF-161: A problem observation **SHALL** contain one or more sources of information, as defined in section ***5.2 Source***.

CCD-CONF-162: A problem observation **MAY** contain exactly one problem status observation.

CCD-CONF-163: A problem status observation (templateId 2.16.840.1.113883.10.20.1.50) **SHALL** be a conformant status observation (templateId 2.16.840.1.113883.10.20.1.57) (as defined in section *5.1 "Type" and "Status" values*).

CCD-CONF-164: The value for "**Observation** / **value**" in a problem status observation **SHALL** be selected from ValueSet 2.16.840.1.113883.1.11.20.13 ProblemStatusCode **STATIC** 20061017.

CCD-CONF-165: A problem observation **MAY** contain exactly one problem healthstatus observation.

CCD-CONF-166: A problem healthstatus observation (templateId 2.16.840.1.113883.10.20.1.51) **SHALL** be a conformant status observation (templateId 2.16.840.1.113883.10.20.1.57) (as defined in section *5.1 "Type" and "Status" values*), except that the value for "**Observation** / **code**" in a problem healthstatus observation **SHALL** be "11323-3" "Health status" 2.16.840.1.113883.6.1 LOINC **STATIC**.

CCD-CONF-167: The value for "**Observation** / **value**" in a problem healthstatus observation **SHALL** be selected from ValueSet 2.16.840.1.113883.1.11.20.12 ProblemHealthStatusCode **STATIC** 20061017.

CCD-CONF-168: A problem act **MAY** contain exactly one episode observation.

CCD-CONF-169: An episode observation (templateId 2.16.840.1.113883.10.20.1.41) **SHALL** be represented with **Observation**.

CCD-CONF-170: The value for "**Observation** / **@classCode**" in an episode observation **SHALL** be "OBS" 2.16.840.1.113883.5.6 ActClass **STATIC**.

CCD-CONF-171: The value for "**Observation** / **@moodCode**" in an episode observation **SHALL** be "EVN" 2.16.840.1.113883.5.1001 ActMood **STATIC**.

CCD-CONF-172: An episode observation **SHALL** include exactly one **Observation** / **statusCode**.

CCD-CONF-173: The value for "**Observation** / **statusCode**" in an episode observation **SHALL** be "completed" 2.16.840.1.113883.5.14 ActStatus **STATIC**.

CCD-CONF-174: The value for "**Observation** / **Code**" in an episode observation **SHOULD** be "ASSERTION" 2.16.840.1.113883.5.4 ActCode **STATIC**.

CCD-CONF-175: "**Observation** / **value**" in an episode observation **SHOULD** be the following SNOMED CT expression:

```
<value xsi:type="CD" code="404684003"
        codeSystem="2.16.840.1.113883.6.96" displayName="Clinical finding">
        <qualifier>
        <name code="246456000" displayName="Episodicity" / >
        <value code="288527008" displayName="New episode" / >
        < / qualifier>
        < / value>
```

CCD-CONF-176: An episode observation **SHALL** be the source of exactly one **entryRelationship** whose value for "**entryRelationship** / **@typeCode**" is "SUBJ" "Has subject" 2.16.840.1.113883.5.1002 ActRelationshipType **STATIC** . This is used to link the episode observation to the target problem act or social history observation.

CCD-CONF-177: An episode observation **MAY** be the source of one or more **entryRelationship** whose value for "**entryRelationship** / **@typeCode**" is "SAS" "Starts after start" 2.16.840.1.113883.5.1002 ActRelationshipType **STATIC**. The target of the **entryRelationship SHALL** be a problem act or social history observation. This is used to represent the temporal sequence of episodes.

CCD-CONF-178: Patient awareness (templateId 2.16.840.1.113883.10.20.1.48) of a problem, observation, or other clinical statement **SHALL** be represented with participant.

CCD-CONF-179: A problem act **MAY** contain exactly one patient awareness.

CCD-CONF-180: A problem observation **MAY** contain exactly one patient awareness.

CCD-CONF-181: The value for "**participant** / **@typeCode**" in a patient awareness **SHALL** be "SBJ" "Subject" 2.16.840.1.113883.5.90 ParticipationType **STATIC**.

CCD-CONF-182: Patient awareness **SHALL** contain exactly one **participant** / **awarenessCode.**

CCD-CONF-183: Patient awareness **SHALL** contain exactly one **participant** / **participantRole** / **id**, which **SHALL** have exactly one value, which **SHALL** also be present in **ClinicalDocument** / **recordTarget** / **patientRole** / **id**.

