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HL7 CDA® R2 Implementation Guide: Public Health Case Report, Release 2 STU Release 1.1 – US Realm

January 2017

HL7 Standard for Trial Use

Publication of this standard for trial use and comment has been approved by Health Level Seven International (HL7). This draft standard is not an accredited American National Standard. The comment period for use of this draft standard shall end 18 months from the date of publication. Suggestions for revision should be submitted at http://www.hl7.org/dstucomments/index.cfm.

Following this 18 month evaluation period, this draft standard, revised as necessary, will be submitted to a normative ballot in preparation for approval by ANSI as an American National Standard. Implementations of this draft standard shall be viable throughout the normative ballot process and for up to six months after publication of the relevant normative standard.

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1 DOCUMENT-LEVEL TEMPLATES

Document-level templates describe the purpose and rules for constructing a conforming CDA document. Document templates include constraints on the CDA header and indicate contained section-level templates.

Each document-level template contains the following information:

- Scope and intended use of the document type
- Description and explanatory narrative
- Template metadata (e.g., templateId)
- Header constraints (e.g., document type, template id, participants)
- Required and optional section-level templates

1.1 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 1: 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.

Table 2: US Realm Header (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01)					
realmCode	1..1	SHALL		1198-16791	US
typeId	1..1	SHALL		1198-5361	
@root	1..1	SHALL		1198-5250	2.16.840.1.113883.1.3
@extension	1..1	SHALL		1198-5251	POCD_HD000040
templateId	1..1	SHALL		1198-5252	
@root	1..1	SHALL		1198-10036	2.16.840.1.113883.10.20.22.1.1
@extension	1..1	SHALL		1198-32503	2015-08-01
id	1..1	SHALL		1198-5363	
code	1..1	SHALL		1198-5253	
title	1..1	SHALL		1198-5254	
effectiveTime	1..1	SHALL		1198-5256	US Realm Date and Time (DTM.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4
confidentialityCode	1..1	SHALL		1198-5259	urn:oid:2.16.840.1.113883.1.11.16926 (HL7 BasicConfidentialityKind)
languageCode	1..1	SHALL		1198-5372	urn:oid:2.16.840.1.113883.1.11.11526 (Language)
setId	0..1	MAY		1198-5261	
versionNumber	0..1	MAY		1198-5264	
recordTarget	1..*	SHALL		1198-5266	
patientRole	1..1	SHALL		1198-5267	
id	1..*	SHALL		1198-5268	
addr	1..*	SHALL		1198-5271	US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2

telecom	1..*	SHALL		1198-5280	
@use	0..1	SHOULD		1198-5375	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
patient	1..1	SHALL		1198-5283	
name	1..*	SHALL		1198-5284	US Realm Person Name (PN.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1
administrativeGenderCode	1..1	SHALL		1198-6394	urn:oid:2.16.840.1.113883.1.11.1 (Administrative Gender (HL7 V3))
birthTime	1..1	SHALL		1198-5298	
maritalStatusCode	0..1	SHOULD		1198-5303	urn:oid:2.16.840.1.113883.1.11.12212 (Marital Status)
religiousAffiliationCode	0..1	MAY		1198-5317	urn:oid:2.16.840.1.113883.1.11.19185 (Religious Affiliation)
raceCode	1..1	SHALL		1198-5322	urn:oid:2.16.840.1.113883.3.2074.1.1.3 (Race Category Excluding Nulls)
sdtc:raceCode	0..*	MAY		1198-7263	urn:oid:2.16.840.1.113883.1.11.14914 (Race)
ethnicGroupCode	1..1	SHALL		1198-5323	urn:oid:2.16.840.1.114222.4.11.837 (Ethnicity)
sdtc:ethnicGroupCode	0..*	MAY		1198-32901	urn:oid:2.16.840.1.114222.4.11.877 (Detailed Ethnicity)
guardian	0..*	MAY		1198-5325	
code	0..1	SHOULD		1198-5326	urn:oid:2.16.840.1.113883.11.20.12.1 (Personal And Legal Relationship Role Type)
addr	0..*	SHOULD		1198-5359	US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
telecom	0..*	SHOULD		1198-5382	
@use	0..1	SHOULD		1198-7993	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
guardianPerson	1..1	SHALL		1198-5385	
name	1..*	SHALL		1198-5386	US Realm Person Name (PN.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1

