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HL7 CDA® R2 Implementation Guide: Public Health Case Report, Release 2 – US Realm the Electronic Initial Case Report (eICR)

Standard for Trial Use
June 2016

Volume 2 – eICR CDA IG - C-CDA Templates Only

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SNOMED CT	International Healthcare Terminology Standards Development Organization (IHTSDO) http://www.ihtsdo.org/snomed-ct/get-snomed-ct or info@ihtsdo.org
Logical Observation Identifiers Names & Codes (LOINC)	Regenstrief Institute
International Classification of Diseases (ICD) codes	World Health Organization (WHO)
NUCC Health Care Provider Taxonomy code set	American Medical Association. Please see 222.nucc.org. AMA licensing contact: 312-464-5022 (AMA IP services)

Table of Contents

Table of Figures

Table of Tables

1 DOCUMENT

1.1 Initial Public Health Case Report Document (eICR)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.15.2:20160422 (open)]

Draft as part of eICR CDA IG - C-CDA Templates Only

Table 1: Initial Public Health Case Report Document (eICR) Contexts

Contained By:	Contains:
	Encounters Section (entries required) (V3) History of Present Illness Section Immunizations Section (entries required) (V3) Medications Administered Section (V2) Problem Section (entries required) (V3) Reason for Visit Section Results Section (entries required) (V3) Social History Section (V3) US Realm Address (AD.US.FIELDED) US Realm Date and Time (DTM.US.FIELDED) US Realm Person Name (PN.US.FIELDED)

The purpose of this implementation guide (IG) is to specify a standard for the creation of an electronic initial case report (eICR) in Clinical Document Architecture, Release 2 (CDA R2) US Realm format built upon Consolidated CDA (C-CDA) DSTU Release 2.1 templates. This document is volume 2 of the "HL7 CDA® R2 Implementation Guide: Public Health Case Report, Release 2" Implementation Guide. The Initial Public Health Case Report Document (eICR) template is a specialization of the US Realm Header (2.16.840.1.113883.10.20.22.1.1:2015-08-01) from v3 of the C-CDA Implementation Guide. It contains all of the constraints of the US Realm Header in addition to constraints specific to initial public health case reporting. It describes the structure and content requirements for the initial Case Report such as document identification, header information, relationships to the eICR required C-CDA section and entry templates and codes systems/value sets. Most importantly it includes the data elements to be retrieved from the EHR to produce the core, electronic Initial Case Report (eICR).

The conformance verb keyword at the start of a constraint (SHALL , SHOULD , MAY, etc.) indicates usage conformance. SHALL is an indication that the constraint is to be enforced without exception; SHOULD is an indication that the constraint is optional but highly recommended; and MAY is an indication that the constraint is optional and that adherence to the constraint is at the discretion of the document creator. The constraint of “SHALL” has been applied to the majority of data elements identified in Volume 1 Section 3.4 of this specification. This allows the electronic Initial Case Reports to be transmitted with as much information as is known at the time of the triggering event within the encounter. As described in Volume 1 Section 3.2, a “@nullFlavor” attribute (such as the most general and default null flavor for no information 'NI') allows the sender to explicitly indicate that the information isn’t known or available. However, there is a small subset of data elements that the Public Health

Agency Information System requires in order to process a case report. This implementation guide uses “SHALL NOT contain 0..0] @nullFlavor” to indicate nullFlavor is not allowed for these elements.

1.1.1 Properties

1. Conforms to **US Realm Header (V3)** template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:2218-94) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.15.2" eICR Initial Public Health Case Report Document (CONF:2218-95).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-11-28" (CONF:2218-96).
3. **SHALL** contain exactly one [1..1] **code**="55751-2" Public Health Case report (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:2218-107).
4. **SHALL** contain exactly one [1..1] **title**="Initial Public Health Case Report" (CONF:2218-109).
5. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:2218-141).
   Note: The effectiveTime indicates the date when the report was created and in almost all cases should correspond to the date when the public health case has been triggered.
    a. This effectiveTime **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:2218-143).
6. **SHALL** contain exactly one [1..1] **recordTarget** (CONF:2218-103).
    a. This recordTarget **SHALL** contain exactly one [1..1] **patientRole** (CONF:2218-104).
        i. This patientRole **SHALL** contain at least one [1..*] **id** (CONF:2218-146).
        Note: If multiple identifiers are available, a medical record number, social security number, medicaid number, or all three SHOULD be provided in this field.
        ii. This patientRole **SHALL** contain at least one [1..*] **US Realm Address (AD.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:2218-147).
        Note: For greatest utility to public health, a patient's address should be a home address if available (PostalAddressUse = 'H' or 'HP'); would also request a second address, preferably a work address, (PostalAddressUse = 'WP') if available.
        iii. This patientRole **SHALL** contain exactly one [1..1] **patient** (CONF:2218-105).
            1. This patient **SHALL** contain exactly one [1..1] **sdtc:deceasedTime** (CONF:2218-106).
            2. This patient **SHOULD** contain zero or more [0..*] **guardian** (CONF:2218-110).
                a. The guardian, if present, **SHALL** contain at least one [1..*] **US Realm Address (AD.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:2218-115).
                b. The guardian, if present, **SHALL** contain at least one [1..*] **telecom** (CONF:2218-116).
                c. The guardian, if present, **SHALL** contain exactly one [1..1] **guardianPerson** (CONF:2218-129).

3. This patient **SHALL** contain at least one [1..*] **languageCommunication** (CONF:2218-130).

7. **SHALL** contain at least one [1..*] **author** (CONF:2218-127).
   Note: In a public health case report, the author may be the provider, software, or a person in the role of a public health reporter, such as an infection control professional (ICP), a medical assistant, an office administrator, or another staff person who assists a provider with public health reporting.
   a. Such authors **SHALL** contain exactly one [1..1] **US Realm Date and Time (DTM.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:2218-142).
      i. This time **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:2218-144).
   b. Such authors **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:2218-128).

1.1.1.1 componentOf

Initial Public Health Case Report ComponentOf

The encompassing encounter represents the setting of the clinical encounter during which the document act(s) or ServiceEvent(s) occurred (CDA R2). For the public health case report, the provider in charge of care and the facility in which care was provided when the case was triggered are contained within this element.

8. **SHALL** contain exactly one [1..1] **componentOf** (CONF:2218-1).
   Note: eICR-ComponentOf
   a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:2218-2).
      i. This encompassingEncounter **SHALL** contain at least one [1..*] **id** (CONF:2218-3).
         Note: This identifier corresponds to the visit or encounter ID
      ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet **ActEncounterCode** 2.16.840.1.113883.1.11.13955 (CONF:2218-4).
         Note: PatientEncounter.typeCode
      iii. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:2218-5).
         1. This effectiveTime **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:2218-124).
         2. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:2218-20).
            Note: PatientEncounter.fromDateTime
         3. This effectiveTime **SHALL** contain exactly one [1..1] **high** (CONF:2218-21).
            Note: PatientEncounter.thruDateTime . This value is associated with the patient's departure (e.g. discharge)
      iv. This encompassingEncounter **SHALL** contain exactly one [1..1] **responsibleParty** (CONF:2218-6).

1. This responsibleParty **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:2218-7).
   Note: ResponsibleProvider
   a. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:2218-8).
      Note: ResponsibleProvider.identifier. If avalable, the NPI Idenitifier SHALL be provided.
      i. Such ids **SHALL** contain exactly one [1..1] **@root** (CONF:2218-22).
      ii. Such ids **MAY** contain zero or one [0..1] **@extension** (CONF:2218-23).
   b. This assignedEntity **SHALL** contain at least one [1..*] **US Realm Address (AD.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:2218-125).
   c. This assignedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:2218-24).
      Note: ResponsibleProvider.telecomAddress
   d. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:2218-9).
      i. This assignedPerson **SHALL** contain exactly one [1..1] **US Realm Person Name (PN.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:2218-25).
         Note: ResponsibleProvider.name
   e. This assignedEntity **SHALL** contain exactly one [1..1] **representedOrganization** (CONF:2218-10).
      Note: ResponsibleProviderFacility
      i. This representedOrganization **SHALL** contain exactly one [1..1] **name** (CONF:2218-26).
         Note: ProviderFacility.name
      ii. This representedOrganization **SHALL** contain exactly one [1..1] **US Realm Address (AD.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:2218-27).
         Note: ProviderFacility.postalAddress

v. This encompassingEncounter **SHALL** contain exactly one [1..1] **location** (CONF:2218-11).
   1. This location **SHALL** contain exactly one [1..1] **healthCareFacility** (CONF:2218-12).
      a. This healthCareFacility **SHALL** contain exactly one [1..1] **id** (CONF:2218-13).
         Note: CareDeliveryFacility.identifier

i. This id **SHALL** contain exactly one [1..1] **@root** (CONF:2218-28).

ii. This id **MAY** contain zero or one [0..1] **@extension** (CONF:2218-29).

b. This healthCareFacility **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet **ServiceDeliveryLocationRoleType** urn:oid:2.16.840.1.113883.1.11.17660 (CONF:2218-14).
Note: CareFacility.typeCode

c. This healthCareFacility **SHALL** contain exactly one [1..1] **location** (CONF:2218-15).

i. This location **SHALL** contain exactly one [1..1] **US Realm Address (AD.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:2218-32).
Note: CareDeliveryFacility.postalAddress

d. This healthCareFacility **SHALL** contain exactly one [1..1] **serviceProviderOrganization** (CONF:2218-16).

i. This serviceProviderOrganization **SHALL** contain exactly one [1..1] **name** (CONF:2218-33).
Note: CareDeliveryOrganization.name

ii. This serviceProviderOrganization **SHALL** contain at least one [1..*] **telecom** (CONF:2218-34).
Note: CareDeliveryOrganization.telecomAddress

iii. This serviceProviderOrganization **SHALL** contain exactly one [1..1] **US Realm Address (AD.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:2218-126).

Figure 1: Initial Public Health Case Report ComponentOf

```
<componentOf>
  <encompassingEncounter>
    <!--encounter ID-->
    <id root="2.16.840.1.113883.19" extension="9937012"/>
    <!--ActClassEncounterCodes - high level -->
    <code code="AMB" codeSystem="2.16.840.1.113883.5.4" displayName="Ambulatory"
codeSystemName="HL7 ActEncounterCode"/>
    <effectiveTime>
      <low value="20151107"/>
      <high value="20151107"/>
    </effectiveTime>
    <!--provider in charge of care when case reported-->
    <responsibleParty>
      <assignedEntity>
        <id extension="6666666666666" root="2.16.840.1.113883.4.6"/>
        <addr>
          <streetAddressLine>1002 Healthcare Drive</streetAddressLine>
          <city>Ann Arbor</city>
          <state>MI</state>
          <postalCode>99999</postalCode>
          <country>US</country>
        </addr>
        <telecom use="WP" value="tel:+1(555)555-1002"/>
        <assignedPerson>
          <name>
            <given>Henry</given>
            <family>Seven</family>
            <suffix qualifier="AC">M.D.</suffix>
          </name>
        </assignedPerson>
        <representedOrganization>
          <name>HC  Doctors</name>
          <addr>
            <streetAddressLine>4444 Healthcare Drive</streetAddressLine>
            <city>Ann Arbor</city>
            <state>MI</state>
            <postalCode>99999</postalCode>
            <country>US</country>
          </addr>
        </representedOrganization>
      </assignedEntity>
    </responsibleParty>
    <!-- Information about facility where care was provided when case reported-->
    <location>
      <healthCareFacility>
        <id extension="77777777777" root="2.16.840.1.113883.4.6"/>
        <!--facility type-->
        <code code="OF" codeSystem="2.16.840.1.113883.1.11.17660" displayName="Outpatient
facility"/>
        <!-- facility location within larger healthcare organization e.g Kaiser Vacaville
within Kaiser North-->
        <location>
          <addr>
            <streetAddressLine>11000 Lakeside Drive</streetAddressLine>
            <city>Ann Arbor</city>
```



```
        <state>MI</state>
        <postalCode>99999</postalCode>
        <country>US</country>
       </addr>
      </location>
      <!--facitiy contact information-->
      <serviceProviderOrganization>
       <name>Community Health and Hospitals</name>
       <telecom use="WP" value="tel: 1+(555)-555-5000"/>
       <addr>
        <streetAddressLine>100 Enterprise Blvd</streetAddressLine>
        <city>Ann Arbor</city>
        <state>MI</state>
        <postalCode>99999</postalCode>
        <country>US</country>
       </addr>
      </serviceProviderOrganization>
     </healthCareFacility>
    </location>
  </encompassingEncounter>
</componentOf>
```

1.1.1.2 component

Component Structural Body

9. **SHALL** contain exactly one [1..1] **component** (CONF:2218-35).
    a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:2218-85).

1.1.1.3 component

Encounters Section (entries required) (V3)

The Encounters section template lists and describes any healthcare encounters pertinent to the patient's current health status or historical health history. The encounter section includes the Encounter Activity, Encounter Diagnosis, and Problem Observation entry templates. The eICR data elements included in this section are:

- Date of Diagnosis
- Date of Onset
- Diagnoses

i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:2218-86) such that it
Note: Encounters Section (entries required) (V3)
    1. **SHALL** contain exactly one [1..1] **Encounters Section (entries required) (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.22.1:2015-08-01) (CONF:2218-90).

1.1.1.4 component

History of Present Illness Section

The History of Present Illness section template describes the historical details leading up to and pertaining to the patient's current complaint or reason for seeking medical care. The section text element is used to capture the history of present illness narrative.

- History of Present Illness

ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:2218-97) such that it
Note: History of Present Illness Section
1. **SHALL** contain exactly one [1..1] **History of Present Illness Section** (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.4) (CONF:2218-100).

1.1.1.5 component

Reason for Visit Section

The Reason for Visit Section template records the patient's reason for the patient's visit (as documented by the provider). The eICR data elements include in this section are:

- Reason for Visit

iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:2218-98) such that it
Note: Reason for Visit Section
1. **SHALL** contain exactly one [1..1] **Reason for Visit Section** (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.12) (CONF:2218-101).

1.1.1.6 component

Social History Section (V3)

The Social History Section template contains social history data that influence a patient's physical, psychological or emotional health. The Social History Section includes the Social History Observation. The eICR data elements included in this section are:

- Occupation

iv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:2218-87) such that it
Note: Social History Section (V3)
1. **SHALL** contain exactly one [1..1] **Social History Section (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01) (CONF:2218-91).

1.1.1.7 component

Problem Section (entries required) (V3)

The Problem Section template lists and describes all relevant clinical problems at the time the document is generated. The Problem Section includes the Problem Concern Act and Problem Observation entry templates. The eICR data elements included in this section are:

- Pregnancy Status

  NOTE: *During the eICR CDA IG DSTU period, the use of the Problems Observation template to indicate pregnancy is being evaluated. The recommended SNOMED value codes are '60001007' Not pregnant (finding), and '77386006' Patient currently pregnant (finding).*

- Symptoms (list)

v. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:2218-99) such that it
Note: Problem Section (entries required) (V3)

1. **SHALL** contain exactly one [1..1] **Problem Section (entries required) (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.5.1:2015-08-01) (CONF:2218-102).

1.1.1.8 component

Medications Administered Section (V2)

The Medications Administered Section template defines medications (excluding anesthetic medications) and fluids administered during an encounter. The Medication Administered Section includes the Medication Activity and Medication Information entry templates. The eICR data elements mapped to this section are:

- Medications Administered (list)

vi. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:2218-88) such that it
Note: Medications Administered Section (V2)

1. **SHALL** contain exactly one [1..1] **Medications Administered Section (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.38:2014-06-09) (CONF:2218-92).

1.1.1.9 component

Results Section (entries required) (V3)

The Results Section template contains the results of observations generated by laboratories, imaging and other procedures. The Results Section includes the Results Organizer and Result Observation entry templates. The eICR data elements mapped to this section are:

- Lab Order Code

o Lab Results

o Filler Order Number (Note: If available, the placing system order identifer (Placer Order number) as well)

vii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:2218-89) such that it
Note: Results Section (entries required) (V3)

1. **SHALL** contain exactly one [1..1] **Results Section (entries required) (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2015-08-01) (CONF:2218-93).

1.1.1.10 component

The Immunization Section (entries required) (V3)

The Immunization Section (entries required) (V3) template from C-CDA R2.1 should include current immunization status, and may contain the entire immunization history that is relevant to the period of time being summarized. The eICR data elements mapped to this section are:

o Immunization Status

viii. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:2218-148) such that it
Note: The Immunization Section (entries required) (V3)

1. **SHALL** contain exactly one [1..1] **Immunizations Section (entries required) (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.2.1:2015-08-01) (CONF:2218-149).

Figure 2: Initial Public Health Case Report Document Example

```
<?xml version="1.0" encoding="UTF-8"?><!--Title: "Sample file for the PHCR Pertussis
Report"
<ClinicalDocument xmlns="urn:hl7-org:v3" xmlns:voc="urn:hl7-org:v3/voc"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:sdtc="urn:hl7-org:sdtc">
<!--
*******************************************************
CDA Header
*******************************************************
-->
<!-- US Realm Header template -->
<realmCode code="US"/>
<typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
<!-- Conformant to Initial Public Health Case Report -->
<templateId root="2.16.840.1.113883.10.20.15.2" extension="2015-11-28"/>
<!-- globally unique document ID (extension) is scoped by vendor/software -->
<id root="db734647-fc99-424c-a864-7e3cda82e703"/>
<!-- Document Code -->
<code code="55751-2" codeSystem="2.16.840.1.113883.6.1" displayName="Public Health Case
report"/>
<title>Initial Public Health Case Report</title>
<effectiveTime value="20151107094421+0000"/>
<confidentialityCode code="N" displayName="Normal" codeSystem="2.16.840.1.113883.5.25"/>
<languageCode code="en-US"/>
<recordTarget>
 <!--patient demographic information -->
 <patientRole>
  <!-- Fake root for sample. -->
  <id extension="123453" root="2.16.840.1.113883.19.5"/>
  <!--SSN-->
  <id extension="444-333-3333" root="2.16.840.1.113883.4.1"/>
  <!--Could have multiple addresses-->
  <addr use="H">
   <streetAddressLine>2222 Home Street</streetAddressLine>
   <city>Ann Arbor</city>
   <state>MI</state>
   <postalCode>99999</postalCode>
   <country>US</country>
  </addr>
  <telecom value="tel:+1-(555)555-2003" use="HP"/>
  <telecom value="tel:+1(555)555-2004" use="WP"/>
  <patient>
   <name use="L">
    <given>Adam</given>
    <given qualifier="IN">A</given>
    <family>Everyman</family>
   </name>
   <administrativeGenderCode code="M" codeSystem="2.16.840.1.113883.5.1"/>
   <birthTime value="19741124"/>
   <!--deceased indicator and deceased datetime go here-->
   <sdtc:deceasedInd value="false"/>
   <!--sdtc:deceasedTime value="20151128"/-->
   <raceCode code="2106-3" displayName="White" codeSystem="2.16.840.1.113883.6.238"
codeSystemName="Race &amp; Ethnicity - CDC"/>
   <ethnicGroupCode code="2186-5" displayName="Not Hispanic or Latino"
codeSystem="2.16.840.1.113883.6.238" codeSystemName="Race &amp; Ethnicity - CDC"/>
```



```
    <!--Guardian information-->
    <guardian>
     <addr use="H">
      <streetAddressLine>2222 Home Street</streetAddressLine>
      <city>Ann Arbor</city>
      <state>MI</state>
      <postalCode>99999</postalCode>
      <country>US</country>
     </addr>
     <telecom value="tel:+1(555)555-2003" use="HP"/>
     <guardianPerson>
      <name use="L">
       <given>Eve</given>
       <given qualifier="IN">E</given>
       <family>Everywoman</family>
      </name>
     </guardianPerson>
    </guardian>
    <languageCommunication>
     <languageCode code="eng"/>
     <!-- "eng" is ISO 639-2 alpha-3 code for "English" -->
     <modeCode code="ESP" displayName="Expressed spoken"
codeSystem="2.16.840.1.113883.5.60" codeSystemName="LanguageAbilityMode"/>
     <proficiencyLevelCode code="G" displayName="Good" codeSystem="2.16.840.1.113883.5.61"
codeSystemName="LanguageAbilityProficiency"/>
     <!-- Patient's preferred language -->
     <preferenceInd value="true"/>
    </languageCommunication>
   </patient>
  </patientRole>
</recordTarget>
<author>
  <time value="20151107094421+0000"/>
  <!--Author/authenticator may be software or may be a provider such as
"infection control professional".-->
  <assignedAuthor>
   <!--Id for authoring device - made up application OID-->
   <id root="2.16.840.1.113883.3.72.5.20"/>
   <!--authoring device address - may or may not be same as facility where care provided
for case-->
   <addr>
    <streetAddressLine>1002 Healthcare Drive</streetAddressLine>
    <city>Ann Arbor</city>
    <state>MI</state>
    <postalCode>99999</postalCode>
    <country>US</country>
   </addr>
   <telecom value="tel:+1-(555)555-1002 (ext=110)" use="WP"/>
   <assignedAuthoringDevice>
    <manufacturerModelName displayName="Acme"/>
    <softwareName displayName="Acme EHR"/>
   </assignedAuthoringDevice>
  </assignedAuthor>
</author>
<!-- The custodian of the CDA document is the generator of the document -->
<custodian>
  <assignedCustodian>
```



```
   <representedCustodianOrganization>
    <id extension="88888888" root="2.16.840.1.113883.4.6"/>
    <name>Level Seven Healthcare, Inc</name>
    <telecom use="WP" value="tel:+1(555)555-3001"/>
    <addr>
     <streetAddressLine>4444 Healthcare Drive</streetAddressLine>
     <city>Ann Arbor</city>
     <state>MI</state>
     <postalCode>99999</postalCode>
     <country>US</country>
    </addr>
   </representedCustodianOrganization>
  </assignedCustodian>
</custodian>

   <!--
*********************************************************
ComponentOf -contains the provider and faclity infomation for the case- see inline example
above
*********************************************************
-->
<componentOf>
..
</componentOf>
<component>
 <structuredBody>
  <component>
   <!--
*********************************************************
Encounters Section (entries required) (V3)
*********************************************************
-->
<section>
...
</section>
</component>
   <component>
       <!--
*********************************************************
History of Present Illness Section
*********************************************************
-->
 <section>
  ...
 </section>
  </component>
  <component>
       <!--
*********************************************************
Medications Administered Section (V2)
*********************************************************
-->
    <section>
'''
    </section>
   </component>
   <component>
```



```
   <!--
**********************************************************
Problem Section (entries required) (V3)
**********************************************************
-->
    <section>
   ...
    </section>
   </component>
   <component>
       <!--
**********************************************************
Reason for Visit Section
**********************************************************
-->
    <section>
    ...
       </section>
   </component>
   <component>
<!--
**********************************************************
 Results Section (entries required) (V3)
**********************************************************
-->
<section>
...
</section>
</component>
   <component>
<!--
**********************************************************
Social History Section (V3)
**********************************************************
-->
<section>
...
</section>
</component>
   <component>
<!--
**********************************************************
Immunizations Section (entries required) (V3)
**********************************************************
-->
<section>
    ...
</section>
</component>
  </structuredBody>
</component>
</ClinicalDocument>
```


1.2 US Realm Header (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01 (open)]

Published as part of Consolidated CDA Templates for Clinical Notes (US Realm) DSTU R2.1

Table 2: US Realm Header (V3) Contexts

Contained By:	Contains:
	US Realm Address (AD.US.FIELDED) US Realm Date and Time (DTM.US.FIELDED) US Realm Person Name (PN.US.FIELDED)

This template defines constraints that represent common administrative and demographic concepts for US Realm CDA documents. Further specification, such as ClinicalDocument/code, are provided in document templates that conform to this template.