Procedures Section (Template ID: 2.16.840.1.113883.10.20.1.12)

Note: ASTM CCR's notion of "procedure" is broader than that specified by the HL7 Version 3 RIM. Therefore, this section uses several RIM classes (**Act**, **Observation**, **Procedure**) to represent CCR's procedure objects.

CCD-CONF-422: **CCD SHOULD** contain exactly one and **SHALL NOT** contain more than one Procedures section (templateId 2.16.840.1.113883.10.20.1.12). The Procedures section **SHALL** contain a narrative block, and **SHOULD** contain clinical statements. Clinical statements **SHOULD** include one or more procedure activities (templateId 2.16.840.1.113883.10.20.1.29).

CCD-CONF-423: The procedure section **SHALL** contain **Section / code**.

CCD-CONF-424: The value for "**Section / code**" **SHALL** be "47519-4" "History of procedures" 2.16.840.1.113883.6.1 LOINC **STATIC**.

CCD-CONF-425: The procedure section **SHALL** contain **Section / title.**

CCD-CONF-426: **Section / title SHOULD** be valued with a case-insensitive language-insensitive text string containing "procedures."

CCD-CONF-427: A procedure activity (templateId 2.16.840.1.113883.10.20.1.29) **SHALL** be represented with **Act**, **Observation**, or **Procedure**.

CCD-CONF-428: The value for "**[Act | Observation | Procedure] / @moodCode**" in a procedure activity **SHALL** be "EVN" 2.16.840.1.113883.5.1001 ActMood **STATIC**.

CCD-CONF-420: A procedure activity **SHALL** contain at least one **[Act | Observation | Procedure] / id**.

CCD-CONF-430: A procedure activity **SHALL** contain exactly one **[Act | Observation | Procedure] / statusCode.**

CCD-CONF-431: The value for "**[Act | Observation | Procedure]** / statusCode" in a procedure activity **SHALL** be selected from ValueSet 2.16.840.1.113883.1.11.20.15 ProcedureStatusCode **STATIC** 20061017.

CCD-CONF-432: A procedure activity **SHOULD** contain exactly one **[Act | Observation | Procedure] / effectiveTime**.

CCD-CONF-433: A procedure activity **SHALL** contain exactly one **[Act | Observation | Procedure] / code**.

CCD-CONF-434: The value for **"[Act | Observation | Procedure] / code**" in a procedure activity **SHOULD** be selected from LOINC (codeSystem 2.16.840.1.113883.6.1) or SNOMED CT (codeSystem 2.16.840.1.113883.6.96), and **MAY** be selected from CPT-4 (codeSystem 2.16.840.1.113883.6.12), ICD9 Procedures (codeSystem 2.16.840.1.113883.6.104), ICD10 Procedure Coding System (codeSystem 2.16.840.1.113883.6.4).

CCD-CONF-435: A procedure activity **MAY** contain one or more **[Observation | Procedure] / methodCode** if the method is not inherent in **[Observation | Procedure] / code** or if there is a need to further specialize the method in **[Observation | Procedure] / code. [Observation | Procedure] / methodCode SHALL NOT** conflict with the method inherent in **[Observation | Procedure] / code.**

CCD-CONF-436A: procedure activity **MAY** contain one or more **[Observation | Procedure] / targetSiteCode** to indicate the anatomical site or system that is the focus of the procedure, if the site is not inherent in **[Observation | Procedure] / code** or if there is a need to further specialize the site in **[Observation | Procedure] / code**. **[Observation | Procedure] / targetSiteCode SHALL NOT** conflict with the site inherent in **[Observation | Procedure] / code**.

CCD-CONF-437: A procedure activity **MAY** contain one or more location participations (templateId 2.16.840.1.113883.10.20.1.45) (see section *3.15.2.2 Encounter location* within CCD for more on referencing within CCD) to represent where the procedure was performed.

CCD-CONF-438: A procedure activity **MAY** contain one or more **[Act | Observation | Procedure] / performer** to represent those practitioners who performed the procedure.

CCD-CONF-439: A procedure activity **MAY** contain one or more **entryRelationship / @typeCode="RSON**", the target of which represents the indication or reason for the procedure.