birthplace	0..1	MAY		1198-5395	
place	1..1	SHALL		1198-5396	
addr	1..1	SHALL		1198-5397	
country	0..1	SHOULD		1198-5404	urn:oid:2.16.840.1.113883.3.88.12.80.63 (Country)
postalCode	0..1	MAY		1198-5403	urn:oid:2.16.840.1.113883.3.88.12.80.2 (PostalCode)
languageCommunication	0..*	SHOULD		1198-5406	
languageCode	1..1	SHALL		1198-5407	urn:oid:2.16.840.1.113883.1.11.11526 (Language)
modeCode	0..1	MAY		1198-5409	urn:oid:2.16.840.1.113883.1.11.12249 (LanguageAbilityMode)
proficiencyLevelCode	0..1	SHOULD		1198-9965	urn:oid:2.16.840.1.113883.1.11.12199 (LanguageAbilityProficiency)
preferenceInd	0..1	SHOULD		1198-5414	
providerOrganization	0..1	MAY		1198-5416	
id	1..*	SHALL		1198-5417	
@root	0..1	SHOULD		1198-16820	2.16.840.1.113883.4.6
name	1..*	SHALL		1198-5419	
telecom	1..*	SHALL		1198-5420	
@use	0..1	SHOULD		1198-7994	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
addr	1..*	SHALL		1198-5422	US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
author	1..*	SHALL		1198-5444	
time	1..1	SHALL		1198-5445	US Realm Date and Time (DTM.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4
assignedAuthor	1..1	SHALL		1198-5448	
id	1..*	SHALL		1198-5449	

id	0..1	SHOULD		1198-32882	
@nullFlavor	0..1	MAY		1198-32883	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = UNK
@root	1..1	SHALL		1198-32884	2.16.840.1.113883.4.6
@extension	0..1	SHOULD		1198-32885	
code	0..1	SHOULD		1198-16787	
@code	1..1	SHALL		1198-16788	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1198-5452	US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
telecom	1..*	SHALL		1198-5428	
@use	0..1	SHOULD		1198-7995	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
assignedPerson	0..1	SHOULD		1198-5430	
name	1..*	SHALL		1198-16789	US Realm Person Name (PN.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1
assignedAuthoringDevice	0..1	SHOULD		1198-16783	
manufacturerModelName	1..1	SHALL		1198-16784	
softwareName	1..1	SHALL		1198-16785	
dataEnterer	0..1	MAY		1198-5441	
assignedEntity	1..1	SHALL		1198-5442	
id	1..*	SHALL		1198-5443	
@root	0..1	SHOULD		1198-16821	2.16.840.1.113883.4.6
code	0..1	MAY		1198-32173	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1198-5460	US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2

telecom	1..*	SHALL		1198-5466	
@use	0..1	SHOULD		1198-7996	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
assignedPerson	1..1	SHALL		1198-5469	
name	1..*	SHALL		1198-5470	US Realm Person Name (PN.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1
informant	0..*	MAY		1198-8001	
assignedEntity	1..1	SHALL		1198-8002	
id	1..*	SHALL		1198-9945	
code	0..1	MAY		1198-32174	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1198-8220	US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
assignedPerson	1..1	SHALL		1198-8221	
name	1..*	SHALL		1198-8222	US Realm Person Name (PN.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1
informant	0..*	MAY		1198-31355	
relatedEntity	1..1	SHALL		1198-31356	
custodian	1..1	SHALL		1198-5519	
assignedCustodian	1..1	SHALL		1198-5520	
representedCustodianOrganization	1..1	SHALL		1198-5521	
id	1..*	SHALL		1198-5522	
@root	0..1	SHOULD		1198-16822	2.16.840.1.113883.4.6
name	1..1	SHALL		1198-5524	
telecom	1..1	SHALL		1198-5525	