1.2.1 Properties

1.2.1.1 realmCode

1. **SHALL** contain exactly one [1..1] **realmCode**="US" (CONF:1198-16791).
2. **SHALL** contain exactly one [1..1] **typeId** (CONF:1198-5361).
    a. This typeId **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.1.3" (CONF:1198-5250).
    b. This typeId **SHALL** contain exactly one [1..1] **@extension**="POCD_HD000040" (CONF:1198-5251).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-5252) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.1" (CONF:1198-10036).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32503).
4. **SHALL** contain exactly one [1..1] **id** (CONF:1198-5363).
    a. This id **SHALL** be a globally unique identifier for the document (CONF:1198-9991).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1198-5253).
    a. This code **SHALL** specify the particular kind of document (e.g., History and Physical, Discharge Summary, Progress Note) (CONF:1198-9992).
6. **SHALL** contain exactly one [1..1] **title** (CONF:1198-5254).
   Note: The title can either be a locally defined name or the displayName corresponding to clinicalDocument/code
7. **SHALL** contain exactly one [1..1] **US Realm Date and Time (DTM.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:1198-5256).
8. **SHALL** contain exactly one [1..1] **confidentialityCode**, which **SHOULD** be selected from ValueSet **HL7 BasicConfidentialityKind** urn:oid:2.16.840.1.113883.1.11.16926 **STATIC** (CONF:1198-5259).

9. **SHALL** contain exactly one [1..1] **languageCode**, which **SHALL** be selected from ValueSet **Language** urn:oid:2.16.840.1.113883.1.11.11526 **DYNAMIC** (CONF:1198-5372).
10. **MAY** contain zero or one [0..1] **setId** (CONF:1198-5261).
    a. If setId is present versionNumber **SHALL** be present (CONF:1198-6380).
11. **MAY** contain zero or one [0..1] **versionNumber** (CONF:1198-5264).
    a. If versionNumber is present setId **SHALL** be present (CONF:1198-6387).

1.2.1.2 recordTarget

The recordTarget records the administrative and demographic data of the patient whose health information is described by the clinical document; each recordTarget must contain at least one patientRole element

12. **SHALL** contain at least one [1..*] **recordTarget** (CONF:1198-5266).
    a. Such recordTargets **SHALL** contain exactly one [1..1] **patientRole** (CONF:1198-5267).
        i. This patientRole **SHALL** contain at least one [1..*] **id** (CONF:1198-5268).
        ii. This patientRole **SHALL** contain at least one [1..*] **US Realm Address (AD.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5271).
        iii. This patientRole **SHALL** contain at least one [1..*] **telecom** (CONF:1198-5280).
            1. Such telecoms **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet **Telecom Use (US Realm Header)** urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1198-5375).
        iv. This patientRole **SHALL** contain exactly one [1..1] **patient** (CONF:1198-5283).
            1. This patient **SHALL** contain at least one [1..*] **US Realm Person Name (PN.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-5284).
            2. This patient **SHALL** contain exactly one [1..1] **administrativeGenderCode**, which **SHALL** be selected from ValueSet **Administrative Gender (HL7 V3)** urn:oid:2.16.840.1.113883.1.11.1 **DYNAMIC** (CONF:1198-6394).
            3. This patient **SHALL** contain exactly one [1..1] **birthTime** (CONF:1198-5298).
                a. **SHALL** be precise to year (CONF:1198-5299).
                b. **SHOULD** be precise to day (CONF:1198-5300).

For cases where information about newborn's time of birth needs to be captured.

                c. **MAY** be precise to the minute (CONF:1198-32418).

            4. This patient **SHOULD** contain zero or one [0..1] **maritalStatusCode**, which **SHALL** be selected from ValueSet **Marital Status**

urn:oid:2.16.840.1.113883.1.11.12212 **DYNAMIC** (CONF:1198-5303).

5. This patient **MAY** contain zero or one [0..1] **religiousAffiliationCode**, which **SHALL** be selected from ValueSet **Religious Affiliation** urn:oid:2.16.840.1.113883.1.11.19185 **DYNAMIC** (CONF:1198-5317).
6. This patient **SHALL** contain exactly one [1..1] **raceCode**, which **SHALL** be selected from ValueSet **Race Category Excluding Nulls** urn:oid:2.16.840.1.113883.3.2074.1.1.3 **DYNAMIC** (CONF:1198-5322).
7. This patient **MAY** contain zero or more [0..*] **sdtc:raceCode**, which **SHALL** be selected from ValueSet **Race** urn:oid:2.16.840.1.113883.1.11.14914 **DYNAMIC** (CONF:1198-7263).
   Note: The sdtc:raceCode is only used to record additional values when the patient has indicated multiple races or additional race detail beyond the five categories required for Meaningful Use Stage 2. The prefix sdtc: SHALL be bound to the namespace "urn:hl7-org:sdtc". The use of the namespace provides a necessary extension to CDA R2 for the use of the additional raceCode elements.
   a. If sdtc:raceCode is present, then the patient **SHALL** contain [1..1] raceCode (CONF:1198-31347).
8. This patient **SHALL** contain exactly one [1..1] **ethnicGroupCode**, which **SHALL** be selected from ValueSet **Ethnicity** urn:oid:2.16.840.1.114222.4.11.837 **DYNAMIC** (CONF:1198-5323).
9. This patient **MAY** contain zero or more [0..*] **sdtc:ethnicGroupCode**, which **SHALL** be selected from ValueSet **Detailed Ethnicity** urn:oid:2.16.840.1.114222.4.11.877 **DYNAMIC** (CONF:1198-32901).
10. This patient **MAY** contain zero or more [0..*] **guardian** (CONF:1198-5325).
    a. The guardian, if present, **SHOULD** contain zero or one [0..1] **code**, which **SHALL** be selected from ValueSet **Personal And Legal Relationship Role Type** urn:oid:2.16.840.1.113883.11.20.12.1 **DYNAMIC** (CONF:1198-5326).
    b. The guardian, if present, **SHOULD** contain zero or more [0..*] **US Realm Address (AD.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5359).
    c. The guardian, if present, **SHOULD** contain zero or more [0..*] **telecom** (CONF:1198-5382).
       i. The telecom, if present, **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet

Telecom Use (US Realm Header) urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1198-7993).

d. The guardian, if present, **SHALL** contain exactly one [1..1] **guardianPerson** (CONF:1198-5385).

i. This guardianPerson **SHALL** contain at least one [1..*] **US Realm Person Name (PN.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-5386).

11. This patient **MAY** contain zero or one [0..1] **birthplace** (CONF:1198-5395).

a. The birthplace, if present, **SHALL** contain exactly one [1..1] **place** (CONF:1198-5396).

i. This place **SHALL** contain exactly one [1..1] **addr** (CONF:1198-5397).

1. This addr **SHOULD** contain zero or one [0..1] **country**, which **SHALL** be selected from ValueSet **Country** urn:oid:2.16.840.1.113883.3.88.12.80.63 **DYNAMIC** (CONF:1198-5404).
2. This addr **MAY** contain zero or one [0..1] **postalCode**, which **SHALL** be selected from ValueSet **PostalCode** urn:oid:2.16.840.1.113883.3.88.12.80.2 **DYNAMIC** (CONF:1198-5403).
3. If country is US, this addr **SHALL** contain exactly one [1..1] state, which **SHALL** be selected from ValueSet StateValueSet 2.16.840.1.113883.3.88.12.80.1 **DYNAMIC** (CONF:1198-5402).
Note: A nullFlavor of ' UNK' may be used if the state is unknown.

12. This patient **SHOULD** contain zero or more [0..*] **languageCommunication** (CONF:1198-5406).

a. The languageCommunication, if present, **SHALL** contain exactly one [1..1] **languageCode**, which **SHALL** be selected from ValueSet **Language** urn:oid:2.16.840.1.113883.1.11.11526 **DYNAMIC** (CONF:1198-5407).

b. The languageCommunication, if present, **MAY** contain zero or one [0..1] **modeCode**, which **SHALL** be selected from ValueSet **LanguageAbilityMode** urn:oid:2.16.840.1.113883.1.11.12249 **DYNAMIC** (CONF:1198-5409).

c. The languageCommunication, if present, **SHOULD** contain zero or one [0..1] **proficiencyLevelCode**, which **SHALL** be selected from ValueSet **LanguageAbilityProficiency**

urn:oid:2.16.840.1.113883.1.11.12199 **DYNAMIC** (CONF:1198-9965).

d. The languageCommunication, if present, **SHOULD** contain zero or one [0..1] **preferenceInd** (CONF:1198-5414).

v. This patientRole **MAY** contain zero or one [0..1] **providerOrganization** (CONF:1198-5416).

1. The providerOrganization, if present, **SHALL** contain at least one [1..*] **id** (CONF:1198-5417).
   a. Such ids **SHOULD** contain zero or one [0..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1198-16820).
2. The providerOrganization, if present, **SHALL** contain at least one [1..*] **name** (CONF:1198-5419).
3. The providerOrganization, if present, **SHALL** contain at least one [1..*] **telecom** (CONF:1198-5420).
   a. Such telecoms **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet **Telecom Use (US Realm Header)** urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1198-7994).
4. The providerOrganization, if present, **SHALL** contain at least one [1..*] **US Realm Address (AD.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5422).

1.2.1.3 author

The author element represents the creator of the clinical document. The author may be a device or a person.

13. **SHALL** contain at least one [1..*] **author** (CONF:1198-5444).
    a. Such authors **SHALL** contain exactly one [1..1] **US Realm Date and Time (DTM.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:1198-5445).
    b. Such authors **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:1198-5448).
       i. This assignedAuthor **SHALL** contain at least one [1..*] **id** (CONF:1198-5449).

If this assignedAuthor is an assignedPerson

       ii. This assignedAuthor **SHOULD** contain zero or one [0..1] **id** (CONF:1198-32882) such that it

If id with @root="2.16.840.1.113883.4.6" National Provider Identifier is unknown then

1. **MAY** contain zero or one [0..1] **@nullFlavor**="UNK" Unknown (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1198-32883).
2. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1198-32884).
3. **SHOULD** contain zero or one [0..1] **@extension** (CONF:1198-32885).

Only if this assignedAuthor is an assignedPerson should the assignedAuthor contain a code.

iii. This assignedAuthor **SHOULD** contain zero or one [0..1] **code** (CONF:1198-16787).
    1. The code, if present, **SHALL** contain exactly one [1..1] **@code**, which **SHOULD** be selected from ValueSet **Healthcare Provider Taxonomy (HIPAA)** urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1198-16788).

iv. This assignedAuthor **SHALL** contain at least one [1..*] **US Realm Address (AD.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5452).

v. This assignedAuthor **SHALL** contain at least one [1..*] **telecom** (CONF:1198-5428).
    1. Such telecoms **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet **Telecom Use (US Realm Header)** urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1198-7995).

vi. This assignedAuthor **SHOULD** contain zero or one [0..1] **assignedPerson** (CONF:1198-5430).
    1. The assignedPerson, if present, **SHALL** contain at least one [1..*] **US Realm Person Name (PN.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-16789).

vii. This assignedAuthor **SHOULD** contain zero or one [0..1] **assignedAuthoringDevice** (CONF:1198-16783).
    1. The assignedAuthoringDevice, if present, **SHALL** contain exactly one [1..1] **manufacturerModelName** (CONF:1198-16784).
    2. The assignedAuthoringDevice, if present, **SHALL** contain exactly one [1..1] **softwareName** (CONF:1198-16785).

viii. There **SHALL** be exactly one assignedAuthor/assignedPerson or exactly one assignedAuthor/assignedAuthoringDevice (CONF:1198-16790).

1.2.1.4 dataEnterer

The dataEnterer element represents the person who transferred the content, written or dictated, into the clinical document. To clarify, an author provides the content found within the header or body of a document, subject to their own interpretation; a dataEnterer adds an author's information to the electronic system.

14. **MAY** contain zero or one [0..1] **dataEnterer** (CONF:1198-5441).
    a. The dataEnterer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-5442).
        i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-5443).
            1. Such ids **SHOULD** contain zero or one [0..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1198-16821).
        ii. This assignedEntity **MAY** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet **Healthcare Provider Taxonomy (HIPAA)** urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1198-32173).

iii. This assignedEntity **SHALL** contain at least one [1..*] **US Realm Address (AD.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5460).

iv. This assignedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1198-5466).

1. Such telecoms **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet **Telecom Use (US Realm Header)** urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1198-7996).

v. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:1198-5469).

1. This assignedPerson **SHALL** contain at least one [1..*] **US Realm Person Name (PN.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-5470).

1.2.1.5 informant

The informant element describes an information source for any content within the clinical document. This informant is constrained for use when the source of information is an assigned health care provider for the patient.

15. **MAY** contain zero or more [0..*] **informant** (CONF:1198-8001) such that it

a. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-8002).

i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-9945).

1. If assignedEntity/id is a provider then this id, **SHOULD** include zero or one [0..1] id where id/@root ="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1198-9946).

ii. This assignedEntity **MAY** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet **Healthcare Provider Taxonomy (HIPAA)** urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1198-32174).

iii. This assignedEntity **SHALL** contain at least one [1..*] **US Realm Address (AD.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-8220).

iv. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:1198-8221).

1. This assignedPerson **SHALL** contain at least one [1..*] **US Realm Person Name (PN.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-8222).

1.2.1.6 informant

The informant element describes an information source (who is not a provider) for any content within the clinical document. This informant would be used when the source of information has a personal relationship with the patient or is the patient.

16. **MAY** contain zero or more [0..*] **informant** (CONF:1198-31355) such that it

a. **SHALL** contain exactly one [1..1] **relatedEntity** (CONF:1198-31356).

1.2.1.7 custodian

The custodian element represents the organization that is in charge of maintaining and is entrusted with the care of the document.

There is only one custodian per CDA document. Allowing that a CDA document may not represent the original form of the authenticated document, the custodian represents the steward of the original source document. The custodian may be the document originator, a health information exchange, or other responsible party.

17. **SHALL** contain exactly one [1..1] **custodian** (CONF:1198-5519).
    a. This custodian **SHALL** contain exactly one [1..1] **assignedCustodian** (CONF:1198-5520).
        i. This assignedCustodian **SHALL** contain exactly one [1..1] **representedCustodianOrganization** (CONF:1198-5521).
            1. This representedCustodianOrganization **SHALL** contain at least one [1..*] **id** (CONF:1198-5522).
                a. Such ids **SHOULD** contain zero or one [0..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1198-16822).
            2. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **name** (CONF:1198-5524).
            3. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **telecom** (CONF:1198-5525).
                a. This telecom **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet **Telecom Use (US Realm Header)** urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1198-7998).
            4. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **US Realm Address (AD.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5559).

1.2.1.8 informationRecipient

The informationRecipient element records the intended recipient of the information at the time the document was created. In cases where the intended recipient of the document is the patient's health chart, set the receivedOrganization to the scoping organization for that chart.

18. **MAY** contain zero or more [0..*] **informationRecipient** (CONF:1198-5565).
    a. The informationRecipient, if present, **SHALL** contain exactly one [1..1] **intendedRecipient** (CONF:1198-5566).
        i. This intendedRecipient **MAY** contain zero or more [0..*] **id** (CONF:1198-32399).
        ii. This intendedRecipient **MAY** contain zero or one [0..1] **informationRecipient** (CONF:1198-5567).

1. The informationRecipient, if present, **SHALL** contain at least one [1..*] **US Realm Person Name (PN.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-5568).

iii. This intendedRecipient **MAY** contain zero or one [0..1] **receivedOrganization** (CONF:1198-5577).

1. The receivedOrganization, if present, **SHALL** contain exactly one [1..1] **name** (CONF:1198-5578).

1.2.1.9 legalAuthenticator

The legalAuthenticator identifies the single person legally responsible for the document and must be present if the document has been legally authenticated. A clinical document that does not contain this element has not been legally authenticated.

The act of legal authentication requires a certain privilege be granted to the legal authenticator depending upon local policy. Based on local practice, clinical documents may be released before legal authentication.

All clinical documents have the potential for legal authentication, given the appropriate credentials.

Local policies MAY choose to delegate the function of legal authentication to a device or system that generates the clinical document. In these cases, the legal authenticator is a person accepting responsibility for the document, not the generating device or system.

Note that the legal authenticator, if present, must be a person.

19. **SHOULD** contain zero or one [0..1] **legalAuthenticator** (CONF:1198-5579).
    a. The legalAuthenticator, if present, **SHALL** contain exactly one [1..1] **US Realm Date and Time (DTM.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:1198-5580).
    b. The legalAuthenticator, if present, **SHALL** contain exactly one [1..1] **signatureCode** (CONF:1198-5583).
        i. This signatureCode **SHALL** contain exactly one [1..1] **@code**="S" (CodeSystem: Participationsignature urn:oid:2.16.840.1.113883.5.89 **STATIC**) (CONF:1198-5584).

1.2.1.10 sdtc:signatureText

The sdtc:signatureText extension provides a location in CDA for a textual or multimedia depiction of the signature by which the participant endorses and accepts responsibility for his or her participation in the Act as specified in the Participation.typeCode. Details of what goes in the field are described in the HL7 CDA Digital Signature Standard balloted in Fall 2013.

    c. The legalAuthenticator, if present, **MAY** contain zero or one [0..1] **sdtc:signatureText** (CONF:1198-30810).
    Note: The signature can be represented either inline or by reference according to the ED data type. Typical cases for CDA are:
    1) Electronic signature: this attribute can represent virtually any electronic signature scheme.

2) Digital signature: this attribute can represent digital signatures by reference to a signature data block that is constructed in accordance to a digital signature standard, such as XML-DSIG, PKCS#7, PGP, etc.

d. The legalAuthenticator, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-5585).
    i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-5586).
        1. Such ids **MAY** contain zero or one [0..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1198-16823).
    ii. This assignedEntity **MAY** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet **Healthcare Provider Taxonomy (HIPAA)** urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1198-17000).
    iii. This assignedEntity **SHALL** contain at least one [1..*] **US Realm Address (AD.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5589).
    iv. This assignedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1198-5595).
        1. Such telecoms **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet **Telecom Use (US Realm Header)** urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1198-7999).
    v. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:1198-5597).
        1. This assignedPerson **SHALL** contain at least one [1..*] **US Realm Person Name (PN.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-5598).

1.2.1.11 authenticator

The authenticator identifies a participant or participants who attest to the accuracy of the information in the document.

20. **MAY** contain zero or more [0..*] **authenticator** (CONF:1198-5607) such that it
    a. **SHALL** contain exactly one [1..1] **US Realm Date and Time (DTM.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4) (CONF:1198-5608).
    b. **SHALL** contain exactly one [1..1] **signatureCode** (CONF:1198-5610).
        i. This signatureCode **SHALL** contain exactly one [1..1] **@code**="S" (CodeSystem: Participationsignature urn:oid:2.16.840.1.113883.5.89 **STATIC**) (CONF:1198-5611).

The sdtc:signatureText extension provides a location in CDA for a textual or multimedia depiction of the signature by which the participant endorses and accepts responsibility for his or her participation in the Act as specified in the Participation.typeCode. Details of what goes in the field are described in the HL7 CDA Digital Signature Standard balloted in Fall of 2013.

c. **MAY** contain zero or one [0..1] **sdtc:signatureText** (CONF:1198-30811).
Note: The signature can be represented either inline or by reference according to the ED data type. Typical cases for CDA are:
1) Electronic signature: this attribute can represent virtually any electronic signature scheme.
2) Digital signature: this attribute can represent digital signatures by reference to a signature data block that is constructed in accordance to a digital signature standard, such as XML-DSIG, PKCS#7, PGP, etc.

d. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-5612).
   i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-5613).
      1. Such ids **SHOULD** contain zero or one [0..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1198-16824).
   ii. This assignedEntity **MAY** contain zero or one [0..1] **code** (CONF:1198-16825).
      1. The code, if present, **MAY** contain zero or one [0..1] **@code**, which **SHOULD** be selected from ValueSet **Healthcare Provider Taxonomy (HIPAA)** urn:oid:2.16.840.1.114222.4.11.1066 **STATIC** (CONF:1198-16826).
   iii. This assignedEntity **SHALL** contain at least one [1..*] **US Realm Address (AD.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2) (CONF:1198-5616).
   iv. This assignedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:1198-5622).
      1. Such telecoms **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet **Telecom Use (US Realm Header)** urn:oid:2.16.840.1.113883.11.20.9.20 **DYNAMIC** (CONF:1198-8000).
   v. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:1198-5624).
      1. This assignedPerson **SHALL** contain at least one [1..*] **US Realm Person Name (PN.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1) (CONF:1198-5625).