CCD-CONF-440: **[Act | Observation | Procedure] / entryRelationship / @typeCode="RSON"** in a procedure activity **SHALL** have a target of problem act (templateId 2.16.840.1.113883.10.20.1.27), problem observation (templateId 2.16.840.1.113883.10.20.1.28), or some other clinical statement.

CCD-CONF-441: A procedure activity **MAY** contain one or more patient instructions (templateId 2.16.840.1.113883.10.20.1.49) (see section *3.9.2.2.2 Patient instructions* within CCD), to represent any additional information provided to a patient related to the procedure.

CCD-CONF-442: A procedure activity **MAY** have one or more associated consents, represented in the CCD Header as **ClinicalDocument / authorization / consent**.

CCD-CONF-443: A Procedure in a procedure activity **MAY** have one or more **Procedure / specimen**, reflecting specimens that were obtained as part of the procedure.

CCD-CONF-444: **Procedure / specimen / specimenRole / id SHOULD** be set to equal an **Organizer / specimen / specimenRole / id** (see section *3.14 Results*) to indicate that the Procedure and the Results are referring to the same specimen.

CCD-CONF-445: The value for "**[Act | Observation | Procedure] / entryRelationship / @typeCode**" in a procedure activity **MAY** be "SUBJ" "Subject" 2.16.840.1.113883.5.1002 ActRelationshipType STATIC to reference an age observation (templateId 2.16.840.1.113883.10.20.1.38).[3]

CCD-CONF-446: A procedure activity **MAY** have one or more **[Act | Observation | Procedure] / entryRelationship [@typeCode="COMP"]**, the target of which is a medication activity (templateId 2.16.840.1.113883.10.20.1.24) (see section *3.9.2.1.1 Medication activity* within CCD), to describe substances administered during the procedure.

CCD-CONF-447: A procedure activity **SHALL** contain one or more sources of information, as defined in section *5.2 Source* within CCD.

CCD-CONF-448: A procedure activity **MAY** have one or more **[Act | Observation | Procedure] / participant [@typeCode="DEV"]**, the target of which is a product instance template.

CCD-CONF-449: A product instance (templateId 2.16.840.1.113883.10.20.1.52) **SHALL** be represented with the **ParticipantRole** class.

CCD-CONF-450: The value for "**participantRole / @classCode**" in a product instance **SHALL** be "MANU" "Manufactured product" 2.16.840.1.113883.5.110 RoleClass **STATIC**.

CCD-CONF-451: If participantRole in a product instance contains participantRole / id, then participantRole **SHOULD** also contain participantRole / scopingEntity.

[3] Note that entryRelationship / inversionInd can be used to distinguish relationship source vs. target.

CCD-CONF-452: **[Act | Observation | Procedure] / participant / participantRole / id SHOULD** be set to equal a **Supply / participant / participantRole / id** (see section *3.9.2.4 Representation of a product* within CCD) to indicate that the Procedure and the Supply are referring to the same product instance.

Results Section (Template ID: 2.16.840.1.113883.10.20.1.14)

CCD-CONF-388: CCD **SHOULD** contain exactly one and **SHALL NOT** contain more than one Results section (templateId 2.16.840.1.113883.10.20.1.14). The Results section **SHALL** contain a narrative block, and **SHOULD** contain clinical statements. Clinical statements **SHOULD** include one or more result organizers (templateId 2.16.840.1.113883.10.20.1.32), each of which **SHALL** contain one or more result observations (templateId 2.16.840.1.113883.10.20.1.31).

CCD-CONF-389: The Results section **SHALL** contain **Section** / **code**.

CCD-CONF-390: The value for "**Section** / **code**" **SHALL** be "30954-2" "Relevant diagnostic tests and / or laboratory data" 2.16.840.1.113883.6.1 LOINC **STATIC**.

CCD-CONF-391: The Results section **SHALL** contain **Section** / **title**.

CCD-CONF-392: **Section** / **title SHOULD** be valued with a case-insensitive language-insensitive text string containing "results."

CCD-CONF-393: A result organizer (templateId 2.16.840.1.113883.10.20.1.32) **SHALL** be represented with **Organizer**.

CCD-CONF-394: The value for "**Organizer** / **@moodCode**" in a result organizer **SHALL** be "EVN" 2.16.840.1.113883.5.1001 ActMood **STATIC**.

CCD-CONF-395: A result organizer **SHALL** contain at least one **Organizer** / **id**.

CCD-CONF-396: A result organizer **SHALL** contain exactly one **Organizer** / **statusCode**.