@use	0..1	SHOULD		1198-7998	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
addr	1..1	SHALL		1198-5559	US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
informationRecipient	0..*	MAY		1198-5565	
intendedRecipient	1..1	SHALL		1198-5566	
id	0..*	MAY		1198-32399	
informationRecipient	0..1	MAY		1198-5567	
name	1..*	SHALL		1198-5568	US Realm Person Name (PN.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1
receivedOrganization	0..1	MAY		1198-5577	
name	1..1	SHALL		1198-5578	
legalAuthenticator	0..1	SHOULD		1198-5579	
time	1..1	SHALL		1198-5580	US Realm Date and Time (DTM.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4
signatureCode	1..1	SHALL		1198-5583	
@code	1..1	SHALL		1198-5584	urn:oid:2.16.840.1.113883.5.89 (HL7ParticipationSignature) = S
sdtc:signatureText	0..1	MAY		1198-30810	
assignedEntity	1..1	SHALL		1198-5585	
id	1..*	SHALL		1198-5586	
@root	0..1	MAY		1198-16823	2.16.840.1.113883.4.6
code	0..1	MAY		1198-17000	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1198-5589	US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
telecom	1..*	SHALL		1198-	

				5595	
@use	0..1	SHOULD		1198-7999	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
assignedPerson	1..1	SHALL		1198-5597	
name	1..*	SHALL		1198-5598	US Realm Person Name (PN.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1
authenticator	0..*	MAY		1198-5607	
time	1..1	SHALL		1198-5608	US Realm Date and Time (DTM.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4
signatureCode	1..1	SHALL		1198-5610	
@code	1..1	SHALL		1198-5611	urn:oid:2.16.840.1.113883.5.89 (HL7ParticipationSignature) = S
sdtc:signatureText	0..1	MAY		1198-30811	
assignedEntity	1..1	SHALL		1198-5612	
id	1..*	SHALL		1198-5613	
@root	0..1	SHOULD		1198-16824	2.16.840.1.113883.4.6
code	0..1	MAY		1198-16825	
@code	0..1	MAY		1198-16826	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
addr	1..*	SHALL		1198-5616	US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
telecom	1..*	SHALL		1198-5622	
@use	0..1	SHOULD		1198-8000	urn:oid:2.16.840.1.113883.11.20.9.20 (Telecom Use (US Realm Header))
assignedPerson	1..1	SHALL		1198-5624	
name	1..*	SHALL		1198-5625	US Realm Person Name (PN.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1
participant	0..*	MAY		1198-	

				10003	
time	0..1	MAY		1198-10004	
inFulfillmentOf	0..*	MAY		1198-9952	
order	1..1	SHALL		1198-9953	
id	1..*	SHALL		1198-9954	
documentationOf	0..*	MAY		1198-14835	
serviceEvent	1..1	SHALL		1198-14836	
effectiveTime	1..1	SHALL		1198-14837	
low	1..1	SHALL		1198-14838	
performer	0..*	SHOULD		1198-14839	
@typeCode	1..1	SHALL		1198-14840	urn:oid:2.16.840.1.113883.1.11.19601 (x_ServiceEventPerformer)
functionCode	0..1	MAY		1198-16818	
@code	0..1	SHOULD		1198-32889	urn:oid:2.16.840.1.113883.1.11.10267 (ParticipationFunction)
assignedEntity	1..1	SHALL		1198-14841	
id	1..*	SHALL		1198-14846	
@root	0..1	SHOULD		1198-14847	2.16.840.1.113883.4.6
code	0..1	SHOULD		1198-14842	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
authorization	0..*	MAY		1198-16792	
consent	1..1	SHALL		1198-16793	
id	0..*	MAY		1198-16794	
code	0..1	MAY		1198-16795	
statusCode	1..1	SHALL		1198-16797	
@code	1..1	SHALL		1198-16798	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = completed
componentOf	0..1	MAY		1198-	

				9955	
encompassingEncounter	1..1	SHALL		1198-9956	
id	1..*	SHALL		1198-9959	
effectiveTime	1..1	SHALL		1198-9958	

1.1.1 Properties

1.1.1.1 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).

1.1.1.2 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).

1.1.1.3 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).

1.1.1.4 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).

1.1.1.5 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).

1.1.1.6 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).

1.1.1.7 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).