1.2.1.12 participant

The participant element identifies supporting entities, including parents, relatives, caregivers, insurance policyholders, guarantors, and others related in some way to the patient.

A supporting person or organization is an individual or an organization with a relationship to the patient. A supporting person who is playing multiple roles would be recorded in multiple participants (e.g., emergency contact and next-of-kin).

21. **MAY** contain zero or more [0..*] **participant** (CONF:1198-10003) such that it
   a. **MAY** contain zero or one [0..1] **time** (CONF:1198-10004).
   b. **SHALL** contain associatedEntity/associatedPerson **AND/OR** associatedEntity/scopingOrganization (CONF:1198-10006).

c. When participant/@typeCode is **IND**, associatedEntity/@classCode **SHOULD** be selected from ValueSet 2.16.840.1.113883.11.20.9.33 INDRoleclassCodes **STATIC 2011-09-30** (CONF:1198-10007).

1.2.1.13 inFulfillmentOf

The inFulfillmentOf element represents orders that are fulfilled by this document such as a radiologists' report of an x-ray.

22. **MAY** contain zero or more [0..*] **inFulfillmentOf** (CONF:1198-9952).
    a. The inFulfillmentOf, if present, **SHALL** contain exactly one [1..1] **order** (CONF:1198-9953).
        i. This order **SHALL** contain at least one [1..*] **id** (CONF:1198-9954).

1.2.1.14 documentationOf

23. **MAY** contain zero or more [0..*] **documentationOf** (CONF:1198-14835).

A serviceEvent represents the main act being documented, such as a colonoscopy or a cardiac stress study. In a provision of healthcare serviceEvent, the care providers, PCP, or other longitudinal providers, are recorded within the serviceEvent. If the document is about a single encounter, the providers associated can be recorded in the componentOf/encompassingEncounter template.

a. The documentationOf, if present, **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:1198-14836).
    i. This serviceEvent **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-14837).
        1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1198-14838).

1.2.1.15 performer

The performer participant represents clinicians who actually and principally carry out the serviceEvent. In a transfer of care this represents the healthcare providers involved in the current or pertinent historical care of the patient. Preferably, the patient's key healthcare care team members would be listed, particularly their primary physician and any active consulting physicians, therapists, and counselors.

ii. This serviceEvent **SHOULD** contain zero or more [0..*] **performer** (CONF:1198-14839).
    1. The performer, if present, **SHALL** contain exactly one [1..1] **@typeCode**, which **SHALL** be selected from ValueSet **x_ServiceEventPerformer** urn:oid:2.16.840.1.113883.1.11.19601 **STATIC** (CONF:1198-14840).
    2. The performer, if present, **MAY** contain zero or one [0..1] **functionCode** (CONF:1198-16818).
        a. The functionCode, if present, **SHOULD** contain zero or one [0..1] **@code**, which **SHOULD** be selected from ValueSet

ParticipationFunction
urn:oid:2.16.840.1.113883.1.11.10267 **STATIC** (CONF:1198-32889).

3. The performer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-14841).
    a. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1198-14846).
        i. Such ids **SHOULD** contain zero or one [0..1] **@root="**2.16.840.1.113883.4.6**"** National Provider Identifier (CONF:1198-14847).
    b. This assignedEntity **SHOULD** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet **Healthcare Provider Taxonomy (HIPAA)** urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1198-14842).

1.2.1.16 authorization

The authorization element represents information about the patient's consent.

The type of consent is conveyed in consent/code. Consents in the header have been finalized (consent/statusCode must equal Completed) and should be on file. This specification does not address how 'Privacy Consent' is represented, but does not preclude the inclusion of 'Privacy Consent'.

The authorization consent is used for referring to consents that are documented elsewhere in the EHR or medical record for a health condition and/or treatment that is described in the CDA document.

24. **MAY** contain zero or more [0..*] **authorization** (CONF:1198-16792) such that it
    a. **SHALL** contain exactly one [1..1] **consent** (CONF:1198-16793).
        i. This consent **MAY** contain zero or more [0..*] **id** (CONF:1198-16794).
        ii. This consent **MAY** contain zero or one [0..1] **code** (CONF:1198-16795). Note: The type of consent (e.g., a consent to perform the related serviceEvent) is conveyed in consent/code.
        iii. This consent **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-16797).
            1. This statusCode **SHALL** contain exactly one [1..1] **@code="**completed**"** Completed (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1198-16798).

1.2.1.17 componentOf

The encompassing encounter represents the setting of the clinical encounter during which the document act(s) or ServiceEvent(s) occurred. In order to represent providers associated with a specific encounter, they are recorded within the encompassingEncounter as participants. In a CCD, the encompassingEncounter may be used when documenting a specific encounter and its participants. All relevant encounters in a CCD may be listed in the encounters section.

25. **MAY** contain zero or one [0..1] **componentOf** (CONF:1198-9955).
    a. The componentOf, if present, **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:1198-9956).
        i. This encompassingEncounter **SHALL** contain at least one [1..*] **id** (CONF:1198-9959).
        ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-9958).

Figure 3: US Realm Header (V3) Example

```
<ClinicalDocument>
    <realmCode code="US" />
    <typeId extension="POCD_HD000040" root="2.16.840.1.113883.1.3" />
    <!-- CCD template -->
    <templateId root="2.16.840.1.113883.10.20.22.1.1" extension="2015-08-01" />
    <!-- Globally unique identifier for the document  -->
    <id extension="TT988" root="2.16.840.1.113883.19.5.99999.1" />
    <code code="34133-9" displayName="Summarization of Episode Note"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
    <!-- Title of the document -->
    <title>Patient Chart Summary</title>
    <effectiveTime value="201209151030-0800" />
    <confidentialityCode code="N" displayName="normal" codeSystem="2.16.840.1.113883.5.25"
codeSystemName="Confidentiality" />
    <languageCode code="en-US" />
    <setId extension="sTT988" root="2.16.840.1.113883.19.5.99999.19" />
    <!-- Version of the document -->
    <versionNumber value="1" />
     . . .
</ClinicalDocument>
```


Figure 4: recordTarget Example

```
<recordTarget>
    <patientRole>
        <id extension="444-22-2222" root="2.16.840.1.113883.4.1" />
        <!-- Example Social Security Number using the actual SSN OID. -->
        <addr use="HP">
            <!-- HP is "primary home" from codeSystem 2.16.840.1.113883.5.1119 -->
            <streetAddressLine>2222 Home Street</streetAddressLine>
            <city>Beaverton</city>
            <state>OR</state>
            <postalCode>97867</postalCode>
            <country>US</country>
            <!-- US is "United States" from ISO 3166-1 Country Codes: 1.0.3166.1 -->
        </addr>
        <telecom value="tel:+1(555)555-2003" use="HP" />
        <!-- HP is "primary home" from HL7 AddressUse 2.16.840.1.113883.5.1119 -->
        <patient>
            <!-- The first name element represents what the patient is known as -->
            <name use="L">
                <given>Eve</given>
                <!-- The "SP" is "Spouse" from
                     HL7 Code System EntityNamePartQualifier 2.16.840.1.113883.5.43 -->
                <family qualifier="SP">Betterhalf</family>
            </name>
            <!-- The second name element represents another name
                 associated with the patient -->
            <name>
                <given>Eve</given>
                <!-- The "BR" is "Birth" from
                     HL7 Code System EntityNamePartQualifier 2.16.840.1.113883.5.43 -->
                <family qualifier="BR">Everywoman</family>
            </name>
            <administrativeGenderCode code="F" displayName="Female"
codeSystem="2.16.840.1.113883.5.1" codeSystemName="AdministrativeGender" />
            <!-- Date of birth need only be precise to the day -->
            <birthTime value="19750501" />
            <maritalStatusCode code="M" displayName="Married"
codeSystem="2.16.840.1.113883.5.2" codeSystemName="MaritalStatusCode" />
            <religiousAffiliationCode code="1013" displayName="Christian (non-Catholic,
non-specific)" codeSystem="2.16.840.1.113883.5.1076" codeSystemName="HL7 Religious
Affiliation" />
            <!-- CDC Race and Ethnicity code set contains the five minimum
                 race and ethnicity categories defined by OMB Standards -->
            <raceCode code="2106-3" displayName="White"
codeSystem="2.16.840.1.113883.6.238" codeSystemName="Race & Ethnicity - CDC" />
            <!-- The raceCode extension is only used if raceCode is valued -->
            <sdtc:raceCode code="2076-8" displayName="Hawaiian or Other Pacific Islander"
codeSystem="2.16.840.1.113883.6.238" codeSystemName="Race & Ethnicity - CDC" />
            <ethnicGroupCode code="2186-5" displayName="Not Hispanic or Latino"
codeSystem="2.16.840.1.113883.6.238" codeSystemName="Race & Ethnicity - CDC" />
            <guardian>
                <code code="POWATT" displayName="Power of Attorney"
codeSystem="2.16.840.1.113883.1.11.19830" codeSystemName="ResponsibleParty" />
                <addr use="HP">
                    <streetAddressLine>2222 Home Street</streetAddressLine>
                    <city>Beaverton</city>
```



```
                    <state>OR</state>
                    <postalCode>97867</postalCode>
                    <country>US</country>
                </addr>
                <telecom value="tel:+1(555)555-2008" use="MC" />
                <guardianPerson>
                    <name>
                        <given>Boris</given>
                        <given qualifier="CL">Bo</given>
                        <family>Betterhalf</family>
                    </name>
                </guardianPerson>
            </guardian>
            <birthplace>
                <place>
                    <addr>
                        <streetAddressLine>4444 Home Street</streetAddressLine>
                        <city>Beaverton</city>
                        <state>OR</state>
                        <postalCode>97867</postalCode>
                        <country>US</country>
                    </addr>
                </place>
            </birthplace>
            <languageCommunication>
                <languageCode code="eng" />
                <!-- "eng" is ISO 639-2 alpha-3 code for "English" -->
                <modeCode code="ESP" displayName="Expressed spoken"
codeSystem="2.16.840.1.113883.5.60" codeSystemName="LanguageAbilityMode" />
                <proficiencyLevelCode code="G" displayName="Good"
codeSystem="2.16.840.1.113883.5.61" codeSystemName="LanguageAbilityProficiency" />
                <!-- Patient's preferred language -->
                <preferenceInd value="true" />
            </languageCommunication>
        </patient>
        <providerOrganization>
            <id extension="219BX" root="1.1.1.1.1.1.1.1.2" />
            <name>The DoctorsTogether Physician Group</name>
            <telecom use="WP" value="tel: +(555)-555-5000" />
            <addr>
                <streetAddressLine>1007 Health Drive</streetAddressLine>
                <city>Portland</city>
                <state>OR</state>
                <postalCode>99123</postalCode>
                <country>US</country>
            </addr>
        </providerOrganization>
    </patientRole>
</recordTarget>
```


Figure 5: author Example

```
<author>
    <time value="201209151030-0800" />
    <assignedAuthor>
        <id extension="5555555555" root="2.16.840.1.113883.4.6" />
        <code code="163W00000X" displayName="Registered nurse"
codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
        <addr>
            <streetAddressLine>1004 Healthcare Drive </streetAddressLine>
            <city>Portland</city>
            <state>OR</state>
            <postalCode>99123</postalCode>
            <country>US</country>
        </addr>
        <telecom use="WP" value="tel:+1(555)555-1004" />
        <assignedPerson>
            <name>
                <given>Patricia</given>
                <given qualifier="CL">Patty</given>
                <family>Primary</family>
                <suffix qualifier="AC">M.D.</suffix>
            </name>
        </assignedPerson>
    </assignedAuthor>
</author>
```

Figure 6: dateEnterer Example

```
<dataEnterer>
    <assignedEntity>
        <id extension="333777777" root="2.16.840.1.113883.4.6" />
        <addr>
            <streetAddressLine>1007 Healthcare Drive</streetAddressLine>
            <city>Portland</city>
            <state>OR</state>
            <postalCode>99123</postalCode>
            <country>US</country>
        </addr>
        <telecom use="WP" value="tel:+1(555)555-1050" />
        <assignedPerson>
            <name>
                <given>Ellen</given>
                <family>Enter</family>
            </name>
        </assignedPerson>
    </assignedEntity>
</dataEnterer>
```


Figure 7: Assigned Health Care Provider informant Example

```
<informant>
    <assignedEntity>
        <id extension="888888888" root="1.1.1.1.1.1.1.3" />
        <addr>
            <streetAddressLine>1007 Healthcare Drive</streetAddressLine>
            <city>Portland</city>
            <state>OR</state>
            <postalCode>99123</postalCode>
            <country>US</country>
        </addr>
        <telecom use="WP" value="tel:+1(555)555-1003" />
        <assignedPerson>
            <name>
                <given>Harold</given>
                <family>Hippocrates</family>
                <suffix qualifier="AC">M.D.</suffix>
            </name>
        </assignedPerson>
        <representedOrganization>
            <name>The DoctorsApart Physician Group</name>
        </representedOrganization>
    </assignedEntity>
</informant>
```

Figure 8: Personal Relation informant Example

```
<informant>
    <relatedEntity classCode="PRS">
        <!-- classCode "PRS" represents a person with personal relationship with the
patient -->
        <code code="SPS" displayName="SPOUSE" codeSystem="2.16.840.1.113883.1.11.19563"
codeSystemName="Personal Relationship Role Type Value Set" />
        <relatedPerson>
            <name>
                <given>Boris</given>
                <given qualifier="CL">Bo</given>
                <family>Betterhalf</family>
            </name>
        </relatedPerson>
    </relatedEntity>
</informant>
```


Figure 9: custodian Example

```
<custodian>
    <assignedCustodian>
        <representedCustodianOrganization>
            <id extension="321CX" root="1.1.1.1.1.1.1.1.3" />
            <name>Good Health HIE</name>
            <telecom use="WP" value="tel:+1(555)555-1009" />
            <addr use="WP">
                <streetAddressLine>1009 Healthcare Drive </streetAddressLine>
                <city>Portland</city>
                <state>OR</state>
                <postalCode>99123</postalCode>
                <country>US</country>
            </addr>
        </representedCustodianOrganization>
    </assignedCustodian>
</custodian>
```

Figure 10: informationRecipient Example

```
<informationRecipient>
    <intendedRecipient>
        <informationRecipient>
            <name>
                <given>Sara</given>
                <family>Specialize</family>
                <suffix qualifier="AC">M.D.</suffix>
            </name>
        </informationRecipient>
        <receivedOrganization>
            <name>The DoctorsApart Physician Group</name>
        </receivedOrganization>
    </intendedRecipient>
</informationRecipient>
```

Figure 11: Digital signature Example

```
<sdtc:signatureText mediaType="text/xml"
representation="B64">omSJUEdmde9j44zmMiromSJUEdmde9j44zmMirdMDSsWdIJdksIJR3373jeu83
   6edjzMMIjdMDSsWdIJdksIJR3373jeu83MNYD83jmMdomSJUEdmde9j44zmMir
   ... MNYD83jmMdomSJUEdmde9j44zmMir6edjzMMIjdMDSsWdIJdksIJR3373jeu83
   4zmMir6edjzMMIjdMDSsWdIJdksIJR3373jeu83==</sdtc:signatureText>
```


Figure 12: legalAuthenticator Example

```
<legalAuthenticator>
    <time value="20120915223615-0800" />
    <signatureCode code="S" />
    <assignedEntity>
        <id extension="5555555555" root="2.16.840.1.113883.4.6" />
        <code code="207QA0505X" displayName="Adult Medicine"
codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
        <addr>
            <streetAddressLine>1004 Healthcare Drive </streetAddressLine>
            <city>Portland</city>
            <state>OR</state>
            <postalCode>99123</postalCode>
            <country>US</country>
        </addr>
        <telecom use="WP" value="tel:+1(555)555-1004" />
        <assignedPerson>
            <name>
                <given>Patricia</given>
                <given qualifier="CL">Patty</given>
                <family>Primary</family>
                <suffix qualifier="AC">M.D.</suffix>
            </name>
        </assignedPerson>
    </assignedEntity>
</legalAuthenticator>
```


Figure 13: authenticator Example

```
<authenticator>
    <time value="201209151030-0800" />
    <signatureCode code="S" />
    <assignedEntity>
        <id extension="5555555555" root="2.16.840.1.113883.4.6" />
        <code code="207QA0505X" displayName="Adult Medicine"
codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
        <addr>
            <streetAddressLine>1004 Healthcare Drive</streetAddressLine>
            <city>Portland</city>
            <state>OR</state>
            <postalCode>99123</postalCode>
            <country>US</country>
        </addr>
        <telecom use="WP" value="tel:+1(555)555-1004" />
        <assignedPerson>
            <name>
                <given>Patricia</given>
                <given qualifier="CL">Patty</given>
                <family>Primary</family>
                <suffix qualifier="AC">M.D.</suffix>
            </name>
        </assignedPerson>
    </assignedEntity>
</authenticator>
```


Figure 14: Supporting Person participant Example

```
<participant typeCode="IND">
    <!-- typeCode "IND" represents an individual -->
    <associatedEntity classCode="NOK">
        <!-- classCode "NOK" represents the patient's next of kin-->
        <addr use="HP">
            <streetAddressLine>2222 Home Street</streetAddressLine>
            <city>Beaverton</city>
            <state>OR</state>
            <postalCode>97867</postalCode>
            <country>US</country>
        </addr>
        <telecom value="tel:+1(555)555-2008" use="MC" />
        <associatedPerson>
            <name>
                <given>Boris</given>
                <given qualifier="CL">Bo</given>
                <family>Betterhalf</family>
            </name>
        </associatedPerson>
    </associatedEntity>
</participant>
<!-- Entities playing multiple roles are recorded in multiple participants -->
<participant typeCode="IND">
    <associatedEntity classCode="ECON">
        <!-- classCode "ECON" represents an emergency contact -->
        <addr use="HP">
            <streetAddressLine>2222 Home Street</streetAddressLine>
            <city>Beaverton</city>
            <state>OR</state>
            <postalCode>97867</postalCode>
            <country>US</country>
        </addr>
        <telecom value="tel:+1(555)555-2008" use="MC" />
        <associatedPerson>
            <name>
                <given>Boris</given>
                <given qualifier="CL">Bo</given>
                <family>Betterhalf</family>
            </name>
        </associatedPerson>
    </associatedEntity>
</participant>
```

Figure 15: inFulfillmentOf Example

```
<inFulfillmentOf typeCode="FLFS">
    <order classCode="ACT" moodCode="RQO">
        <id root="2.16.840.1.113883.6.96" extension="1298989898" />
        <code code="388975008" displayName="Weight Reduction Consultation"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="CPT4" />
    </order>
</inFulfillmentOf>
```


Figure 16: performer Example

```
<performer typeCode="PRF">
    <functionCode code="PCP"
              displayName="Primary Care Provider"
              codeSystem="2.16.840.1.113883.5.88"
              codeSystemName="ParticipationFunction">
        <originalText>Primary Care Provider</originalText>
    </functionCode>
    <assignedEntity>
        <id extension="5555555555" root="2.16.840.1.113883.4.6" />
        <code code="207QA0505X" displayName="Adult Medicine"
codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
        <addr>
            <streetAddressLine>1004 Healthcare Drive </streetAddressLine>
            <city>Portland</city>
            <state>OR</state>
            <postalCode>99123</postalCode>
            <country>US</country>
        </addr>
        <telecom use="WP" value="tel:+1(555)555-1004" />
        <assignedPerson>
            <name>
                <given>Patricia</given>
                <given qualifier="CL">Patty</given>
                <family>Primary</family>
                <suffix qualifier="AC">M.D.</suffix>
            </name>
        </assignedPerson>
        <representedOrganization>
            <id extension="219BX" root="1.1.1.1.1.1.1.1.2" />
            <name>The DoctorsTogether Physician Group</name>
            <telecom use="WP" value="tel: +(555)-555-5000" />
            <addr>
                <streetAddressLine>1004 Health Drive</streetAddressLine>
                <city>Portland</city>
                <state>OR</state>
                <postalCode>99123</postalCode>
                <country>US</country>
            </addr>
        </representedOrganization>
    </assignedEntity>
</performer>
```


Figure 17: documentationOf Example

```
<documentationOf>
    <serviceEvent classCode="PCPR">
        <!-- The effectiveTime reflects the provision of care summarized in the document.
    In this scenario, the provision of care summarized is the lifetime for the patient -->
        <effectiveTime>
            <low value="19750501" />
            <!-- The low value represents when the summarized provision of care began.
     In this scenario, the patient's date of birth -->
            <high value="20120915" />
            <!-- The high value represents when the summarized provision of care being
ended.
     In this scenario, when chart summary was created -->
        </effectiveTime>
        <performer typeCode="PRF">
            <functionCode code="PCP"
                                        displayName="Primary Care Provider"
                                        codeSystem="2.16.840.1.113883.5.88"
                                        codeSystemName="ParticipationFunction">
                <originalText>Primary Care Provider</originalText>
            </functionCode>
            <assignedEntity>
                <id extension="5555555555" root="2.16.840.1.113883.4.6" />
                <code code="207QA0505X" displayName="Adult Medicine"
codeSystem="2.16.840.1.113883.5.53" codeSystemName="Health Care Provider Taxonomy" />
                <addr>
                    <streetAddressLine>1004 Healthcare Drive </streetAddressLine>
                    <city>Portland</city>
                    <state>OR</state>
                    <postalCode>99123</postalCode>
                    <country>US</country>
                </addr>
                <telecom use="WP" value="tel:+1(555)555-1004" />
                <assignedPerson>
                    <name>
                        <given>Patricia</given>
                        <given qualifier="CL">Patty</given>
                        <family>Primary</family>
                        <suffix qualifier="AC">M.D.</suffix>
                    </name>
                </assignedPerson>
                <representedOrganization>
                    <id extension="219BX" root="1.1.1.1.1.1.1.1.2" />
                    <name>The DoctorsTogether Physician Group</name>
                    <telecom use="WP" value="tel: +(555)-555-5000" />
                    <addr>
                        <streetAddressLine>1004 Health Drive</streetAddressLine>
                        <city>Portland</city>
                        <state>OR</state>
                        <postalCode>99123</postalCode>
                        <country>US</country>
                    </addr>
                </representedOrganization>
            </assignedEntity>
        </performer>
    </serviceEvent>
```



```
</documentationOf>
```

Figure 18: authorization Example

```
<authorization typeCode="AUTH">
    <consent classCode="CONS" moodCode="EVN">
        <id root="629deb70-5306-11df-9879-0800200c9a66" />
        <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" code="64293-4"
displayName="Procedure consent" />
        <statusCode code="completed" />
    </consent>
</authorization>
```


2 SECTION

2.1 Encounters Section (entries required) (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.22.1:2015-08-01 (open)]

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Table 3: Encounters Section (entries required) (V3) Contexts

Contained By:	Contains:
Initial Public Health Case Report Document (eICR) (required)	Encounter Activity (V3)

This section lists and describes any healthcare encounters pertinent to the patient's current health status or historical health history. An encounter is an interaction, regardless of the setting, between a patient and a practitioner who is vested with primary responsibility for diagnosing, evaluating, or treating the patient's condition. It may include visits, appointments, as well as non-face-to-face interactions. It is also a contact between a patient and a practitioner who has primary responsibility (exercising independent judgment) for assessing and treating the patient at a given contact. This section may contain all encounters for the time period being summarized, but should include notable encounters.