CCD-CONF-397: A result organizer **SHALL** contain exactly one **Organizer** / **code**.

CCD-CONF-398: The value for "**Organizer** / **code**" in a result organizer **SHOULD** be selected from LOINC (codeSystem 2.16.840.1.113883.6.1) or SNOMED CT (codeSystem 2.16.840.1.113883.6.96), and **MAY** be selected from CPT-4 (codeSystem 2.16.840.1.113883.6.12) or ValueSet 2.16.840.1.113883.1.11.20.16 ResultTypeCode **STATIC**.

Note that this is a U.S.-realm document and users should be aware of the U.S. regulations that were promulgated, in July 2010, after the CCD was published in 2008. A LOINC code is more appropriate for `observation/code` in the U.S. realm.[4]

CCD-CONF-399: A result organizer **SHOULD** include one or more **Organizer** / **specimen** if the specimen is not inherent in **Organizer** / **code**.

[4] http://healthit.hhs.gov/portal/server.pt?open=512&objID=1195&parentname=CommunityPage&parentid=97&mode=2&in_hi_userid=11673&cached=true

CCD-CONF-400: **Organizer** / **specimen** **SHALL NOT** conflict with the specimen inherent in **Organizer** / **code**.

CCD-CONF-402: **Organizer** / **specimen** / **specimenRole** / **id** **SHOULD** be set to equal a **Procedure** / **specimen** / **specimenRole** / **id** (see section ***3.15 Procedures***) to indicate that the Results and the Procedure are referring to the same specimen.

CCD-CONF-402: A result organizer **SHALL** contain one or more **Organizer** / **component**.

CCD-CONF-403: The target of one or more result organizer **Organizer** / **component** relationships **MAY** be a procedure, to indicate the means or technique by which a result is obtained, particularly if the means or technique is not inherent in **Organizer** / **code** or if there is a need to further specialize the **Organizer** / **code** value.

CCD-CONF-404: A result organizer **Organizer** / **component** / **procedure** **MAY** be a reference to a procedure described in the Procedure section. (See Section 5.3 InternalCCRLink for more on referencing within CCD).

CCD-CONF-405: The target of one or more result organizer **Organizer** / **component** relationships **SHALL** be a result observation.

CCD-CONF-406: A result organizer **SHALL** contain one or more sources of information, as defined in section ***5.2 Source***.

CCD-CONF-407: A result observation (templateId 2.16.840.1.113883.10.20.1.31) **SHALL** be represented with Observation.

CCD-CONF-408: The value for "**Observation** / **@moodCode**" in a result observation **SHALL** be "EVN" 2.16.840.1.113883.5.1001 ActMood **STATIC**.

CCD-CONF-409: A result observation **SHALL** contain at least one **Observation** / **id**.

CCD-CONF-410: A result observation **SHALL** contain exactly one **Observation** / **statusCode**.

CCD-CONF-411: A result observation **SHOULD** contain exactly one **Observation** / **effectiveTime**, which represents the biologically relevant time (e.g. time the specimen was obtained from the patient).

CCD-CONF-412: A result observation **SHALL** contain exactly one **Observation** / **code**.

CCD-CONF-413: The value for "**Observation** / **code**" in a result observation **SHOULD** be selected from LOINC (codeSystem 2.16.840.1.113883.6.1) or SNOMED CT (codeSystem 2.16.840.1.113883.6.96), and **MAY** be selected from CPT-4 (codeSystem 2.16.840.1.113883.6.12).

Note that this is a U.S.-realm document and users should be aware of the U.S. regulations that were promulgated, in July 2010, after the CCD was published in 2008. A LOINC code is more appropriate for `observation/code` in the U.S. realm.[5]

CCD-CONF-414: A result observation **MAY** contain exactly one **Observation** / **methodCode** if the method is not inherent in **Observation** / **code** or if there is a need to further specialize the method in **Observation** / **code**.

CCD-CONF-415: **Observation** / **methodCode** **SHALL NOT** conflict with the method inherent in **Observation** / **code**.

CCD-CONF-416: A result observation **SHALL** contain exactly one **Observation** / **value**.

CCD-CONF-417: Where **Observation** / **value** is a physical quantity, the unit of measure **SHALL** be expressed using a valid Unified Code for Units of Measure (UCUM) expression.