1. Conforms to Encounters Section (entries optional) (V3) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.22:2015-08-01).
2. **MAY** contain zero or one [0..1] **@nullFlavor**="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1198-32815).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8705) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.22.1" (CONF:1198-10387).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32548).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15466).
    a. This code **SHALL** contain exactly one [1..1] **@code**="46240-8" Encounters (CONF:1198-15467).
    b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1 **STATIC**) (CONF:1198-31137).
5. **SHALL** contain exactly one [1..1] **title** (CONF:1198-8707).
6. **SHALL** contain exactly one [1..1] **text** (CONF:1198-8708).

If section/@nullFlavor is not present:

7. **SHALL** contain at least one [1..*] **entry** (CONF:1198-8709) such that it
    a. **SHALL** contain exactly one [1..1] **Encounter Activity (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2015-08-01) (CONF:1198-15468).

Figure 19: Encounters Section (entries required) (V3) Example

```
<section>
    <templateId root="2.16.840.1.113883.10.20.22.2.22.1" extension="2015-08-01" />
    <!-- Encounters Section - Entries required -->
    <code code="46240-8" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="History of encounters" />
    <title>Encounters</title>
    <text>
    ...
  </text>
    <entry typeCode="DRIV">
        <encounter classCode="ENC" moodCode="EVN">
            <!-- Encounter Activities -->
            ...

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

2.2 History of Present Illness Section

`[section: identifier urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.4 (open)]`

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Table 4: History of Present Illness Section Contexts

Contained By:	Contains:
Initial Public Health Case Report Document (eICR) (required)	

The History of Present Illness section describes the history related to the reason for the encounter. It contains the historical details leading up to and pertaining to the patient's current complaint or reason for seeking medical care.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7848) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="1.3.6.1.4.1.19376.1.5.3.1.3.4" (CONF:81-10458).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15477).
    a. This code **SHALL** contain exactly one [1..1] **@code**="10164-2" (CONF:81-15478).
    b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:81-26478).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-7850).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-7851).

Figure 20: History of Present Illness Section Example

```
<section>
    <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.4.2"/>
    <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
        code="10164-2"
        displayName="HISTORY OF PRESENT ILLNESS"/>
    <title>HISTORY OF PRESENT ILLNESS</title>
    <text>
        <paragraph>This patient was only recently discharged for a recurrent
        GI bleed as described below.</paragraph>
        <paragraph>He presented to the ER today c/o a dark stool yesterday
        but a normal brown stool today. On exam he was hypotensive in the
        80s resolved after .... .... .... </paragraph>
        <paragraph>Lab at discharge: Glucose 112, BUN 16, creatinine 1.1,
        electrolytes normal. H. pylori antibody pending. Admission
        hematocrit 16%, discharge hematocrit 29%. WBC 7300, platelet
        count 256,000. Urinalysis normal. Urine culture: No growth. INR
        1.1, PTT 40.</paragraph>
        <paragraph>He was transfused with 6 units of packed red blood cells
        with .... .... ....</paragraph>
        <paragraph>GI evaluation 12 September: Colonoscopy showed single red
       clot in .... .... ....</paragraph>
    </text>
</section>
```

2.3 Immunizations Section (entries required) (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.2.1:2015-08-01 (open)]

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Table 5: Immunizations Section (entries required) (V3) Contexts

Contained By:	**Contains:**
Initial Public Health Case Report Document (eICR) (optional)	

The Immunizations Section defines a patient's current immunization status and pertinent immunization history. The primary use case for the Immunization Section is to enable communication of a patient's immunization status. The section should include current immunization status, and may contain the entire immunization history that is relevant to the period of time being summarized.

1. Conforms to Immunizations Section (entries optional) (V3) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.2:2015-08-01).
2. **MAY** contain zero or one [0..1] **@nullFlavor**="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1198-32833).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-9015) such that it

a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.2.1" (CONF:1198-10400).
b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32530).

4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15369).
    a. This code **SHALL** contain exactly one [1..1] **@code**="11369-6" Immunizations (CONF:1198-15370).
    b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1198-32147).
5. **SHALL** contain exactly one [1..1] **title** (CONF:1198-9017).
6. **SHALL** contain exactly one [1..1] **text** (CONF:1198-9018).

If section/@nullFlavor is not present:

7. **SHALL** contain at least one [1..*] **entry** (CONF:1198-9019) such that it
    a. **SHALL** contain exactly one [1..1] Immunization Activity (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01) (CONF:1198-15495).

Figure 21: Immunizations Section (entries required) (V3) Example

```
<section>
    <templateId root="2.16.840.1.113883.10.20.22.2.1" extension="2015-08-01" />
    <!--  ********  Immunizations section template   ******** -->
    <code code="11369-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="History of immunizations" />
    <title>Immunizations</title>
    <text>
        <table border="1" width="100%">
            <thead>
                <tr>
                    <th>Vaccine</th>
                    <th>Date</th>
                    <th>Status</th>
                </tr>
            </thead>
            <tbody>
                <tr>
                    <td>
                        <content ID="immun1" />Influenza virus vaccine, IM

                    </td>
                    <td>Nov 1999</td>
                    <td>Completed</td>
                </tr>
                <tr>
                    <td>
                        <content ID="immun2" />Influenza virus vaccine, IM

                    </td>
                    <td>Dec 1998</td>
                    <td>Completed</td>
                </tr>
                <tr>
                    <td>
                        <content ID="immun3" />
            Pneumococcal polysaccharide vaccine, IM

                    </td>
                    <td>Dec 1998</td>
                    <td>Completed</td>
                </tr>
                <tr>
                    <td>
                        <content ID="immun4" />Tetanus and diphtheria toxoids, IM

                    </td>
                    <td>1997</td>
                    <td>Refused</td>
                </tr>
            </tbody>
        </table>
    </text>
    <entry typeCode="DRIV">
        <substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="false">
            <templateId root="2.16.840.1.113883.10.20.22.4.52" />
```



```
            <!--  ****  Immunization activity template  **** -->
      ...


        </substanceAdministration>
    </entry>
  ...
</section>
```

2.4 Medications Administered Section (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.38:2014-06-09 (open)]

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Table 6: Medications Administered Section (V2) Contexts

Contained By:	Contains:
Initial Public Health Case Report Document (eICR) (required)	Medication Activity (V2)

The Medications Administered Section usually resides inside a Procedure Note describing a procedure. This section defines medications and fluids administered during the procedure, its related encounter, or other procedure related activity excluding anesthetic medications. Anesthesia medications should be documented as described in the Anesthesia Section

templateId 2.16.840.1.113883.10.20.22.2.25.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-8152) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.38" (CONF:1098-10405).
    b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32525).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-15383).
    a. This code **SHALL** contain exactly one [1..1] **@code**="29549-3" Medications Administered (CONF:1098-15384).
    b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1098-30829).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-8154).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-8155).
5. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8156).
    a. The entry, if present, **SHALL** contain exactly one [1..1] **Medication Activity (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09) (CONF:1098-15499).

Figure 22: Medications Administered Section (V2) Example

```
<section>
    <templateId root="2.16.840.1.113883.10.20.22.2.38" extension="2014-06-09" />
    <code code="29549-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="MEDICATIONS ADMINISTERED" />
    <title>MEDICATIONS ADMINISTERED</title>
    <text>
        <table border="1" width="100%">
            <thead>
                <tr>
                    <th>Medication</th>
                    <th>Directions</th>
                    <th>Start Date</th>
                    <th>Status</th>
                    <th>Indications</th>
                    <th>Fill Instructions</th>
                </tr>
            </thead>
            <tbody>
                <tr>
                    <td>
                        <content ID="MedAdministered_1">
                            Proventil 0.09 MG/ACTUAT inhalant solution
                        </content>
                    </td>
                    <td>0.09 MG/ACTUAT inhalant solution, 2 puffs QID PRN wheezing</td>
                    <td>20070103</td>
                    <td>Active</td>
                    <td>Pneumonia (233604007 SNOMED CT)</td>
                    <td>Generic Substitution Allowed</td>
                </tr>
            </tbody>
        </table>
    </text>
    <entry typeCode="DRIV">
        <substanceAdministration classCode="SBADM" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09" />
            <!-- ** MEDICATION ACTIVITY V2 ** -->
                ...
        </substanceAdministration>
    </entry>
</section>
```


2.5 Problem Section (entries required) (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.5.1:2015-08-01 (open)]

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Table 7: Problem Section (entries required) (V3) Contexts

Contained By:	Contains:
Initial Public Health Case Report Document (eICR) (required)	Problem Concern Act (V3)

This section lists and describes all relevant clinical problems at the time the document is generated. At a minimum, all pertinent current and historical problems should be listed. Overall health status may be represented in this section.

1. Conforms to Problem Section (entries optional) (V3) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.5:2015-08-01).
2. **MAY** contain zero or one [0..1] **@nullFlavor**="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1198-32864).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-9179) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.5.1" (CONF:1198-10441).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32510).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15409).
    a. This code **SHALL** contain exactly one [1..1] **@code**="11450-4" Problem List (CONF:1198-15410).
    b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1198-31142).
5. **SHALL** contain exactly one [1..1] **title** (CONF:1198-9181).
6. **SHALL** contain exactly one [1..1] **text** (CONF:1198-9182).

If section/@nullFlavor is not present:

7. **SHALL** contain at least one [1..*] **entry** (CONF:1198-9183) such that it
    a. **SHALL** contain exactly one [1..1] **Problem Concern Act (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01) (CONF:1198-15506).
8. **MAY** contain zero or one [0..1] **entry** (CONF:1198-30479) such that it
    a. **SHALL** contain exactly one [1..1] Health Status Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09) (CONF:1198-30480).

Figure 23: Problem Section (entries required) (V3) Example

```
<section>
    <templateId root="2.16.840.1.113883.10.20.22.2.5.1"
            extension="2015-08-01" />
    <code code="11450-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="PROBLEM LIST" />
    <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">
            <templateId root="2.16.840.1.113883.10.20.22.4.3" extension="2014-06-09" />
            <!-- Problem Concern Act template -->
        ...


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


Figure 24: No Known Problems Section Example

```
<section>
    <templateId root="2.16.840.1.113883.10.20.22.2.5"
        extension="2014-06-09" />
    <!-- Problem Section with Coded Entries Optional -->
    <templateId root="2.16.840.1.113883.10.20.22.2.5.1"/>
    <!-- Problem Section with Coded Entries Required -->
    <code code="11450-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Problem List"/>
    <title>PROBLEMS</title>
    <text ID="Concern_1">
            Problem Concern:

        <br/>
            Concern Tracker Start Date: 06/07/2013 16:05:06

        <br/>
            Concern Tracker End Date:

        <br/>
            Concern Status: Active

        <br/>
        <content ID="problems1">No known

            <content ID="problemType1">problems.</content>
        </content>
    </text>
    <entry typeCode="DRIV">
        <!-- Problem Concern Act -->
        <act classCode="ACT" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.3"/>
            <id root="36e3e930-7b14-11db-9fe1-0800200c9a66"/>
            <!-- SDWG supports 48765-2 or CONC in the code element -->
            <code code="CONC" codeSystem="2.16.840.1.113883.5.6"/>
            <text>
                <reference value="#Concern_1"></reference>
            </text>
            <statusCode code="active"/>
            <!-- The concern is not active, in terms of there being an active condition to
be managed.-->
            <effectiveTime>
                <low value="20130607160506"/>
                <!-- Time at which THIS "concern" began being tracked.-->
            </effectiveTime>
            <!-- status is active so high is not applicable. If high is present it should
have nullFlavor of NA-->
            <!-- Optional Author Element-->
            <author>
                <time value="20130607160506"/>
                <assignedAuthor>
                    <id extension="66666" root="2.16.840.1.113883.4.6"/>
                    <code code="207RC0000X" codeSystem="2.16.840.1.113883.6.101"
codeSystemName="NUCC"
                            displayName="Cardiovascular Disease"/>
                    <addr>
```



```
                        <streetAddressLine>6666 StreetName St.</streetAddressLine>
                        <city>Silver Spring</city>
                        <state>MD</state>
                        <postalCode>20901</postalCode>
                        <country>US</country>
                    </addr>
                    <telecom value="tel:+1(301)666-6666" use="WP"/>
                    <assignedPerson>
                        <name>
                            <given>Heartly</given>
                            <family>Sixer</family>
                            <suffix>MD</suffix>
                        </name>
                    </assignedPerson>
                </assignedAuthor>
            </author>
            <entryRelationship typeCode="SUBJ">
                <observation classCode="OBS" moodCode="EVN" negationInd="true">
                    <!-- Model of Meaning for No Problems -->
                    <!-- This is more consistent with how we did no known allergies. -->
                    <!-- The use of negationInd corresponds with the newer
Observation.ValueNegationInd -->
                    <!-- The negationInd = true negates the value element. -->
                    <!-- problem observation template -->
                    <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
                    <id root="4adc1021-7b14-11db-9fe1-0800200c9a67"/>
                    <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
                    <text>
                        <reference value="#problems1"></reference>
                    </text>
                    <statusCode code="completed"/>
                    <effectiveTime>
                        <low value="20130607160506"/>
                    </effectiveTime>
                    <!-- The time when this was biologically relevant ie True for the
patient. -->
                    <!-- As a minimum time interval over which this is true, populate the
effectiveTime/low with the current time. -->
                    <!-- It would be equally valid to have a longer range of time over
which this statement was represented as being true. -->
                    <!-- As a maximum, you would never indicate an effectiveTime/high that
was greater than the current point in time. -->
                    <!-- This idea assumes that the value element could come from the
Problem value set, or-->
                    <!-- when negationInd was true, is could also come from the ProblemType
value set (and code would be ASSERTION). -->
                    <value xsi:type="CD" code="55607006"
                            displayName="Problem"
                            codeSystem="2.16.840.1.113883.6.96"
                            codeSystemName="SNOMED CT">
                        <originalText>
                            <reference value="#problemType1"></reference>
                        </originalText>
                    </value>
                </observation>
            </entryRelationship>
        </act>
```



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

2.6 Reason for Visit Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.22.2.12 (open)]

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Table 8: Reason for Visit Section Contexts

Contained By:	Contains:
Initial Public Health Case Report Document (eICR) (required)	

This section records the patient's reason for the patient's visit (as documented by the provider). Local policy determines whether Reason for Visit and Chief Complaint are in separate or combined sections.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-7836) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.12" (CONF:81-10448).
2. **SHALL** contain exactly one [1..1] **code** (CONF:81-15429).
    a. This code **SHALL** contain exactly one [1..1] **@code**="29299-5" Reason for Visit (CONF:81-15430).
    b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:81-26494).
3. **SHALL** contain exactly one [1..1] **title** (CONF:81-7838).
4. **SHALL** contain exactly one [1..1] **text** (CONF:81-7839).

Figure 25: Reason for Visit Section Example

```
<section>
    <templateId root="2.16.840.1.113883.10.20.22.2.12"/>
    <code code="29299-5"
          codeSystem="2.16.840.1.113883.6.1"
          codeSystemName="LOINC"
          displayName="REASON FOR VISIT"/>
    <title>REASON FOR VISIT</title>
    <text>
        <paragraph>Dark stools.</paragraph>
    </text>
</section>
```


2.7 Results Section (entries required) (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2015-08-01 (open)]

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Table 9: Results Section (entries required) (V3) Contexts

Contained By:	Contains:
Initial Public Health Case Report Document (eICR) (required)	Result Organizer (V3)

The Results Section contains observations of results generated by laboratories, imaging procedures, and other procedures. These coded result observations are contained within a Results Organizer in the Results Section. The scope includes observations such as hematology, chemistry, serology, virology, toxicology, microbiology, plain x-ray, ultrasound, CT, MRI, angiography, echocardiography, nuclear medicine, pathology, and procedure observations. The section often includes notable results such as abnormal values or relevant trends, and could contain all results for the period of time being documented.

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

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

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

1. Conforms to Results Section (entries optional) (V3) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2015-08-01).
2. **MAY** contain zero or one [0..1] **@nullFlavor**="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1198-32875).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7108) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.3.1" (CONF:1198-9137).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32592).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15433).
    a. This code **SHALL** contain exactly one [1..1] **@code**="30954-2" Relevant diagnostic tests and/or laboratory data (CONF:1198-15434).
    b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1198-31040).
5. **SHALL** contain exactly one [1..1] **title** (CONF:1198-8892).

6. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7111).

If section/@nullFlavor is not present:

7. **SHALL** contain at least one [1..*] **entry** (CONF:1198-7112) such that it
    a. **SHALL** contain exactly one [1..1] **Result Organizer (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2015-08-01) (CONF:1198-15516).

Figure 26: Results Section (entries required) (V3) Example

```
<section>
    <templateId root="2.16.840.1.113883.10.20.22.2.3.1" extension="2015-08-01" />
    <code code="30954-2" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="RELEVANT DIAGNOSTIC TESTS AND/OR LABORATORY DATA" />
    <title>Results</title>
    <text />
    <entry typeCode="DRIV">
        <organizer classCode="BATTERY" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.1" extension="2014-06-09" />
      ...




            <organizer>
                <component>
                    <observation classCode="OBS" moodCode="EVN">
                        <templateId root="2.16.840.1.113883.10.20.22.4.2" extension="2014-
06-09" />
                        . . .


                    </observation>
                </component>
            </organizer>
        </organizer>
    </entry>
</section>
```

2.8 Social History Section (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01 (open)]

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Table 10: Social History Section (V3) Contexts

Contained By:	Contains:
Initial Public Health Case Report Document (eICR) (required)	Social History Observation (V3)

This section contains social history data that influence a patient's physical, psychological or emotional health (e.g., smoking status, pregnancy). Demographic data, such as marital status, race, ethnicity, and religious affiliation, is captured in the header.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7936) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.17" (CONF:1198-10449).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32494).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-14819).
    a. This code **SHALL** contain exactly one [1..1] **@code**="29762-2" Social History (CONF:1198-14820).
    b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1198-30814).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-7938).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7939).
5. **MAY** contain zero or more [0..*] **entry** (CONF:1198-7953) such that it
    a. **SHALL** contain exactly one [1..1] **Social History Observation (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2015-08-01) (CONF:1198-14821).
6. **MAY** contain zero or more [0..*] **entry** (CONF:1198-9132) such that it
    a. **SHALL** contain exactly one [1..1] Pregnancy Observation (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.8) (CONF:1198-14822).
7. **SHOULD** contain zero or more [0..*] **entry** (CONF:1198-14823) such that it
    a. **SHALL** contain exactly one [1..1] Smoking Status - Meaningful Use (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09) (CONF:1198-14824).
8. **MAY** contain zero or more [0..*] **entry** (CONF:1198-16816) such that it
    a. **SHALL** contain exactly one [1..1] Tobacco Use (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09) (CONF:1198-16817).
9. **MAY** contain zero or more [0..*] **entry** (CONF:1198-28361) such that it
    a. **SHALL** contain exactly one [1..1] Caregiver Characteristics (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.72) (CONF:1198-28362).
10. **MAY** contain zero or more [0..*] **entry** (CONF:1198-28366) such that it
    a. **SHALL** contain exactly one [1..1] Cultural and Religious Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.111) (CONF:1198-28367).
11. **MAY** contain zero or more [0..*] **entry** (CONF:1198-28825) such that it
    a. **SHALL** contain exactly one [1..1] Characteristics of Home Environment (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.109) (CONF:1198-28826).

Figure 27: Social History Section (V3) Example

```
<component>
    <section>
        <templateId root="2.16.840.1.113883.10.20.22.2.17" extension="2015-08-01" />
        <code code="29762-2" codeSystem="2.16.840.1.113883.6.1" displayName="Social
History" />
        <title>SOCIAL HISTORY</title>
        <text>
        . . .
        </text>
        <entry>
            <observation classCode="OBS" moodCode="EVN">
                <!-- Social history observation V2-->
                <templateId root="2.16.840.1.113883.10.20.22.4.38" extension="2015-08-01"
/>
       ...


            </observation>
        </entry>
        <entry>
            <observation classCode="OBS" moodCode="EVN">
                <!-- ** Current smoking status observation ** -->
                <templateId root="2.16.840.1.113883.10.20.22.4.78" extension="2014-06-09"
/>
 ...



            </observation>
        </entry>
        <entry>
            <observation classCode="OBS" moodCode="EVN">
                <!-- Caregiver Characteristics -->
                <templateId root="2.16.840.1.113883.10.20.22.4.72" />
       ...



            </observation>
        </entry>
        <entry>
            <observation classCode="OBS" moodCode="EVN">
                <!-- **Cultural and Religious Observations(NEW)**-->
                <templateId root="2.16.840.1.113883.10.20.22.4.111" />
        ...



            </observation>
        </entry>
        <entry>
            <observation classCode="OBS" moodCode="EVN">
                <!-- ** Characteristics of Care Environment** -->
                <templateId root="2.16.840.1.113883.10.20.22.4.109" />
       ...
```



```
            </observation>
        </entry>
    </section>
</component>
```


3 ENTRY

3.1 Encounter Activity (V3)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2015-08-01 (open)]

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Table 11: Encounter Activity (V3) Contexts

Contained By:	Contains:
Encounters Section (entries required) (V3) (required)	Encounter Diagnosis (V3)

This clinical statement describes an interaction between a patient and clinician. Interactions may include in-person encounters, telephone conversations, and email exchanges.

1. **SHALL** contain exactly one [1..1] **@classCode**="ENC" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-8710).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-8711).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8712) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.49" (CONF:1198-26353).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32546).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-8713).
5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet **EncounterTypeCode** urn:oid:2.16.840.1.113883.3.88.12.80.32 **DYNAMIC** (CONF:1198-8714).
    a. This code **SHOULD** contain zero or one [0..1] **originalText** (CONF:1198-8719).
        i. The originalText, if present, **SHOULD** contain zero or one [0..1] **reference** (CONF:1198-15970).
            1. The reference, if present, **SHOULD** contain zero or one [0..1] **@value** (CONF:1198-15971).
                a. This reference/@value **SHALL** begin with a '#' and **SHALL** point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:1198-15972).

The translation may exist to map the code of EncounterTypeCode (2.16.840.1.113883.3.88.12.80.32) value set to the code of Encounter Planned (2.16.840.1.113883.11.20.9.52) value set.

    b. This code **MAY** contain zero or one [0..1] **translation** (CONF:1198-32323).
6. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-8715).

7. **MAY** contain zero or one [0..1] **sdtc:dischargeDispositionCode** (CONF:1198-32176). Note: The prefix sdtc: SHALL be bound to the namespace "urn:hl7-org:sdtc". The use of the namespace provides a necessary extension to CDA R2 for the use of the dischargeDispositionCode element
    a. This sdtc:dischargeDispositionCode **SHOULD** contain exactly [1..1] **@code**, which **SHOULD** be selected from ValueSet 2.16.840.1.113883.3.88.12.80.33 NUBC UB-04 FL17-Patient Status (code system 2.16.840.1.113883.6.301.5) **DYNAMIC** or, if access to NUBC is unavailable, from CodeSystem 2.16.840.1.113883.12.112 HL7 Discharge Disposition (CONF:1198-32177).
    b. This sdtc:dischargeDispositionCode **SHOULD** contain exactly [1..1] **@codeSystem**, which **SHOULD** be either CodeSystem: NUBC 2.16.840.1.113883.6.301.5 **OR** CodeSystem: HL7 Discharge Disposition 2.16.840.1.113883.12.112 (CONF:1198-32377).
8. **MAY** contain zero or more [0..*] **performer** (CONF:1198-8725).
    a. The performer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-8726).
        i. This assignedEntity **MAY** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet **Healthcare Provider Taxonomy (HIPAA)** urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1198-8727).
9. **SHOULD** contain zero or more [0..*] **participant** (CONF:1198-8738) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="LOC" Location (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-8740).
    b. **SHALL** contain exactly one [1..1] Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32) (CONF:1198-14903).
10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-8722) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" Has Reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-8723).
    b. **SHALL** contain exactly one [1..1] Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1198-14899).
11. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-15492) such that it
    a. **SHALL** contain exactly one [1..1] **Encounter Diagnosis (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2015-08-01) (CONF:1198-15973).

Figure 28: Encounter Activity (V3) Example

```
<encounter classCode="ENC" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.49" extension="2015-08-01" />
    <id root="2a620155-9d11-439e-92b3-5d9815ff4de8" />
    <code code="99213" displayName="Office outpatient visit 15 minutes"
codeSystemName="CPT-4" codeSystem="2.16.840.1.113883.6.12">
        <originalText>
            <reference value="#Encounter1" />
        </originalText>
        <translation code="AMB" codeSystem="2.16.840.1.113883.5.4" displayName="Ambulatory"
codeSystemName="HL7 ActEncounterCode" />
    </code>
    <effectiveTime value="201209271300+0500" />
    <performer>
        <assignedEntity>
        . . .
        </assignedEntity>
    </performer>
    <participant typeCode="LOC">
        <participantRole classCode="SDLOC">
            <templateId root="2.16.840.1.113883.10.20.22.4.32" />

            . . .
        </participantRole>
    </participant>
    <entryRelationship typeCode="RSON">
        <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.19" extension="2014-06-09" />

            . . .
        </observation>
    </entryRelationship>
</encounter>
```

3.2 Encounter Diagnosis (V3)

`[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2015-08-01 (open)]`

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Table 12: Encounter Diagnosis (V3) Contexts

Contained By:	**Contains:**
Encounter Activity (V3) (optional)	Problem Observation (V3)

This template wraps relevant problems or diagnoses at the close of a visit or that need to be followed after the visit. If the encounter is associated with a Hospital Discharge, the Hospital Discharge Diagnosis must be used. This entry requires at least one Problem Observation entry.

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-14889).

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-14890).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-14895) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.80" (CONF:1198-14896).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32542).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1198-19182).
    a. This code **SHALL** contain exactly one [1..1] **@code**="29308-4" Diagnosis (CONF:1198-19183).
    b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1198-32160).
5. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1198-14892) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-14893).
    b. **SHALL** contain exactly one [1..1] **Problem Observation (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) (CONF:1198-14898).

Figure 29: Encounter Diagnosis (V3) Example

```
<act classCode="ACT" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.80" extension="2015-08-01" />
    <code code="29308-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName=" DIAGNOSIS" />
    <statusCode code="active" />
    <effectiveTime>
        <low value="20903003" />
    </effectiveTime>
    <entryRelationship typeCode="SUBJ">
        <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01" />
            <!-- Problem Observation -->
          ...



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


3.3 Medication Activity (V2)

[substanceAdministration: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09 (open)]

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Table 13: Medication Activity (V2) Contexts

Contained By:	Contains:
Medications Administered Section (V2) (optional)	Medication Information (V2)

A Medication Activity describes substance administrations that have actually occurred (e.g., pills ingested or injections given) or are intended to occur (e.g., "take 2 tablets twice a day for the next 10 days"). Medication activities in "INT" mood are reflections of what a clinician intends a patient to be taking. For example, a clinician may intend that a patient to be administered Lisinopril 20 mg PO for blood pressure control. If what was actually administered was Lisinopril 10 mg., then the Medication activities in the "EVN" mood would reflect actual use.

A moodCode of INT is allowed, but it is recommended that the Planned Medication Activity (V2) template be used for moodCodes other than EVN if the document type contains a section that includes Planned Medication Activity (V2) (for example a Care Plan document with Plan of Treatment, Intervention, or Goal sections).

At a minimum, a Medication Activity shall include an effectiveTime indicating the duration of the administration (or single-administration timestamp). Ambulatory medication lists generally provide a summary of use for a given medication over time - a medication activity in event mood with the duration reflecting when the medication started and stopped. Ongoing medications will not have a stop date (or will have a stop date with a suitable NULL value). Ambulatory medication lists will generally also have a frequency (e.g., a medication is being taken twice a day). Inpatient medications generally record each administration as a separate act.

The dose (doseQuantity) represents how many of the consumables are to be administered at each administration event. As a result, the dose is always relative to the consumable and the interval of administration. Thus, a patient consuming a single "metoprolol 25mg tablet" per administration will have a doseQuantity of "1", whereas a patient consuming "metoprolol" will have a dose of "25 mg".

1. **SHALL** contain exactly one [1..1] **@classCode="**SBADM" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-7496).
2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet **MoodCodeEvnInt** urn:oid:2.16.840.1.113883.11.20.9.18 **STATIC** 2011-04-03 (CONF:1098-7497).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7499) such that it
    a. **SHALL** contain exactly one [1..1] **@root="**2.16.840.1.113883.10.20.22.4.16" (CONF:1098-10504).
    b. **SHALL** contain exactly one [1..1] **@extension="**2014-06-09" (CONF:1098-32498).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-7500).

5. **MAY** contain zero or one [0..1] **code** (CONF:1098-7506).
   Note: SubstanceAdministration.code is an optional field. Per HL7 Pharmacy Committee, "this is intended to further specify the nature of the substance administration act. To date the committee has made no use of this attribute". Because the type of substance administration is generally implicit in the routeCode, in the consumable participant, etc., the field is generally not used, and there is no defined value set.
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-7507).
   a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet **ActStatus** urn:oid:2.16.840.1.113883.1.11.159331 **DYNAMIC** (CONF:1098-32360).

The substance administration effectiveTime field can repeat, in order to represent varying levels of complex dosing. effectiveTime can be used to represent the duration of administration (e.g., "10 days"), the frequency of administration (e.g., "every 8 hours"), and more. Here, we require that there SHALL be an effectiveTime documentation of the duration (or single-administration timestamp), and that there SHOULD be an effectiveTime documentation of the frequency. Other timing nuances, supported by the base CDA R2 standard, may also be included.

7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1098-7508) such that it
   Note: This effectiveTime represents either the medication duration (i.e., the time the medication was started and stopped) or the single-administration timestamp.
   a. **SHOULD** contain zero or one [0..1] **@value** (CONF:1098-32775).
      Note: indicates a single-administration timestamp
   b. **SHOULD** contain zero or one [0..1] **low** (CONF:1098-32776).
      Note: indicates when medication started
   c. **MAY** contain zero or one [0..1] **high** (CONF:1098-32777).
      Note: indicates when medication stopped
   d. This effectiveTime **SHALL** contain either a low or a @value but not both (CONF:1098-32890).
8. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-7513) such that it
   Note: This effectiveTime represents the medication frequency (e.g., administration times per day).
   a. **SHALL** contain exactly one [1..1] **@operator="A"** (CONF:1098-9106).
   b. **SHALL** contain exactly one [1..1] @xsi:type="PIVL_TS" or "EIVL_TS" (CONF:1098-28499).

In "INT" (intent) mood, the repeatNumber defines the number of allowed administrations. For example, a repeatNumber of "3" means that the substance can be administered up to 3 times. In "EVN" (event) mood, the repeatNumber is the number of occurrences. For example, a repeatNumber of "3" in a substance administration event means that the current administration is the 3rd in a series.

9. **MAY** contain zero or one [0..1] **repeatNumber** (CONF:1098-7555).
10. **SHOULD** contain zero or one [0..1] **routeCode**, which **SHALL** be selected from ValueSet **Medication Route FDA** urn:oid:2.16.840.1.113883.3.88.12.3221.8.7 **DYNAMIC** (CONF:1098-7514).

11. **MAY** contain zero or one [0..1] **approachSiteCode**, where the code **SHALL** be selected from ValueSet **Body Site** urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-7515).
12. **SHALL** contain exactly one [1..1] **doseQuantity** (CONF:1098-7516).
    a. This doseQuantity **SHOULD** contain zero or one [0..1] **@unit**, which **SHALL** be selected from ValueSet **UnitsOfMeasureCaseSensitive** urn:oid:2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-7526).
    b. Pre-coordinated consumable: If the consumable code is a pre-coordinated unit dose (e.g., "metoprolol 25mg tablet") then doseQuantity is a unitless number that indicates the number of products given per administration (e.g., "2", meaning 2 x "metoprolol 25mg tablet" per administration) (CONF:1098-16878).
    c. Not pre-coordinated consumable: If the consumable code is not pre-coordinated (e.g., is simply "metoprolol"), then doseQuantity must represent a physical quantity with @unit, e.g., "25" and "mg", specifying the amount of product given per administration (CONF:1098-16879).
13. **MAY** contain zero or one [0..1] **rateQuantity** (CONF:1098-7517).
    a. The rateQuantity, if present, **SHALL** contain exactly one [1..1] **@unit**, which **SHALL** be selected from ValueSet **UnitsOfMeasureCaseSensitive** urn:oid:2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1098-7525).
14. **MAY** contain zero or one [0..1] **maxDoseQuantity** (CONF:1098-7518).

administrationUnitCode@code describes the units of medication administration for an item using a code that is pre-coordinated to include a physical unit form (ointment, powder, solution, etc.) which differs from the units used in administering the consumable (capful, spray, drop, etc.). For example when recording medication administrations, “metric drop (C48491)” would be appropriate to accompany the RxNorm code of 198283 (Timolol 0.25% Ophthalmic Solution) where the number of drops would be specified in doseQuantity@value.

15. **MAY** contain zero or one [0..1] **administrationUnitCode**, which **SHALL** be selected from ValueSet **AdministrationUnitDoseForm** urn:oid:2.16.840.1.113762.1.4.1021.30 **DYNAMIC** (CONF:1098-7519).
16. **SHALL** contain exactly one [1..1] **consumable** (CONF:1098-7520).
    a. This consumable **SHALL** contain exactly one [1..1] **Medication Information (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09) (CONF:1098-16085).
17. **MAY** contain zero or one [0..1] **performer** (CONF:1098-7522).
18. **SHOULD** contain zero or more [0..*] Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-31150).
19. **MAY** contain zero or more [0..*] **participant** (CONF:1098-7523) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode="CSM"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1098-7524).
    b. **SHALL** contain exactly one [1..1] Drug Vehicle (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.24) (CONF:1098-16086).
20. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7536) such that it

a. **SHALL** contain exactly one [1..1] **@typeCode**="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7537).
b. **SHALL** contain exactly one [1..1] Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1098-16087).

21. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-7539) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7540).
    b. **SHALL** contain exactly one [1..1] **@inversionInd**="true" True (CONF:1098-7542).
    c. **SHALL** contain exactly one [1..1] Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1098-31387).
22. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-7543) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7547).
    b. **SHALL** contain exactly one [1..1] Medication Supply Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09) (CONF:1098-16089).
23. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7549) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7553).
    b. **SHALL** contain exactly one [1..1] Medication Dispense (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09) (CONF:1098-16090).
24. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-7552) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="CAUS" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1098-7544).
    b. **SHALL** contain exactly one [1..1] Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09) (CONF:1098-16091).
25. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1098-30820) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" Has component (CONF:1098-30821).
    b. **SHALL** contain exactly one [1..1] Drug Monitoring Act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.123) (CONF:1098-30822).

The following entryRelationship is used to indicate a given medication's order in a series. The nested Substance Administered Act identifies an administration in the series. The entryRelationship/sequenceNumber shows the order of this particular administration in that series.

26. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31515) such that it

a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-31516).
b. **SHALL** contain exactly one [1..1] **@inversionInd**="true" (CONF:1098-31517).
c. **MAY** contain zero or one [0..1] **sequenceNumber** (CONF:1098-31518).
d. **SHALL** contain exactly one [1..1] Substance Administered Act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.118) (CONF:1098-31519).

27. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32907) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1098-32908).
    b. **SHALL** contain exactly one [1..1] Medication Free Text Sig (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.147) (CONF:1098-32909).
28. **MAY** contain zero or more [0..*] **precondition** (CONF:1098-31520).
    a. The precondition, if present, **SHALL** contain exactly one [1..1] **@typeCode**="PRCN" (CONF:1098-31882).
    b. The precondition, if present, **SHALL** contain exactly one [1..1] Precondition for Substance Administration (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09) (CONF:1098-31883).
29. Medication Activity **SHOULD** include doseQuantity **OR** rateQuantity (CONF:1098-30800).

Figure 30: Medication Activity (V2) Example

```
<substanceAdministration classCode="SBADM" moodCode="EVN">
  <!-- ** Medication Activity (V2) ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.16"
         extension="2014-06-09"/>
  <id root="6c844c75-aa34-411c-b7bd-5e4a9f206e29"/>
  <statusCode code="active"/>
  <effectiveTime xsi:type="IVL_TS">
    <low value="20120318"/>
  </effectiveTime>
  <effectiveTime xsi:type="PIVL_TS" institutionSpecified="true" operator="A">
    <period value="12" unit="h"/>
  </effectiveTime>
  <routeCode code="C38288"
            codeSystem="2.16.840.1.113883.3.26.1.1"
            codeSystemName="NCI Thesaurus"
            displayName="ORAL"/>
  <doseQuantity value="1"/>
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- ** Medication information ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.23"
                extension="2014-06-09"/>
      <id root="2a620155-9d11-439e-92b3-5d9815ff4ee8"/>
      <manufacturedMaterial>
        <code code="197380"
              displayName="Atenolol 25 MG Oral Tablet"
              codeSystem="2.16.840.1.113883.6.88" codeSystemName="RxNorm"/>
      </manufacturedMaterial>
    </manufacturedProduct>
  </consumable>
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <!-- ** Indication ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.19"
             extension="2014-06-09"/>
      <id root="e63166c7-6482-4a44-83a1-37ccdbde725b"/>
      <code code="75321-0"
            codeSystem="2.16.840.1.113883.6.1"
            codeSystemName="LOINC"
            displayName="Clinical finding"/>
      <statusCode code="completed"/>
      <value xsi:type="CD"
             code="38341003"
             displayName="Hypertension"
             codeSystem="2.16.840.1.113883.6.96"/>
    </observation>
  </entryRelationship>
</substanceAdministration>
```


Figure 31: No Known Medications Example

```
<substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="true">
    <!-- ** Medication activity ** -->
    <templateId root="2.16.840.1.113883.10.20.22.4.16" extension="2014-06-09" />
    <id root="072f00fc-4f9d-4516-8d6f-ed00ed523fe0" />
    <statusCode code="active" />
    <effectiveTime xsi:type="IVL_TS">
        <low value="20110103" />
    </effectiveTime>
    <consumable>
        <manufacturedProduct classCode="MANU">
            <!-- ** Medication information ** -->
            <templateId root="2.16.840.1.113883.10.20.22.4.23" extension="2014-06-09" />
            <manufacturedMaterial>
                <code nullFlavor="OTH" codeSystem="2.16.840.1.113883.6.88">
                    <translation code="410942007" displayName="drug or medication"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" />
                </code>
            </manufacturedMaterial>
        </manufacturedProduct>
    </consumable>
</substanceAdministration>
```

3.4 Medication Information (V2)

`[manufacturedProduct: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09 (open)]`

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Table 14: Medication Information (V2) Contexts

Contained By:	Contains:
Medication Activity (V2) (required)	

A medication should be recorded as a pre-coordinated ingredient + strength + dose form (e.g., “metoprolol 25mg tablet”, “amoxicillin 400mg/5mL suspension”) where possible. This includes RxNorm codes whose Term Type is SCD (semantic clinical drug), SBD (semantic brand drug), GPCK (generic pack), BPCK (brand pack).

The dose (doseQuantity) represents how many of the consumables are to be administered at each administration event. As a result, the dose is always relative to the consumable. Thus, a patient consuming a single "metoprolol 25mg tablet" per administration will have a doseQuantity of "1", whereas a patient consuming "metoprolol" will have a dose of "25 mg".

1. **SHALL** contain exactly one [1..1] **`@classCode`**="`MANU`" (CodeSystem: `RoleClass urn:oid:2.16.840.1.113883.5.110` **STATIC**) (CONF:1098-7408).
2. **SHALL** contain exactly one [1..1] **`templateId`** (CONF:1098-7409) such that it
    a. **SHALL** contain exactly one [1..1] **`@root`**="`2.16.840.1.113883.10.20.22.4.23`" (CONF:1098-10506).

b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32579).

3. **MAY** contain zero or more [0..*] **id** (CONF:1098-7410).
4. **SHALL** contain exactly one [1..1] **manufacturedMaterial** (CONF:1098-7411).
   Note: A medication should be recorded as a pre-coordinated ingredient + strength + dose form (e.g., "metoprolol 25mg tablet", "amoxicillin 400mg/5mL suspension") where possible. This includes RxNorm codes whose Term Type is SCD (semantic clinical drug), SBD (semantic brand drug), GPCK (generic pack), BPCK (brand pack).
   a. This manufacturedMaterial **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet **Medication Clinical Drug** urn:oid:2.16.840.1.113762.1.4.1010.4 **DYNAMIC** (CONF:1098-7412).
      i. This code **MAY** contain zero or more [0..*] **translation**, which **MAY** be selected from ValueSet **Clinical Substance** urn:oid:2.16.840.1.113762.1.4.1010.2 **DYNAMIC** (CONF:1098-31884).
5. **MAY** contain zero or one [0..1] **manufacturerOrganization** (CONF:1098-7416).

Figure 32: Medication Information (V2) Example