CCD-CONF-418: A result observation **SHOULD** contain exactly one **Observation** / **interpretationCode**, which can be used to provide a rough qualitative interpretation of the observation, such as "normal", "abnormal", resistant", "susceptible", etc. Interpretation is generally provided for numeric results where an interpretation range has been defined, or for antimicrobial susceptibility test interpretation.

CCD-CONF-419: A result observation **SHOULD** contain one or more **Observation** / **referenceRange** to show the normal range of values for the observation result.

CCD-CONF-420: A result observation **SHALL NOT** contain **Observation** / **referenceRange** / **observationRange** / **code**, as this attribute is not used by the HL7 Clinical Statement or Lab Committee models.

CCD-CONF-421: A result observation **SHALL** contain one or more sources of information, as defined in section ***5.2 Source***.

History & Physical Constraints

The following constraints are from the final publication of the History and Physical (H&P) Note dated July 16, 2008. Any discrepancy between this and the original is inadvertent, and in all cases the H&P source takes precedence.

General Status Section (Template ID: 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

[5] http://healthit.hhs.gov/portal/server.pt?open=512&objID=1195&parentname=CommunityPage&parentid=97&mode=2&in_hi_userid=11673&cached=true

observations may be nested under this heading or directly under the Physical Exam heading.

H&P-CONF-88: A History and Physical Examination section **MAY** contain exactly one General Status section (templateId 2.16.840.1.113883.10.20.2.5).

H&P-CONF-89: The section code for the section describing General Status **SHALL** be 10210-3 [GENERAL STATUS, PHYSICAL FINDINGS).

Physical Examination Section (Template ID: 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 the appendix on Additional Physical Examination Subsections. Note that Vital Signs can be a top-level section or subsection of Physical Exam.

H&P-CONF-84: A History and Physical **SHALL** contain exactly one Physical Examination section (templateId 2.16.840.1.113883.10.20.2.10).

H&P-CONF-85: The section code for the section describing physical examination **SHALL** be 29545-1 (PHYSICAL FINDINGS).

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 the appendix on Additional Physical Examination Subsections.

Review of Systems Section (Template ID: 1.3.6.1.4.1.19376.1.5.3.1.3.18)

H&P-CONF-83: All constraints from this section were derived from CRS. This section **SHALL** include the template identifier for the Review of Systems section (1.3.6.1.4.1.19376.1.5.3.1.3.18, as defined in the IHE PCC Technical Framework – XDS-MS). A History and Physical **SHALL** contain exactly one and **SHALL NOT** contain more than one Review of Systems section (templateId 3.6.1.4.1.19376.1.5.3.1.3.18). The Review of Systems

section **SHALL** contain a narrative block and **SHOULD** contain clinical statements.

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.

Vital Signs Section (Template ID: 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.

H&P-CONF-86: A History and Physical **SHALL** contain exactly one Vital Signs section (`templateId 2.16.840.1.113883.10.20.2.4`). The Vital Signs section **MAY** be contained within a History and Physical Examination section or **MAY** stand alone in a first level section.

H&P-CONF-87: The section code for the section describing vital signs in a conforming History and Physical **SHALL** be `8716-3 (VITAL SIGNS)`. The Vital Signs section **SHALL** contain a narrative block, and **SHOULD** contain clinical statements. Level 3 clinical statements **SHOULD** include one or more CCD vital signs organizers (`templateId 2.16.840.1.113883.10.20.1.35`), each of which **SHALL** contain one or more CCD result observations (`templateId 2.16.840.1.113883.10.20.1.31`).

IHE Constraints

The following constraint is from the IHE Patient Care Coordination Technical Framework Volume II, Release 6 dated August 10, 2010. Any discrepancy between this and the original is inadvertent, and in all cases the IHE source takes precedence.

Chief Complaint Section (Template ID: 1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1)

Template ID	1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1	
General Description	This contains a narrative description of the patient's chief complaint.	
LOINC Code	**Opt**	**Description**
10154-3	R	CHIEF COMPLAINT

Procedure Note Constraints

The following constraint is from the final publication of the Procedure Note dated July 23, 2010. Any discrepancy between this and the original is inadvertent, and in all cases the Procedure Note source takes precedence.

Chief Complaint Section (Template ID: 2.16.840.1.113883.10.20.18.2.16)

The Chief Complaint section records the patient's chief complaint (the patient's own description).

The Chief Complaint section may be a subsection of the Medical History section.

ProcNote-CONF-107: A Procedure Note **MAY** contain exactly one and **SHALL NOT** contain more than one Chief Complaint section (`templateId 2.16.840.1.113883.10.20.18.2.16`).

ProcNote-CONF-108: A `Section/code` element **SHALL** be present where the value for `@code` is `10154-3 CHIEF COMPLAINT 2.16.840.1.113883.6.1 LOINC` **STATIC**.

ProcNote-CONF-109: If the Chief Complaint section is NOT present, there **MAY** be a statement in the Medical History section providing the patient's chief compliant.

APPENDIX F — HITSP CONFORMANCE

This appendix lists additional sections that must be included in a Progress Note body conforming to Health Information Technology Standards Panel (HITSP), release v2.5.

Allergies – HITSP C83 ALLERGIES AND OTHER ADVERSE REACTIONS SECTION

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

Table 7: HITSP Conformance – Allergies

TemplateId	Description	Specification Reference
2.16.840.1.113883.3.88.11.83.102	HITSP Allergies and Other Adverse Reactions Section	HITSP C83 20100125 V2.0
2.16.840.1.113883.3.88.11.83.6	HITSP Allergy and Drug Sensitivity Module	HITSP C83 20100125 V2.0
1.3.6.1.4.1.19376.1.5.3.1.3.13	IHE Allergies and Other Adverse Reactions Section	PCC Technical Framework V5.0
1.3.6.1.4.1.19376.1.5.3.1.4.5.3	IHE Allergy and Intolerance Concern Entry	PCC Technical Framework V5.0

Medications – HITSP C83 MEDICATIONS SECTION

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

Table 8: HITSP Conformance – Medications

TemplateId	Description	Specification Reference
2.16.840.1.113883.3.88.11.83.112	HITSP Medications Section	HITSP C83 20100125 V2.0
2.16.840.1.113883.3.88.11.83.8	HITSP Medications Module	HITSP C83 20100125 V2.0
1.3.6.1.4.1.19376.1.5.3.1.3.19	IHE Medications Section	PCC Technical Framework V5.0
1.3.6.1.4.1.19376.1.5.3.1.4.7	IHE Medications Entry	PCC Technical Framework V5.0

Problems – HITSP C83 PROBLEM LIST SECTION

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

Table 9: HITSP Conformance – Problem List

TemplateId	Description	Specification Reference
2.16.840.1.113883.3.88.11.83.103	HITSP Problem List Section	HITSP C83 20100125 V2.0
2.16.840.1.113883.3.88.11.83.7	HITSP Condition Module	HITSP C83 20100125 V2.0
1.3.6.1.4.1.19376.1.5.3.1.3.6	IHE Active Problems Section	PCC Technical Framework V5.0
1.3.6.1.4.1.19376.1.5.3.1.4.5.2	IHE Problem Concern Entry	PCC Technical Framework V5.0

Results – HITSP C83 DIAGNOSTIC RESULTS SECTION

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

Table 10: HITSP Conformance – Results

TemplateId	Description	Specification Reference
2.16.840.1.113883.3.88.11.83.122	HITSP Diagnostic Results Section	HITSP C83 20100125 V2.0
2.16.840.1.113883.3.88.11.83.17	HITSP Procedure Module	HITSP C83 20100125 V2.0
2.16.840.1.113883.3.88.11.83.15.1	HITSP Result Module	HITSP C83 20100125 V2.0
1.3.6.1.4.1.19376.1.5.3.1.3.28	IHE Coded Results Section	PCC Technical Framework V5.0
1.3.6.1.4.1.19376.1.5.3.1.4.19	IHE Procedure Entry	PCC Technical Framework V5.0
1.3.6.1.4.1.19376.1.5.3.1.4.13	IHE Simple Observation Entry	PCC Technical Framework V5.0

Vital Signs – HITSP C83 VITAL SIGNS SECTION

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

Table 11: HITSP Conformance – Vital Signs

TemplateId	Description	Specification Reference
2.16.840.1.113883.3.88.11.83.119	HITSP Vital Signs Section	HITSP C83 20100125 V2.0
2.16.840.1.113883.3.88.11.83.14	HITSP Vital Signs Module	HITSP C83 20100125 V2.0
1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2	IHE Coded Vital Signs Section	PCC Technical Framework V5.0
1.3.6.1.4.1.19376.1.5.3.1.4.13.1	IHE Vital Signs Organizer	PCC Technical Framework V5.0