```
<manufacturedProduct classCode="MANU">
    <!-- ** Medication information ** -->
    <templateId root="2.16.840.1.113883.10.20.22.4.23" extension="2014-06-09" />
    <id root="2a620155-9d11-439e-92b3-5d9815ff4ee8" />
    <manufacturedMaterial>
        <code code="573621" displayName="Proventil 0.09 MG/ACTUAT inhalant solution"
codeSystem="2.16.840.1.113883.6.88" codeSystemName="RxNorm" />
    </manufacturedMaterial>
    <manufacturerOrganization>
        <name>Medication Factory Inc.</name>
    </manufacturerOrganization>
</manufacturedProduct>
```

3.5 Problem Concern Act (V3)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01 (open)]

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Table 15: Problem Concern Act (V3) Contexts

Contained By:	Contains:
Problem Section (entries required) (V3) (required)	Problem Observation (V3)

This template reflects an ongoing concern on behalf of the provider that placed the concern on a patient's problem list. So long as the underlying condition is of concern to the provider (i.e., as long as the condition, whether active or resolved, is of ongoing concern and interest to the provider), the statusCode is "active". Only when the underlying condition is no longer of concern is the statusCode set to "completed". The effectiveTime reflects the time that the underlying condition was felt to be a concern; it may or may not correspond to the

effectiveTime of the condition (e.g., even five years later, the clinician may remain concerned about a prior heart attack).

The statusCode of the Problem Concern Act is the definitive indication of the status of the concern, whereas the effectiveTime of the nested Problem Observation is the definitive indication of whether or not the underlying condition is resolved.

The effectiveTime/low of the Problem Concern Act asserts when the concern became active. This equates to the time the concern was authored in the patient's chart. The effectiveTime/high asserts when the concern was completed (e.g., when the clinician deemed there is no longer any need to track the underlying condition).

A Problem Concern Act can contain many Problem Observations (templateId 2.16.840.1.113883.10.20.22.4.4). Each Problem Observation is a discrete observation of a condition, and therefore will have a statusCode of “completed”. The many Problem Observations nested under a Problem Concern Act reflect the change in the clinical understanding of a condition over time. For instance, a Concern may initially contain a Problem Observation of “chest pain”:

- Problem Concern 1

  --- Problem Observation: Chest Pain

Later, a new Problem Observation of “esophagitis” will be added, reflecting a better understanding of the nature of the chest pain. The later problem observation will have a more recent author time stamp.

- Problem Concern 1

  --- Problem Observation (author/time Jan 3, 2012): Chest Pain

  --- Problem Observation (author/time Jan 6, 2012): Esophagitis

Many systems display the nested Problem Observation with the most recent author time stamp, and provide a mechanism for viewing prior observations.

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-9024).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-9025).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-16772) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.3" (CONF:1198-16773).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32509).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-9026).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1198-9027).
    a. This code **SHALL** contain exactly one [1..1] **@code**="CONC" Concern (CONF:1198-19184).
    b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.6" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1198-32168).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-9029).

The statusCode of the Problem Concern Act is the definitive indication of the status of the concern, whereas the effectiveTime of the nested Problem Observation is the definitive indication of whether or not the underlying condition is resolved.

   a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet **ProblemAct statusCode** urn:oid:2.16.840.1.113883.11.20.9.19 **STATIC** (CONF:1198-31525).

7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-9030).
   a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1198-9032).
      Note: The effectiveTime/low asserts when the concern became active. This equates to the time the concern was authored in the patient's chart.
   b. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:1198-9033).
      Note: The effectiveTime/high asserts when the concern was completed (e.g., when the clinician deemed there is no longer any need to track the underlying condition).
8. **SHOULD** contain zero or more [0..*] Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-31146).
9. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:1198-9034) such that it
   a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-9035).
   b. **SHALL** contain exactly one [1..1] **Problem Observation (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01) (CONF:1198-15980).

The following entryRelationship represents the importance of the concern to a provider.

10. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31638) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-31639).
    b. **SHALL** contain exactly one [1..1] Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1198-31640).

Figure 33: Problem Concern Act (V3) Example

```
<act classCode="ACT" moodCode="EVN">
    <!-- ** Problem Concern Act (V2) ** -->
    <templateId root="2.16.840.1.113883.10.20.22.4.3"
          extension="2015-08-01" />
    <id root="ec8a6ff8-ed4b-4f7e-82c3-e98e58b45de7" />
    <code code="CONC" codeSystem="2.16.840.1.113883.5.6" displayName="Concern" />
    <!-- The statusCode represents the need to continue tracking the problem -->
    <!-- This is of ongoing concern to the provider -->
    <statusCode code="active" />
    <effectiveTime>
        <!-- The low value represents when the problem was first recorded in the patient's
chart -->
        <!-- Concern was documented on July 6, 2013 -->
        <low value="201307061145-0800" />
    </effectiveTime>
    <author typeCode="AUT">
        <templateId root="2.16.840.1.113883.10.20.22.4.119" />
        <!-- Same as Concern effectiveTime/low -->
        <time value="201307061145-0800" />
        <assignedAuthor>
            <id extension="555555555" root="2.16.840.1.113883.4.6" />
            <code code="207QA0505X" displayName="Adult Medicine"
codeSystem="2.16.840.1.113883.6.101"
        codeSystemName="Healthcare Provider Taxonomy (HIPAA)" />
        </assignedAuthor>
    </author>
    <entryRelationship typeCode="SUBJ">
        <observation classCode="OBS" moodCode="EVN">
            <!-- ** Problem Observation (V2) ** -->
            <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01" />
            <id root="ab1791b0-5c71-11db-b0de-0800200c9a66" />
            <code code="75323-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Condition" />
            <!-- The statusCode reflects the status of the observation itself -->
            <statusCode code="completed" />
            <effectiveTime>
                <!-- The low value reflects the date of onset -->
                <!-- Based on patient symptoms, presumed onset is July 3, 2013 -->
                <low value="20130703" />
                <!-- The high value reflects when the problem was known to be resolved -->
                <!-- Based on signs and symptoms, appears to be resolved on Aug 14, 2013 --
>
                <high value="20080814" />
            </effectiveTime>
            <value xsi:type="CD"
             code="233604007"
             codeSystem="2.16.840.1.113883.6.96"
             displayName="Pneumonia" />
            <author typeCode="AUT">
                <templateId root="2.16.840.1.113883.10.20.22.4.119" />
                <time value="200808141030-0800" />
                <assignedAuthor>
                    <id extension="555555555" root="2.16.840.1.113883.4.6" />
                    <code code="207QA0505X"
                displayName="Adult Medicine"
```



```
                codeSystem="2.16.840.1.113883.6.101"
                codeSystemName="Healthcare Provider Taxonomy (HIPAA)" />
                </assignedAuthor>
            </author>
        </observation>
    </entryRelationship>
</act>
```

3.6 Problem Observation (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01 (open)]

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Table 16: Problem Observation (V3) Contexts

Contained By:	Contains:
Encounter Diagnosis (V3) (required) Problem Concern Act (V3) (required)	

NOTE: *During the eICR CDA IG DSTU period, the use of the Problems Observation template to indicate pregnancy is being evaluated. The recommended SNOMED value codes are '60001007' Not pregnant (finding), and '77386006' Patient currently pregnant (finding). An eICR Example is provided for a pregnant patient.*

This template reflects a discrete observation about a patient's problem. Because it is a discrete observation, it will have a statusCode of "completed". The effectiveTime, also referred to as the "biologically relevant time" is the time at which the observation holds for the patient. For a provider seeing a patient in the clinic today, observing a history of heart attack that occurred five years ago, the effectiveTime is five years ago.

The effectiveTime of the Problem Observation is the definitive indication of whether or not the underlying condition is resolved. If the problem is known to be resolved, then an effectiveTime/high would be present. If the date of resolution is not known, then effectiveTime/high will be present with a nullFlavor of "UNK".

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-9041).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-9042).

The negationInd is used to indicate the absence of the condition in observation/value. A negationInd of "true" coupled with an observation/value of SNOMED code 64572001 "Disease (disorder)" indicates that the patient has no known conditions.

3. **MAY** contain zero or one [0..1] **@negationInd** (CONF:1198-10139).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-14926) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.4" (CONF:1198-14927).

b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32508).

5. **SHALL** contain at least one [1..*] **id** (CONF:1198-9043).
6. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet **Problem Type** urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 **STATIC** 2012-06-01 (CONF:1198-9045).
    a. This code **SHALL** contain at least one [1..*] **translation**, which **SHOULD** be selected from ValueSet **Problem Type** urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 2014-09-02 (CONF:1198-32848).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-9049).
    a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1198-19112).

If the problem is known to be resolved, but the date of resolution is not known, then the high element SHALL be present, and the nullFlavor attribute SHALL be set to 'UNK'. Therefore, the existence of an high element within a problem does indicate that the problem has been resolved.

8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-9050).

The effectiveTime/low (a.k.a. "onset date") asserts when the condition became biologically active.

    a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1198-15603).

The effectiveTime/high (a.k.a. "resolution date") asserts when the condition became biologically resolved.

    b. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:1198-15604).

9. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD", where the code **SHOULD** be selected from ValueSet **Problem** urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:1198-9058).

The observation/value and all the qualifiers together (often referred to as a post-coordinated expression) make up one concept. Qualifiers constrain the meaning of the primary code, and cannot negate it or change its meaning. Qualifiers can only be used according to well-defined rules of post-coordination and only if the underlying code system defines the use of such qualifiers or if there is a third code system that specifies how other code systems may be combined.

For example, SNOMED CT allows constructing concepts as a combination of multiple codes. SNOMED CT defines a concept "pneumonia (disorder)" (233604007) an attribute "finding site" (363698007) and another concept "left lower lobe of lung (body structure)" (41224006). SNOMED CT allows one to combine these codes in a code phrase, as shown in the sample XML.

    a. This value **MAY** contain zero or more [0..*] **qualifier** (CONF:1198-31870).
    b. This value **MAY** contain zero or more [0..*] **translation** (CONF:1198-16749) such that it
        i. **MAY** contain zero or one [0..1] **@code** (CodeSystem: ICD-10-CM urn:oid:2.16.840.1.113883.6.90 **STATIC**) (CONF:1198-16750).

A negationInd of "true" coupled with an observation/value/@code of SNOMED code 64572001 "Disease (disorder)" indicates that the patient has no known conditions.

c. This value **MAY** contain zero or one [0..1] **@code** (CONF:1198-31871).

10. **SHOULD** contain zero or more [0..*] Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-31147).
11. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-9059) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-9060).
    b. **SHALL** contain exactly one [1..1] **@inversionInd**="true" True (CONF:1198-9069).
    c. **SHALL** contain exactly one [1..1] Age Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.31) (CONF:1198-15590).
12. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-29951) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-31531).
    b. **SHALL** contain exactly one [1..1] Prognosis Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.113) (CONF:1198-29952).
13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31063) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-31532).
    b. **SHALL** contain exactly one [1..1] Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1198-31064).
14. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-9063) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-9068).
    b. **SHALL** contain exactly one [1..1] Problem Status (DEPRECATED) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2014-06-09) (CONF:1198-15591).

Figure 34: Problem Observation (V3) Example

```
<observation classCode="OBS" moodCode="EVN">
    <!-- ** Problem Observation (V3) ** -->
    <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01" />
    <id root="ab1791b0-5c71-11db-b0de-0800200c9a66" />
    <code code="64572001" displayName="Condition"
                                    codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT">
        <translation code="75323-6"
           codeSystem="2.16.840.1.113883.6.1"
           codeSystemName="LOINC"
           displayName="Condition"/>
    </code>
    <!-- The statusCode reflects the status of the observation itself -->
    <statusCode code="completed" />
    <effectiveTime>
        <!-- The low value reflects the date of onset -->
        <!-- Based on patient symptoms, presumed onset is July 3, 2013 -->
        <low value="20130703" />
        <!-- The high value reflects when the problem was known to be resolved -->
        <!-- Based on signs and symptoms, appears to be resolved on Aug 14, 2013 -->
        <high value="20080814" />
    </effectiveTime>
    <value xsi:type="CD"
    code="233604007"
    codeSystem="2.16.840.1.113883.6.96"
    displayName="Pneumonia" />
    <author typeCode="AUT">
        <templateId root="2.16.840.1.113883.10.20.22.4.119" />
        <time value="200808141030-0800" />
        <assignedAuthor>
            <id extension="555555555" root="2.16.840.1.113883.4.6" />
            <code code="207QA0505X"
        displayName="Adult Medicine"
        codeSystem="2.16.840.1.113883.6.101"
        codeSystemName="Healthcare Provider Taxonomy (HIPAA)" />
        </assignedAuthor>
    </author>
</observation>
```

3.7 Result Observation (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2015-08-01 (open)]

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Table 17: Result Observation (V3) Contexts

Contained By:	Contains:
Result Organizer (V3) (required)	

This template represents the results of a laboratory, radiology, or other study performed on a patient.

The result observation includes a statusCode to allow recording the status of an observation. "Pending" results (e.g., a test has been run but results have not been reported yet) should be represented as "active" ActStatus.

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-7130).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-7131).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7136) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.2" (CONF:1198-9138).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32575).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-7137).
5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from CodeSystem LOINC (urn:oid:2.16.840.1.113883.6.1) (CONF:1198-7133).
    a. This code **SHOULD** be a code from the LOINC that identifies the result observation. If an appropriate LOINC code does not exist, then the local code for this result **SHALL** be sent (CONF:1198-19212).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-7134).
    a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet **Result Status** urn:oid:2.16.840.1.113883.11.20.9.39 **STATIC** (CONF:1198-14849).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-7140).
   Note: Represents the biologically relevant time of the measurement (e.g., the time a blood pressure reading is obtained, the time the blood sample was obtained for a chemistry test).
8. **SHALL** contain exactly one [1..1] **value** (CONF:1198-7143).
    a. If Observation/value is a physical quantity (**xsi:type**="**PQ**"), the unit of measure **SHALL** be selected from ValueSet UnitsOfMeasureCaseSensitive 2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1198-31484).
    b. A coded or physical quantity value **MAY** contain zero or more [0..*] translations, which can be used to represent the original results as output by the lab (CONF:1198-31866).
    c. If Observation/value is a CD (**xsi:type**="**CD**") the value **SHOULD** be SNOMED-CT (CONF:1198-32610).
9. **SHOULD** contain zero or more [0..*] **interpretationCode** (CONF:1198-7147).
    a. The interpretationCode, if present, **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet **Observation Interpretation (HL7)** urn:oid:2.16.840.1.113883.1.11.78 **STATIC** (CONF:1198-32476).
10. **MAY** contain zero or one [0..1] **methodCode** (CONF:1198-7148).
11. **MAY** contain zero or one [0..1] **targetSiteCode** (CONF:1198-7153).
12. **SHOULD** contain zero or more [0..*] Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-7149).

13. **SHOULD** contain zero or more [0..*] **referenceRange** (CONF:1198-7150).
    a. The referenceRange, if present, **SHALL** contain exactly one [1..1] **observationRange** (CONF:1198-7151).
        i. This observationRange **SHALL NOT** contain [0..0] **code** (CONF:1198-7152).
        ii. This observationRange **SHALL** contain exactly one [1..1] **value** (CONF:1198-32175).

Figure 35: Result Observation (V3) Example

```
<observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.2" extension="2015-08-01" />
    <id root="7c0704bb-9c40-41b5-9c7d-26b2d59e234f" />
    <code code="20570-8" displayName="Hematocrit" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" />
    <statusCode code="completed" />
    <effectiveTime value="200803190830-0800" />
    <value xsi:type="PQ" value="35.3" unit="%" />
    <interpretationCode code="L" codeSystem="2.16.840.1.113883.5.83" />
    <author>
        <time value="200803190830-0800" />
        <assignedAuthor>
            <id extension="333444444" root="1.1.1.1.1.1.1.4" />
            <addr>
                <streetAddressLine>1017 Health Drive</streetAddressLine>
                <city>Portland</city>
                <state>OR</state>
                <postalCode>99123</postalCode>
                <country>US</country>
            </addr>
            <telecom use="WP" value="tel:+1(555)555-1017" />
            <assignedPerson>
                <name>
                    <given>William</given>
                    <given qualifier="CL">Bill</given>
                    <family>Beaker</family>
                </name>
            </assignedPerson>
            <representedOrganization>
                <name>Good Health Laboratory</name>
            </representedOrganization>
        </assignedAuthor>
    </author>
    <referenceRange>
        <observationRange>
            <text>Low</text>
            <value xsi:type="IVL_PQ">
                <low value="34.9" unit="%" />
                <high value="44.5" unit="%" />
            </value>
            <interpretationCode code="L" codeSystem="2.16.840.1.113883.5.83"/>
        </observationRange>
    </referenceRange>
</observation>
```


3.8 Result Organizer (V3)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2015-08-01 (open)]

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Table 18: Result Organizer (V3) Contexts

Contained By:	Contains:
Results Section (entries required) (V3) (required)	Result Observation (V3)

This template provides a mechanism for grouping result observations. It contains information applicable to all of the contained result observations. The Result Organizer code categorizes the contained results into one of several commonly accepted values (e.g., “Hematology”, “Chemistry”, “Nuclear Medicine”).

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

1. **SHALL** contain exactly one [1..1] **@classCode** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-7121).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-7122).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7126) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.1" (CONF:1198-9134).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32588).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-7127).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1198-7128).
    a. **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) (CONF:1198-19218).
    b. Laboratory results **SHOULD** be from LOINC (CodeSystem: 2.16.840.1.113883.6.1) or other constrained terminology named by the US Department of Health and Human Services Office of National Coordinator or other federal agency (CONF:1198-19219).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-7123).
    a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet **Result Status** urn:oid:2.16.840.1.113883.11.20.9.39 **STATIC** (CONF:1198-14848).
7. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:1198-31865).
   Note: The effectiveTime is an interval that spans the effectiveTimes of the contained result observations. Because all contained result observations have a required time stamp, it is not required that this effectiveTime be populated.
    a. The effectiveTime, if present, **SHALL** contain exactly one [1..1] **low** (CONF:1198-32488).

b. The effectiveTime, if present, **SHALL** contain exactly one [1..1] **high** (CONF:1198-32489).

8. **SHOULD** contain zero or more [0..*] Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-31149).
9. **SHALL** contain at least one [1..*] **component** (CONF:1198-7124) such that it
   a. **SHALL** contain exactly one [1..1] **Result Observation (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2015-08-01) (CONF:1198-14850).

Figure 36: Result Organizer (V3) Example

```
<organizer classCode="BATTERY" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.1" extension="2015-08-01" />
    <id root="7d5a02b0-67a4-11db-bd13-0800200c9a66" />
    <code code="57021-8" displayName="CBC W Auto Differential panel in Blood"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
    <statusCode code="completed" />
    <effectiveTime>
        <low value="200803190830-0800" />
        <high value="200803190830-0800" />
    </effectiveTime>
    <author>
        . . .
  </author>
    <component>
        <observation classCode="OBS" moodCode="EVN">
            <!-- ** Result observation ** -->
            <templateId root="2.16.840.1.113883.10.20.22.4.2" extension="2015-08-01" />
            . . .


        </observation>
    </component>
</organizer>
```

3.9 Social History Observation (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2015-08-01 (open)]

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Table 19: Social History Observation (V3) Contexts

Contained By:	Contains:
Social History Section (V3) (optional)	

This template represents a patient's occupations, lifestyle, and environmental health risk factors. Demographic data (e.g., marital status, race, ethnicity, religious affiliation) are captured in the header. Though tobacco use and exposure may be represented with a Social

History Observation, it is recommended to use the Current Smoking Status template or the Tobacco Use template instead, to represent smoking or tobacco habits.

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-8548).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-8549).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8550) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.38" (CONF:1198-10526).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32495).
4. **SHALL** contain at least one [1..*] **id** (CONF:1198-8551).
5. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet **Social History Type** urn:oid:2.16.840.1.113883.3.88.12.80.60 **STATIC** 2008-12-18 (CONF:1198-8558).
    a. This code **SHALL** contain at least one [1..*] **translation**, which **SHOULD** be selected from CodeSystem LOINC (urn:oid:2.16.840.1.113883.6.1) (CONF:1198-32853).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-8553).
    a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1198-19117).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-31868).
8. **SHOULD** contain zero or one [0..1] **value** (CONF:1198-8559).
    a. If Observation/value is a physical quantity (xsi:type="PQ"), the unit of measure **SHALL** be selected from ValueSet UnitsOfMeasureCaseSensitive (2.16.840.1.113883.1.11.12839) **DYNAMIC** (CONF:1198-8555).
9. **SHOULD** contain zero or more [0..*] Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-31869).

Figure 37: Social History Observation (V3) Example

```
<observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.22.4.38"
        extension="2015-08-01" />
    <id root="37f76c51-6411-4e1d-8a37-957fd49d2cef" />
    <code code="160573003" displayName="Alcohol intake"
                               codeSystem="2.16.840.1.113883.6.96"
                               codeSystemName="SNOMED CT">
        <translation code="74013-4"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        displayName="Alcoholic drinks per day"></translation>
        <statusCode code="completed" />
        <effectiveTime>
            <low value="20120215" />
        </effectiveTime>
        <value xsi:type="PQ" value="12" />
        <author typeCode="AUT">
            <templateId root="2.16.840.1.113883.10.20.22.4.119" />
    ...

        </author>
    </observation>
```


4 UNSPECIFIED

4.1 US Realm Address (AD.US.FIELDED)

[addr: identifier urn:oid:2.16.840.1.113883.10.20.22.5.2 (open)]

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Table 20: US Realm Address (AD.US.FIELDED) Contexts

Contained By:	Contains:
US Realm Header (V3) (required) Initial Public Health Case Report Document (eICR) (required)	

Reusable address template, for use in US Realm CDA Header.

1. **SHOULD** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet **PostalAddressUse** urn:oid:2.16.840.1.113883.1.11.10637 **STATIC** 2005-05-01 (CONF:81-7290).
2. **SHOULD** contain zero or one [0..1] **country**, which **SHALL** be selected from ValueSet **Country** urn:oid:2.16.840.1.113883.3.88.12.80.63 **DYNAMIC** (CONF:81-7295).
3. **SHOULD** contain zero or one [0..1] **state** (ValueSet: **StateValueSet** urn:oid:2.16.840.1.113883.3.88.12.80.1 **DYNAMIC**) (CONF:81-7293).
    a. State is required if the country is US. If country is not specified, it's assumed to be US. If country is something other than US, the state **MAY** be present but **MAY** be bound to different vocabularies (CONF:81-10024).
4. **SHALL** contain exactly one [1..1] **city** (CONF:81-7292).
5. **SHOULD** contain zero or one [0..1] **postalCode**, which **SHOULD** be selected from ValueSet **PostalCode** urn:oid:2.16.840.1.113883.3.88.12.80.2 **DYNAMIC** (CONF:81-7294).
    a. PostalCode is required if the country is US. If country is not specified, it's assumed to be US. If country is something other than US, the postalCode **MAY** be present but **MAY** be bound to different vocabularies (CONF:81-10025).
6. **SHALL** contain exactly one [1..1] **streetAddressLine** (CONF:81-7291).
7. **SHALL NOT** have mixed content except for white space (CONF:81-7296).

Figure 38: US Realm Address Example

```
<addr use="HP">
    <streetAddressLine>22 Sample Street</streetAddressLine>
    <city>Beaverton</city>
    <state>OR</state>
    <postalCode>97867</postalCode>
    <country>US</country>
</addr>
```

4.2 US Realm Date and Time (DTM.US.FIELDED)

[effectiveTime: identifier urn:oid:2.16.840.1.113883.10.20.22.5.4 (open)]

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Table 21: US Realm Date and Time (DTM.US.FIELDED) Contexts

Contained By:	Contains:
US Realm Header (V3) (required) Initial Public Health Case Report Document (eICR) (required)	

The US Realm Clinical Document Date and Time datatype flavor records date and time information. If no time zone offset is provided, you can make no assumption about time, unless you have made a local exchange agreement.

This data type uses the same rules as US Realm Date and Time (DT.US.FIELDED), but is used with elements having a datatype of TS.

1. **SHALL** be precise to the day (CONF:81-10127).
2. **SHOULD** be precise to the minute (CONF:81-10128).
3. **MAY** be precise to the second (CONF:81-10129).
4. If more precise than day, **SHOULD** include time-zone offset (CONF:81-10130).

Figure 39: US Realm Date and Time Example

```
<!-- Common values for date/time elements would range in precision to the day YYYYMMDD to
precision to the second with a time zone offset YYYYMMDDHHMMSS - ZZzz -->
<!-- time element with TS data type precise to the day for a birthdate -->
<time value=”19800531”/>
<!-- effectiveTime element with IVL<TS> data type precise to the second for an observation
-->
<effectiveTime>
    <low value='20110706122735-0800'/>
    <high value='20110706122815-0800'/>
</effectiveTime>
```

4.3 US Realm Patient Name (PTN.US.FIELDED)

[name: identifier urn:oid:2.16.840.1.113883.10.20.22.5.1 (open)]

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The US Realm Patient Name datatype flavor is a set of reusable constraints that can be used for the patient or any other person. It requires a first (given) and last (family) name. If a patient or person has only one name part (e.g., patient with first name only) place the name part in the field required by the organization. Use the appropriate nullFlavor, "Not Applicable" (NA), in the other field.

For information on mixed content see the Extensible Markup Language reference (http://www.w3c.org/TR/2008/REC-xml-20081126/).

1. **MAY** contain zero or one [0..1] **@use**, which **SHALL** be selected from ValueSet **EntityNameUse** urn:oid:2.16.840.1.113883.1.11.15913 **STATIC** 2005-05-01 (CONF:81-7154).
2. **SHALL** contain exactly one [1..1] **family** (CONF:81-7159).
    a. This family **MAY** contain zero or one [0..1] **@qualifier**, which **SHALL** be selected from ValueSet **EntityPersonNamePartQualifier** urn:oid:2.16.840.1.113883.11.20.9.26 **STATIC** 2011-09-30 (CONF:81-7160).
3. **SHALL** contain at least one [1..*] **given** (CONF:81-7157).
    a. Such givens **MAY** contain zero or one [0..1] **@qualifier**, which **SHALL** be selected from ValueSet **EntityPersonNamePartQualifier** urn:oid:2.16.840.1.113883.11.20.9.26 **STATIC** 2011-09-30 (CONF:81-7158).
    b. The second occurrence of given (given2]) if provided, **SHALL** include middle name or middle initial (CONF:81-7163).
4. **MAY** contain zero or more [0..*] **prefix** (CONF:81-7155).
    a. The prefix, if present, **MAY** contain zero or one [0..1] **@qualifier**, which **SHALL** be selected from ValueSet **EntityPersonNamePartQualifier** urn:oid:2.16.840.1.113883.11.20.9.26 **STATIC** 2011-09-30 (CONF:81-7156).
5. **MAY** contain zero or one [0..1] **suffix** (CONF:81-7161).
    a. The suffix, if present, **MAY** contain zero or one [0..1] **@qualifier**, which **SHALL** be selected from ValueSet **EntityPersonNamePartQualifier** urn:oid:2.16.840.1.113883.11.20.9.26 **STATIC** 2011-09-30 (CONF:81-7162).
6. **SHALL NOT** have mixed content except for white space (CONF:81-7278).

Figure 40: US Realm Patient Name Example

```
<name use="L">
    <prefix qualifier="TITLE">Rep</suffix>
    <given>Evelyn</given>
    <given qualifier="CL">Eve</given>
    <family qualifier="BR">Everywoman</family>
    <suffix qualifier="AC">J.D.</suffix>
</name>
```


4.4 US Realm Person Name (PN.US.FIELDED)

[name: identifier urn:oid:2.16.840.1.113883.10.20.22.5.1.1 (open)]

Published as part of Consolidated CDA Templates for Clinical Notes (US Realm) DSTU R1.1

Table 22: US Realm Person Name (PN.US.FIELDED) Contexts

Contained By:	Contains:
US Realm Header (V3) (required) Initial Public Health Case Report Document (eICR) (required)	

The US Realm Clinical Document Person Name datatype flavor is a set of reusable constraints that can be used for Persons.

1. **SHALL** contain exactly one [1..1] **name** (CONF:81-9368).
    a. The content of name **SHALL** be either a conformant Patient Name (PTN.US.FIELDED), or a string (CONF:81-9371).
    b. The string **SHALL NOT** contain name parts (CONF:81-9372).

5 TEMPLATE IDS IN THIS GUIDE

Table 23: Template Containments

Template Title	Template Type	templateId
Initial Public Health Case Report Document (eICR)	document	urn:hl7ii:2.16.840.1.113883.10.20.15.2:20160422
Encounters Section (entries required) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.22.1:2015-08-01
Encounter Activity (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2015-08-01
Encounter Diagnosis (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2015-08-01
Problem Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01
History of Present Illness Section	section	urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.4
Immunizations Section (entries required) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.2.1:2015-08-01
Medications Administered Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.38:2014-06-09
Medication Activity (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09
Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
Problem Section (entries required) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.5.1:2015-08-01
Problem Concern Act (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01
Problem Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01
Reason for Visit Section	section	urn:oid:2.16.840.1.113883.10.20.22.2.12
Results Section (entries required) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2015-08-01
Result Organizer (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2015-08-01
Result Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2015-08-01
Social History Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01
Social History Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2015-08-01
US Realm Address (AD.US.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
US Realm Date and Time	unspecified	urn:oid:2.16.840.1.113883.10.20.2

Template Title	Template Type	templateId
(DTM.US.FIELDED)		2.5.4
US Realm Person Name (PN.US.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1.1
US Realm Header (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01
US Realm Address (AD.US.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.2
US Realm Date and Time (DTM.US.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.4
US Realm Person Name (PN.US.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1.1

6 VALUE SETS IN THIS GUIDE

Table 24: ActEncounterCode

Value Set: ActEncounterCode 2.16.840.1.113883.1.11.13955 Domain provides codes that qualify the ActEncounterClass Value Set Source: http://www.hl7.org			
Code	**Code System**	**Code System OID**	**Print Name**
AMB	ActCode	urn:oid:2.16.840.1.113883.5.4	ambulatory
FLD	ActCode	urn:oid:2.16.840.1.113883.5.4	field
HH	ActCode	urn:oid:2.16.840.1.113883.5.4	home health
EMER	ActCode	urn:oid:2.16.840.1.113883.5.4	emergency
IMP	ActCode	urn:oid:2.16.840.1.113883.5.4	inpatient encounter
ACUTE	ActCode	urn:oid:2.16.840.1.113883.5.4	inpatient acute
NONAC	ActCode	urn:oid:2.16.840.1.113883.5.4	inpatient non-acute
PRENC	ActCode	urn:oid:2.16.840.1.113883.5.4	pre-admission
SS	ActCode	urn:oid:2.16.840.1.113883.5.4	short stay
VR	ActCode	urn:oid:2.16.840.1.113883.5.4	Virtual

Table 25: ServiceDeliveryLocationRoleType

Value Set: Personal And Legal Relationship Role Type urn:oid:2.16.840.1.113883.11.20.12.1

A personal or legal relationship records the role of a person in relation to another person, or a person to himself or herself. This value set is to be used when recording relationships based on personal or family ties or through legal assignment of responsibility.

Value Set Source: **http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html**

Code	Code System	Code System OID	Print Name
DX	RoleCode	urn:oid:2.16.840.1.113883.5.111	Diagnostics or therapeutics unit
CVDX	RoleCode	urn:oid:2.16.840.1.113883.5.111	Cardiovascular diagnostics or therapeutics unit
CATH	RoleCode	urn:oid:2.16.840.1.113883.5.111	Cardiac catheterization lab
ECHO	RoleCode	urn:oid:2.16.840.1.113883.5.111	Echocardiography lab
GIDX	RoleCode	urn:oid:2.16.840.1.113883.5.111	Gastroenterology diagnostics or therapeutics lab
ENDOS	RoleCode	urn:oid:2.16.840.1.113883.5.111	Endoscopy lab
RADDX	RoleCode	urn:oid:2.16.840.1.113883.5.111	Radiology diagnostics or therapeutics unit
RADO	RoleCode	urn:oid:2.16.840.1.113883.5.111	Radiation oncology unit
RNEU	RoleCode	urn:oid:2.16.840.1.113883.5.111	Neuroradiology unit
HOSP	RoleCode	urn:oid:2.16.840.1.113883.5.111	Hospital
…			

Table 26: Race

Value Set: Race urn:oid:2.16.840.1.113883.1.11.14914 Concepts in the race value set include the 5 minimum categories for race specified by OMB along with a more detailed set of race categories used by the Bureau of Census. Value Set Source: https://vsac.nlm.nih.gov/			
Code	**Code System**	**Code System OID**	**Print Name**
1002-5	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	American Indian or Alaska Native
2028-9	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Asian
2054-5	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Black or African American
2076-8	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Native Hawaiian or Other Pacific Islander
2106-3	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	White
1006-6	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Abenaki
1579-2	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Absentee Shawnee
1490-2	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Acoma
2126-1	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Afghanistani
1740-0	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Ahtna
…			

Table 27: HL7 BasicConfidentialityKind

Value Set: HL7 BasicConfidentialityKind urn:oid:2.16.840.1.113883.1.11.16926 A value set of HL7 Code indication the level of confidentiality an act. Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html			
Code	**Code System**	**Code System OID**	**Print Name**
N	ConfidentialityCode	urn:oid:2.16.840.1.113883.5.25	normal
R	ConfidentialityCode	urn:oid:2.16.840.1.113883.5.25	restricted
V	ConfidentialityCode	urn:oid:2.16.840.1.113883.5.25	very restricted

Table 28: Language

Value Set: Language urn:oid:2.16.840.1.113883.1.11.11526 A value set of codes defined by Internet RFC 4646 (replacing RFC 3066). Please see ISO 639 language code set maintained by Library of Congress for enumeration of language codes. Value Set Source: http://www.loc.gov/standards/iso639-2/php/code_list.php			
Code	**Code System**	**Code System OID**	**Print Name**
aa	Language	urn:oid:2.16.840.1.113883.6.121	Afar
ab	Language	urn:oid:2.16.840.1.113883.6.121	Abkhazian
ace	Language	urn:oid:2.16.840.1.113883.6.121	Achinese
ach	Language	urn:oid:2.16.840.1.113883.6.121	Acoli
ada	Language	urn:oid:2.16.840.1.113883.6.121	Adangme
ady	Language	urn:oid:2.16.840.1.113883.6.121	Adyghe; Adygei
ae	Language	urn:oid:2.16.840.1.113883.6.121	Avestan
af	Language	urn:oid:2.16.840.1.113883.6.121	Afrikaans
afa	Language	urn:oid:2.16.840.1.113883.6.121	Afro-Asiatic (Other)
afh	Language	urn:oid:2.16.840.1.113883.6.121	Afrihili
…			

Table 29: Telecom Use (US Realm Header)

Value Set: Telecom Use (US Realm Header) urn:oid:2.16.840.1.113883.11.20.9.20 Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html			
Code	**Code System**	**Code System OID**	**Print Name**
HP	AddressUse	urn:oid:2.16.840.1.113883.5.1119	Primary home
HV	AddressUse	urn:oid:2.16.840.1.113883.5.1119	Vacation home
WP	AddressUse	urn:oid:2.16.840.1.113883.5.1119	Work place
MC	AddressUse	urn:oid:2.16.840.1.113883.5.1119	Mobile contact

Table 30: Administrative Gender (HL7 V3)

Value Set: Administrative Gender (HL7 V3) urn:oid:2.16.840.1.113883.1.11.1 Administrative Gender based upon HL7 V3 vocabulary. This value set contains only male, female and undifferentiated concepts. Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html			
Code	**Code System**	**Code System OID**	**Print Name**
F	AdministrativeGender	urn:oid:2.16.840.1.113883.5.1	Female
M	AdministrativeGender	urn:oid:2.16.840.1.113883.5.1	Male
UN	AdministrativeGender	urn:oid:2.16.840.1.113883.5.1	Undifferentiated

Table 31: Marital Status

Value Set: Marital Status urn:oid:2.16.840.1.113883.1.11.12212 Marital Status is the domestic partnership status of a person. Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html			
Code	**Code System**	**Code System OID**	**Print Name**
A	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Annulled
D	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Divorced
T	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Domestic partner
I	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Interlocutory
L	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Legally Separated
M	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Married
S	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Never Married
P	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Polygamous
W	MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Widowed

Table 32: Religious Affiliation

Value Set: Religious Affiliation urn:oid:2.16.840.1.113883.1.11.19185 A value set of codes that reflect spiritual faith affiliation. Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html			
Code	**Code System**	**Code System OID**	**Print Name**
1001	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Adventist
1002	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	African Religions
1003	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Afro-Caribbean Religions
1004	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Agnosticism
1005	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Anglican
1006	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Animism
1007	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Atheism
1008	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Babi & Baha'I faiths
1009	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Baptist
1010	ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Bon
…			

Table 33: Race Category Excluding Nulls

Value Set: Race Category Excluding Nulls urn:oid:2.16.840.1.113883.3.2074.1.1.3 Value Set Source: https://vsac.nlm.nih.gov/			
Code	**Code System**	**Code System OID**	**Print Name**
1002-5	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	American Indian or Alaska Native
2028-9	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Asian
2054-5	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Black or African American
2076-8	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Native Hawaiian or Other Pacific Islander
2106-3	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	White

Table 34: Ethnicity

Value Set: Ethnicity urn:oid:2.16.840.1.114222.4.11.837 Code System: Race & Ethnicity - CDC 2.16.840.1.113883.6.238 Value Set Source: https://vsac.nlm.nih.gov/			
Code	**Code System**	**Code System OID**	**Print Name**
2135-2	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Hispanic or Latino
2186-5	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Not Hispanic or Latino

Table 35: Personal And Legal Relationship Role Type

Value Set: Personal And Legal Relationship Role Type urn:oid:2.16.840.1.113883.11.20.12.1 A personal or legal relationship records the role of a person in relation to another person, or a person to himself or herself. This value set is to be used when recording relationships based on personal or family ties or through legal assignment of responsibility. Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html			
Code	**Code System**	**Code System OID**	**Print Name**
SELF	RoleCode	urn:oid:2.16.840.1.113883.5.111	self
MTH	RoleCode	urn:oid:2.16.840.1.113883.5.111	mother
FTH	RoleCode	urn:oid:2.16.840.1.113883.5.111	father
DAU	RoleCode	urn:oid:2.16.840.1.113883.5.111	natural daughter
SON	RoleCode	urn:oid:2.16.840.1.113883.5.111	natural son
DAUINLAW	RoleCode	urn:oid:2.16.840.1.113883.5.111	daughter in-law
SONINLAW	RoleCode	urn:oid:2.16.840.1.113883.5.111	son in-law
GUARD	RoleCode	urn:oid:2.16.840.1.113883.5.111	guardian
HPOWATT	RoleCode	urn:oid:2.16.840.1.113883.5.111	healthcare power of attorney
…			

Table 36: Country

Value Set: Country urn:oid:2.16.840.1.113883.3.88.12.80.63 This identifies the codes for the representation of names of countries, territories and areas of geographical interest. Value Set Source: http://www.iso.org/iso/country_codes/iso_3166_code_lists.htm			
Code	**Code System**	**Code System OID**	**Print Name**
AW	Country	urn:oid:2.16.840.1.113883.3.88.12.80.63	Aruba
IL	Country	urn:oid:2.16.840.1.113883.3.88.12.80.63	Israel
…			

Table 37: PostalCode

Value Set: PostalCode urn:oid:2.16.840.1.113883.3.88.12.80.2 A value set of postal (ZIP) Code of an address in the United States Value Set Source: http://ushik.ahrq.gov/ViewItemDetails?system=mdr&itemKey=86671000			
Code	**Code System**	**Code System OID**	**Print Name**
19009	USPostalCodes	urn:oid:2.16.840.1.113883.6.231	Bryn Athyn
92869-1736	USPostalCodes	urn:oid:2.16.840.1.113883.6.231	Orange, CA
32830-8413	USPostalCodes	urn:oid:2.16.840.1.113883.6.231	Lake Buena Vista, FL
…			

Table 38: LanguageAbilityMode

Value Set: LanguageAbilityMode urn:oid:2.16.840.1.113883.1.11.12249 This identifies the language ability of the individual. A value representing the method of expression of the language. Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html			
Code	**Code System**	**Code System OID**	**Print Name**
ESGN	LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Expressed signed
ESP	LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Expressed spoken
EWR	LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Expressed written
RSGN	LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Received signed
RSP	LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Received spoken
RWR	LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Received written

Table 39: LanguageAbilityProficiency

Value Set: LanguageAbilityProficiency urn:oid:2.16.840.1.113883.1.11.12199 Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html			
Code	**Code System**	**Code System OID**	**Print Name**
E	LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.5.61	Excellent
F	LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.5.61	Fair
G	LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.5.61	Good
P	LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.5.61	Poor

Table 40: Detailed Ethnicity

Value Set: Detailed Ethnicity urn:oid:2.16.840.1.114222.4.11.877 List of detailed ethnicity codes reported on a limited basis Value Set Source: **http://phinvads.cdc.gov/vads/ViewValueSet.action?id=34D34BBC-617F-DD11-B38D-00188B398520#**			
Code	**Code System**	**Code System OID**	**Print Name**
2138-6	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Andalusian
2166-7	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Argentinean
2139-4	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Asturian
2142-8	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Belearic Islander
2167-5	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Bolivian
2163-4	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Canal Zone
2145-1	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Canarian
2140-2	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Castillian
2141-0	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Catalonian
2155-0	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Central American
…			

Table 41: Healthcare Provider Taxonomy (HIPAA)

Value Set: Healthcare Provider Taxonomy (HIPAA) urn:oid:2.16.840.1.114222.4.11.1066

The Health Care Provider Taxonomy value set is a collection of unique alphanumeric codes, ten characters in length. The code set is structured into three distinct Levels including Provider Type, Classification, and Area of Specialization. The Health Care Provider Taxonomy code set allows a single provider (individual, group, or institution) to identify their specialty category. Providers may have one or more than one value associated to them. When determining what value or values to associate with a provider, the user needs to review the requirements of the trading partner with which the value(s) are being used.

Value Set Source:
http://www.nucc.org/index.php?option=com_content&view=article&id=14&Itemid=125

Code	Code System	Code System OID	Print Name
171100000X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Acupuncturist
363LA2100X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Nurse Practitioner - Acute Care
364SA2100X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Clinical Nurse Specialist - Acute Care
101YA0400X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Counselor - Addiction (Substance Use Disorder)
103TA0400X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Psychologist - Addiction (Substance Use Disorder)
163WA0400X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Registered Nurse - Addiction (Substance Use Disorder)
207LA0401X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Anesthesiology - Addiction Medicine
207QA0401X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Family Medicine - Addiction Medicine
207RA0401X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Internal Medicine - Addiction Medicine
2084A0401X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Psychiatry & Neurology - Addiction Medicine
…			

Table 42: INDRoleclassCodes

Value Set: INDRoleclassCodes urn:oid:2.16.840.1.113883.11.20.9.33 Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html			
Code	**Code System**	**Code System OID**	**Print Name**
PRS	RoleClass	urn:oid:2.16.840.1.113883.5.110	personal relationship
NOK	RoleClass	urn:oid:2.16.840.1.113883.5.110	next of kin
CAREGIVER	RoleClass	urn:oid:2.16.840.1.113883.5.110	caregiver
AGNT	RoleClass	urn:oid:2.16.840.1.113883.5.110	agent
GUAR	RoleClass	urn:oid:2.16.840.1.113883.5.110	guarantor
ECON	RoleClass	urn:oid:2.16.840.1.113883.5.110	emergency contact

Table 43: x_ServiceEventPerformer

Value Set: x_ServiceEventPerformer urn:oid:2.16.840.1.113883.1.11.19601 Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html			
Code	**Code System**	**Code System OID**	**Print Name**
PRF	HL7ParticipationType	urn:oid:2.16.840.1.113883.5.90	performer
SPRF	HL7ParticipationType	urn:oid:2.16.840.1.113883.5.90	secondary performer
PPRF	HL7ParticipationType	urn:oid:2.16.840.1.113883.5.90	primary performer

Table 44: ParticipationFunction

Value Set: ParticipationFunction urn:oid:2.16.840.1.113883.1.11.10267

This HL7-defined value set can be used to specify the exact function an actor had in a service in all necessary detail.

Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.htm

Code	Code System	Code System OID	Print Name
SNRS	participationFunction	urn:oid:2.16.840.1.113883.5.88	Scrub nurse
SASST	participationFunction	urn:oid:2.16.840.1.113883.5.88	Second assistant surgeon
_AuthorizedParticipationFunction	participationFunction	urn:oid:2.16.840.1.113883.5.88	AuthorizedParticipationFunction
_AuthorizedReceiverParticipationFunction	participationFunction	urn:oid:2.16.840.1.113883.5.88	AuthorizedReceiverParticipationFunction
AUCG	participationFunction	urn:oid:2.16.840.1.113883.5.88	caregiver information receiver
AULR	participationFunction	urn:oid:2.16.840.1.113883.5.88	legitimate relationship information receiver
AUTM	participationFunction	urn:oid:2.16.840.1.113883.5.88	care team information receiver
AUWA	participationFunction	urn:oid:2.16.840.1.113883.5.88	work area information receiver
_ConsenterParticipationFunction	participationFunction	urn:oid:2.16.840.1.113883.5.88	ConsenterParticipationFunction
GRDCON	participationFunction	urn:oid:2.16.840.1.113883.5.88	legal guardian consent author
…			

Table 45: EncounterTypeCode

Value Set: EncounterTypeCode urn:oid:2.16.840.1.113883.3.88.12.80.32 This value set includes only the codes of the Current Procedure and Terminology designated for Evaluation and Management (99200 – 99607) (subscription to AMA Required Value Set Source: **http://www.ama-assn.org/ama/pub/physician-resources/solutions-managing-your-practice/coding-billing-insurance.page**			
Code	**Code System**	**Code System OID**	**Print Name**
99201	CPT4	urn:oid:2.16.840.1.113883.6.12	Office or other outpatient visit (problem focused)
99202	CPT4	urn:oid:2.16.840.1.113883.6.12	Office or other outpatient visit (expanded problem (expanded)
99203	CPT4	urn:oid:2.16.840.1.113883.6.12	Office or other outpatient visit (detailed)
99204	CPT4	urn:oid:2.16.840.1.113883.6.12	Office or other outpatient visit (comprehensive, (comprehensive - moderate)
99205	CPT4	urn:oid:2.16.840.1.113883.6.12	Office or other outpatient visit (comprehensive, comprehensive-high)
19681004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Nursing evaluation of patient and report (procedure)
207195004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	History and physical examination with evaluation and management of nursing facility patient (procedure)
209099002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	History and physical examination with management of domiciliary or rest home patient (procedure)
210098006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Domiciliary or rest home patient evaluation and management (procedure)
225929007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Joint home visit (procedure)
…			

Table 46: MoodCodeEvnInt

Value Set: MoodCodeEvnInt urn:oid:2.16.840.1.113883.11.20.9.18 Contains moodCode EVN and INT Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html			
Code	**Code System**	**Code System OID**	**Print Name**
EVN	ActMood	urn:oid:2.16.840.1.113883.5.1001	Event
INT	ActMood	urn:oid:2.16.840.1.113883.5.1001	Intent

Table 47: Medication Route FDA

Value Set: Medication Route FDA urn:oid:2.16.840.1.113883.3.88.12.3221.8.7 Route of Administration value set is based upon FDA Drug Registration and Listing Database (FDA Orange Book) which are used in FDA Structured Product Labeling (SPL). Value Set Source: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.3221.8.7			
Code	**Code System**	**Code System OID**	**Print Name**
C38192	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	AURICULAR (OTIC)
C38193	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	BUCCAL
C38194	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	CONJUNCTIVAL
C38675	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	CUTANEOUS
C38197	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	DENTAL
C38633	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	ELECTRO-OSMOSIS
C38205	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	ENDOCERVICAL
C38206	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	ENDOSINUSIAL
C38208	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	ENDOTRACHEAL
C38209	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	ENTERAL
…			

Table 48: Body Site

Value Set: Body Site urn:oid:2.16.840.1.113883.3.88.12.3221.8.9

Contains values descending from the SNOMED CT® Anatomical Structure (91723000) hierarchy or Acquired body structure (body structure) (280115004) or Anatomical site notations for tumor staging (body structure) (258331007) or Body structure, altered from its original anatomical structure (morphologic abnormality) (118956008) or Physical anatomical entity (body structure) (91722005) This indicates the anatomical site.

Value Set Source: http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.3221.8.9

Code	Code System	Code System OID	Print Name
362783006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	entire medial surface of lower extremity (body structure)
302539009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	entire hand (body structure)
287679003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	left hip region structure (body structure)
3341006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	right lung structure (body structure)
87878005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	left ventricular structure (body structure)
49848007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	structure of myocardium of left ventricle (body structure)
38033009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	amputation stump (body structure)
305005006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	6/7 interchondral joint (body structure)
28726007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	corneal structure (body structure)
75324005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	70 to 79 percent of body surface (body structure)
…			

Table 49: UnitsOfMeasureCaseSensitive

Value Set: UnitsOfMeasureCaseSensitive urn:oid:2.16.840.1.113883.1.11.12839 The UCUM code system provides a set of structural units from which working codes are built. There is an unlimited number of possible valid UCUM codes. Value Set Source: **http://unitsofmeasure.org/ucum.html**			
Code	**Code System**	**Code System OID**	**Print Name**
min	UCUM	urn:oid:2.16.840.1.113883.6.8	minute
hour	UCUM	urn:oid:2.16.840.1.113883.6.8	hr
%	UCUM	urn:oid:2.16.840.1.113883.6.8	percent
cm	UCUM	urn:oid:2.16.840.1.113883.6.8	centimeter
g	UCUM	urn:oid:2.16.840.1.113883.6.8	gram
g/(12.h)	UCUM	urn:oid:2.16.840.1.113883.6.8	gram per 12 hour
g/L	UCUM	urn:oid:2.16.840.1.113883.6.8	gram per liter
mol	UCUM	urn:oid:2.16.840.1.113883.6.8	mole
[IU]	UCUM	urn:oid:2.16.840.1.113883.6.8	international unit
Hz	UCUM	urn:oid:2.16.840.1.113883.6.8	Hertz
…			

Table 50: AdministrationUnitDoseForm

Value Set: AdministrationUnitDoseForm urn:oid:2.16.840.1.113762.1.4.1021.30 Codes that are similar to a drug "form" but limited to those used as units when describing drug administration when the drug item is a physical form that is continuous and therefore not administered as an "each" of the physical form, or is not using standard measurement units (inch, ounce, gram, etc.) This set does not include unit concepts that mimic "physical form" concepts that can be counted using "each", such as tablet, bar, lozenge, packet, etc. Value Set Source: https://vsac.nlm.nih.gov/			
Code	**Code System**	**Code System OID**	**Print Name**
C122629	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	Actuation Dosing Unit
C25397	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	Application Unit
C102405	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	Capful Dosing Unit
C122631	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	Dropperful Dosing Unit
C48501	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	Inhalation Dosing Unit
C48491	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	Metric Drop
C71204	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	Nebule Dosing Unit
C65060	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	Puff Dosing Unit
C48536	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	Scoopful Dosing Unit
C48537	NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1	Spray Dosing Unit
…			

Table 51: ActStatus

Value Set: ActStatus urn:oid:2.16.840.1.113883.1.11.159331 Contains the names (codes) for each of the states in the state-machine of the RIM Act class. Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html			
Code	**Code System**	**Code System OID**	**Print Name**
normal	ActStatus	urn:oid:2.16.840.1.113883.5.14	normal
aborted	ActStatus	urn:oid:2.16.840.1.113883.5.14	aborted
active	ActStatus	urn:oid:2.16.840.1.113883.5.14	active
cancelled	ActStatus	urn:oid:2.16.840.1.113883.5.14	cancelled
completed	ActStatus	urn:oid:2.16.840.1.113883.5.14	completed
held	ActStatus	urn:oid:2.16.840.1.113883.5.14	held
new	ActStatus	urn:oid:2.16.840.1.113883.5.14	new
suspended	ActStatus	urn:oid:2.16.840.1.113883.5.14	suspended
nullified	ActStatus	urn:oid:2.16.840.1.113883.5.14	nullified
obsolete	ActStatus	urn:oid:2.16.840.1.113883.5.14	obsolete

Table 52: Medication Clinical Drug

Value Set: Medication Clinical Drug urn:oid:2.16.840.1.113762.1.4.1010.4

All prescribable medication formulations represented using either a "generic" or "brand-specific" concept. This includes RxNorm codes whose Term Type is SCD (semantic clinical drug), SBD (semantic brand drug), GPCK (generic pack), BPCK (brand pack), SCDG (semantic clinical drug group), SBDG (semantic brand drug group), SCDF (semantic clinical drug form), or SBDF (semantic brand drug form).

Value set intensionally defined as a GROUPING made up of: Value Set: Medication Clinical General Drug (2.16.840.1.113883.3.88.12.80.17) (RxNorm Generic Drugs); Value Set: Medication Clinical Brand-specific Drug (2.16.840.1.113762.1.4.1010.5) (RxNorm Branded Drugs).

Value Set Source: **http://phinvads.cdc.gov/vads/ViewValueSet.action?id=239BEF3E-971C-DF11-B334-0015173D1785**

Code	Code System	Code System OID	Print Name
978727	RxNorm	urn:oid:2.16.840.1.113883.6.88	0.2 ML Dalteparin Sodium 12500 UNT/ML Prefilled Syringe [Fragmin]
827318	RxNorm	urn:oid:2.16.840.1.113883.6.88	Acetaminophen 250 MG / Aspirin 250 MG / Caffeine 65 MG Oral Capsule
199274	RxNorm	urn:oid:2.16.840.1.113883.6.88	Aspirin 300 MG Oral Capsule
362867	RxNorm	urn:oid:2.16.840.1.113883.6.88	Cefotetan Injectable Solution [Cefotan]
…			

Table 53: Clinical Substance

Value Set: Clinical Substance urn:oid:2.16.840.1.113762.1.4.1010.2

All substances that may need to be represented in the context of health care related activities. This value set is quite broad in coverage and includes concepts that may never be needed in a health care activity event, particularly the included SNOMED CT concepts. The code system-specific value sets in this grouping value set are intended to provide broad coverage of all kinds of agents, but the expectation for use is that the chosen concept identifier for a substance should be appropriately specific and drawn from the appropriate code system as noted: prescribable medications should use RXNORM concepts, more specific drugs and chemicals should be represented using UNII concepts, and any substances not found in either of those two code systems, should use the appropriate SNOMED CT concept. This overarching grouping value set is intended to support identification of prescribable medications, foods, general substances and environmental entities.

Value set intensionally defined as a GROUPING made up of: Value Set: Medication Clinical Drug (2.16.840.1.113762.1.4.1010.4) (RxNorm generic and brand codes); Value Set: Unique Ingredient Identifier - Complete Set (2.16.840.1.113883.3.88.12.80.20) (UNII codes); Value Set: Substance Other Than Clinical Drug (2.16.840.1.113762.1.4.1010.9) (SNOMED CT codes).

Value Set Source: **https://vsac.nlm.nih.gov/**

Code	Code System	Code System OID	Print Name
369436	RxNorm	urn:oid:2.16.840.1.113883.6.88	6-Aminocaproic Acid Oral Tablet [Amicar]
1116447	RxNorm	urn:oid:2.16.840.1.113883.6.88	Acepromazine Oral Tablet
9042592173	Unique Ingredient Identifier (UNII)	urn:oid:2.16.840.1.113883.4.9	ATROMEPINE
7673326042	Unique Ingredient Identifier (UNII)	urn:oid:2.16.840.1.113883.4.9	IRINOTECAN
413480003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Almond product (substance)
256915001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Aluminum hydroxide absorbed plasma (substance)
10020007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Biperiden hydrochloride (substance)
10133003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Cyclizine lactate (substance)
10174003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Procarbazine hydrochloride (substance)
102259006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Citrus fruit (substance)
…			

Table 54: ProblemAct statusCode

Value Set: ProblemAct statusCode urn:oid:2.16.840.1.113883.11.20.9.19 A ValueSet of HL7 actStatus codes for use on the concern act Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html			
Code	**Code System**	**Code System OID**	**Print Name**
completed	ActStatus	urn:oid:2.16.840.1.113883.5.14	Completed
aborted	ActStatus	urn:oid:2.16.840.1.113883.5.14	Aborted
active	ActStatus	urn:oid:2.16.840.1.113883.5.14	Active
suspended	ActStatus	urn:oid:2.16.840.1.113883.5.14	Suspended

Table 55: Problem

Value Set: Problem urn:oid:2.16.840.1.113883.3.88.12.3221.7.4

A value set of SNOMED-CT codes limited to terms descending from the Clinical Findings (404684003) or Situation with Explicit Context (243796009) hierarchies.

Specific URL Pending

Value Set Source: **http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.3221.7.4**

Code	Code System	Code System OID	Print Name
46635009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	diabetes mellitus type 1
234422006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	acute intermittent porphyria
31712002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	primary biliary cirrhosis
302002000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	difficulty moving
15188001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	hearing loss
129851009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	alteration in bowel elimination
247472004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	hives
39579001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	anaphylaxis
274945004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	AA amyloidosis (disorder)
129851009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	alteration in comfort: pain
…			

Table 56: Problem Type

Value Set: Problem Type 2.16.840.1.113883.3.88.12.3221.7.2 STATIC 2012-06-01
This value set indicates the level of medical judgment used to determine the existence of a problem.
Value Set Source: https://vsac.nlm.nih.gov

Code	Code System	Code System OID	Print Name
404684003	SNOMED CT	2.16.840.1.113883.6.96	Finding
409586006	SNOMED CT	2.16.840.1.113883.6.96	Complaint
282291009	SNOMED CT	2.16.840.1.113883.6.96	Diagnosis
64572001	SNOMED CT	2.16.840.1.113883.6.96	Condition
248536006	SNOMED CT	2.16.840.1.113883.6.96	Finding of functional performance and activity
418799008	SNOMED CT	2.16.840.1.113883.6.96	Symptom
55607006	SNOMED CT	2.16.840.1.113883.6.96	Problem
373930000	SNOMED CT	2.16.840.1.113883.6.96	Cognitive function finding

Value Set: Problem Type 2.16.840.1.113883.3.88.12.3221.7.2 STATIC 2014-09-02
This value set indicates the level of medical judgment used to determine the existence of a problem.
Value Set Source: https://vsac.nlm.nih.gov

Code	Code System	Code System OID	Print Name
75326-9	LOINC	2.16.840.1.113883.6.1	Problem HL7.CCDAR2
75325-1	LOINC	2.16.840.1.113883.6.1	Symptom HL7.CCDAR2
75324-4	LOINC	2.16.840.1.113883.6.1	Functional performance HL7.CCDAR2
75323-6	LOINC	2.16.840.1.113883.6.1	Condition HL7.CCDAR2
29308-4	LOINC	2.16.840.1.113883.6.1	Diagnosis
75322-8	LOINC	2.16.840.1.113883.6.1	Complaint HL7.CCDAR2
75275-8	LOINC	2.16.840.1.113883.6.1	Cognitive Function HL7.CCDAR2
75321-0	LOINC	2.16.840.1.113883.6.1	Clinical finding HL7.CCDAR2
75319-4	LOINC	2.16.840.1.113883.6.1	Cognitive function family member HL7.CCDAR2
75318-6	LOINC	2.16.840.1.113883.6.1	Problem family member HL7.CCDAR2
75317-8	LOINC	2.16.840.1.113883.6.1	Symptom family member HL7.CCDAR2
75316-0	LOINC	2.16.840.1.113883.6.1	Functional performance family member HL7.CCDAR2
75315-2	LOINC	2.16.840.1.113883.6.1	Condition family member HL7.CCDAR2
75314-5	LOINC	2.16.840.1.113883.6.1	Diagnosis family member HL7.CCDAR2

75313-7	LOINC	2.16.840.1.113883.6.1	Complaint family member HL7.CCDAR2
75312-9	LOINC	2.16.840.1.113883.6.1	Clinical finding family member HL7.CCDAR2

Table 57: Result Status

Value Set: Result Status urn:oid:2.16.840.1.113883.11.20.9.39
Value Set Source:
http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html

Code	Code System	Code System OID	Print Name
aborted	ActStatus	urn:oid:2.16.840.1.113883.5.14	aborted
active	ActStatus	urn:oid:2.16.840.1.113883.5.14	active
cancelled	ActStatus	urn:oid:2.16.840.1.113883.5.14	cancelled
completed	ActStatus	urn:oid:2.16.840.1.113883.5.14	completed
held	ActStatus	urn:oid:2.16.840.1.113883.5.14	held
suspended	ActStatus	urn:oid:2.16.840.1.113883.5.14	suspended

Table 58: Observation Interpretation (HL7)

Value Set: Observation Interpretation (HL7) urn:oid:2.16.840.1.113883.1.11.78 Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.htm			
Code	**Code System**	**Code System OID**	**Print Name**
A	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	abnormal
B	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	better
Carrier	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	carrier
D	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	decreased
HX	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	above high threshold
I	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	intermediate
IND	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	indeterminate
LX	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	below low threshold
MS	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	moderately susceptible
N	HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83	normal
…			

Table 59: Social History Type

Value Set: Social History Type urn:oid:2.16.840.1.113883.3.88.12.80.60

A value set of SNOMED-CT observable entity codes containing common social history observables. Though Tobacco Use and Exposure exists in this value set, it is recommended to use the Current Smoking Status template or the Tobacco Use template to represent smoking or tobacco habits.

Value Set Source: **https://vsac.nlm.nih.gov**

Code	Code System	Code System OID	Print Name
160573003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Alcohol intake (observable entity)
363908000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Details of drug misuse behavior (observable entity)
364703007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Employment detail (observable entity)
256235009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Exercise (observable entity)
228272008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Health-related behavior (observable entity)
364393001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Nutritional observable (observable entity)
425400000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Toxic exposure status (observable entity)
105421008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Educational achievement (observable entity)
302160007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Household, family and support network detail (observable entity)
423514004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Community resource details (observable entity)
…			

Table 60: PostalAddressUse

Value Set: PostalAddressUse urn:oid:2.16.840.1.113883.1.11.10637
A value set of HL7 Codes for address use.
Value Set Source:
http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html

Code	Code System	Code System OID	Print Name
BAD	AddressUse	urn:oid:2.16.840.1.113883.5.1119	bad address
CONF	AddressUse	urn:oid:2.16.840.1.113883.5.1119	confidential
DIR	AddressUse	urn:oid:2.16.840.1.113883.5.1119	direct
H	AddressUse	urn:oid:2.16.840.1.113883.5.1119	home address
HP	AddressUse	urn:oid:2.16.840.1.113883.5.1119	primary home
HV	AddressUse	urn:oid:2.16.840.1.113883.5.1119	vacation home
PHYS	AddressUse	urn:oid:2.16.840.1.113883.5.1119	physical visit address
PST	AddressUse	urn:oid:2.16.840.1.113883.5.1119	postal address
PUB	AddressUse	urn:oid:2.16.840.1.113883.5.1119	public
TMP	AddressUse	urn:oid:2.16.840.1.113883.5.1119	temporary
…			

Table 61: StateValueSet

Value Set: StateValueSet urn:oid:2.16.840.1.113883.3.88.12.80.1 Identifies addresses within the United States are recorded using the FIPS 5-2 two-letter alphabetic codes for the State, District of Columbia, or an outlying area of the United States or associated area Value Set Source: **http://www.census.gov/geo/reference/ansi_statetables.html**			
Code	**Code System**	**Code System OID**	**Print Name**
AL	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Alabama
AK	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Alaska
AZ	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Arizona
AR	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Arkansas
CA	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	California
CO	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Colorado
CT	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Connecticut
DE	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Delaware
DC	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	District of Columbia
FL	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Florida
…			

Table 62: EntityNameUse

Value Set: EntityNameUse urn:oid:2.16.840.1.113883.1.11.15913 Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.htm			
Code	**Code System**	**Code System OID**	**Print Name**
A	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Artist/Stage
ABC	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Alphabetic
ASGN	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Assigned
C	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	License
I	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Indigenous/Tribal
IDE	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Ideographic
L	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Legal
P	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Pseudonym
PHON	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Phonetic
R	EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Religious
…			

Table 63: EntityPersonNamePartQualifier

Value Set: EntityPersonNamePartQualifier urn:oid:2.16.840.1.113883.11.20.9.26 Value Set Source: http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html			
Code	**Code System**	**Code System OID**	**Print Name**
AC	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	academic
AD	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	adopted
BR	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	birth
CL	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	callme
IN	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	initial
NB	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	nobility
PR	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	professional
SP	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	spouse
TITLE	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	title
VV	EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	voorvoegsel

7 CODE SYSTEMS IN THIS GUIDE

Table 64: Code Systems

Name	OID
ActCode	urn:oid:2.16.840.1.113883.5.4
ActMood	urn:oid:2.16.840.1.113883.5.1001
ActStatus	urn:oid:2.16.840.1.113883.5.14
AddressUse	urn:oid:2.16.840.1.113883.5.1119
AdministrativeGender	urn:oid:2.16.840.1.113883.5.1
ConfidentialityCode	urn:oid:2.16.840.1.113883.5.25
Country	urn:oid:2.16.840.1.113883.3.88.12.80.63
CPT4	urn:oid:2.16.840.1.113883.6.12
EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43
EntityNameUse	urn:oid:2.16.840.1.113883.5.45
FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92
Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101
HITSP-CS-83	urn:oid:2.16.840.1.113883.5.83
HL7 Race	urn:oid:2.16.840.1.113883.5.104
HL7ActClass	urn:oid:2.16.840.1.113883.5.6
HL7ActRelationshipType	urn:oid:2.16.840.1.113883.5.1002
HL7NullFlavor	urn:oid:2.16.840.1.113883.5.1008
HL7ParticipationType	urn:oid:2.16.840.1.113883.5.90
ICD-10-CM	urn:oid:2.16.840.1.113883.6.90
Language	urn:oid:2.16.840.1.113883.6.121
LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60
LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.5.61
LOINC	urn:oid:2.16.840.1.113883.6.1
MaritalStatus	urn:oid:2.16.840.1.113883.5.2
NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1
participationFunction	urn:oid:2.16.840.1.113883.5.88
Participationsignature	urn:oid:2.16.840.1.113883.5.89
Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238
ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076
RoleClass	urn:oid:2.16.840.1.113883.5.110
RoleCode	urn:oid:2.16.840.1.113883.5.111
RxNorm	urn:oid:2.16.840.1.113883.6.88
SNOMED CT	urn:oid:2.16.840.1.113883.6.96
UCUM	urn:oid:2.16.840.1.113883.6.8
Unique Ingredient Identifier (UNII)	urn:oid:2.16.840.1.113883.4.9

Name	OID
USPostalCodes	urn:oid:2.16.840.1.113883.6.231