1.1.1.8 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).

1.1.1.9 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: HL7ParticipationSignature urn:oid:2.16.840.1.113883.5.89 **STATIC**) (CONF:1198-5584).

1.1.1.10 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).

1.1.1.11 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: HL7ParticipationSignature 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).

1.1.1.12 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).

1.1.1.13 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).

1.1.1.14 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).

1.1.1.15 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).

1.1.1.16 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).

1.1.1.17 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).

Table 3: 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 4: 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: https://vsac.nlm.nih.gov/			
Code	**Code System**	**Code System OID**	**Print Name**
N	HL7Confidentiality	urn:oid:2.16.840.1.113883.5.25	normal
R	HL7Confidentiality	urn:oid:2.16.840.1.113883.5.25	restricted
V	HL7Confidentiality	urn:oid:2.16.840.1.113883.5.25	very restricted

Table 5: 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 6: 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: https://vsac.nlm.nih.gov/			
Code	**Code System**	**Code System OID**	**Print Name**
HP	HL7AddressUse	urn:oid:2.16.840.1.113883.5.1119	Primary home
HV	HL7AddressUse	urn:oid:2.16.840.1.113883.5.1119	Vacation home
WP	HL7AddressUse	urn:oid:2.16.840.1.113883.5.1119	Work place
MC	HL7AddressUse	urn:oid:2.16.840.1.113883.5.1119	Mobile contact

Table 7: 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: https://vsac.nlm.nih.gov/			
Code	**Code System**	**Code System OID**	**Print Name**
F	HL7AdministrativeGender	urn:oid:2.16.840.1.113883.5.1	Female
M	HL7AdministrativeGender	urn:oid:2.16.840.1.113883.5.1	Male
UN	HL7AdministrativeGender	urn:oid:2.16.840.1.113883.5.1	Undifferentiated

Table 8: 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: https://vsac.nlm.nih.gov/			
Code	**Code System**	**Code System OID**	**Print Name**
A	HL7MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Annulled
D	HL7MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Divorced
T	HL7MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Domestic partner
I	HL7MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Interlocutory
L	HL7MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Legally Separated
M	HL7MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Married
S	HL7MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Never Married
P	HL7MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Polygamous
W	HL7MaritalStatus	urn:oid:2.16.840.1.113883.5.2	Widowed

Table 9: 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: https://vsac.nlm.nih.gov/			
Code	**Code System**	**Code System OID**	**Print Name**
1001	HL7ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Adventist
1002	HL7ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	African Religions
1003	HL7ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Afro-Caribbean Religions
1004	HL7ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Agnosticism
1005	HL7ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Anglican
1006	HL7ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Animism
1007	HL7ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Atheism
1008	HL7ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Babi & Baha'I faiths
1009	HL7ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Baptist
1010	HL7ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076	Bon
…			

Table 10: 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 11: 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 12: 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: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.11.20.12.1			
Code	**Code System**	**Code System OID**	**Print Name**
SELF	HL7RoleCode	urn:oid:2.16.840.1.113883.5.111	self
MTH	HL7RoleCode	urn:oid:2.16.840.1.113883.5.111	mother
FTH	HL7RoleCode	urn:oid:2.16.840.1.113883.5.111	father
DAU	HL7RoleCode	urn:oid:2.16.840.1.113883.5.111	natural daughter
SON	HL7RoleCode	urn:oid:2.16.840.1.113883.5.111	natural son
DAUINLAW	HL7RoleCode	urn:oid:2.16.840.1.113883.5.111	daughter in-law
SONINLAW	HL7RoleCode	urn:oid:2.16.840.1.113883.5.111	son in-law
GUARD	HL7RoleCode	urn:oid:2.16.840.1.113883.5.111	guardian
HPOWATT	HL7RoleCode	urn:oid:2.16.840.1.113883.5.111	healthcare power of attorney
…			

Table 13: 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 14: 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 15: 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: https://vsac.nlm.nih.gov/			
Code	**Code System**	**Code System OID**	**Print Name**
ESGN	HL7LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Expressed signed
ESP	HL7LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Expressed spoken
EWR	HL7LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Expressed written
RSGN	HL7LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Received signed
RSP	HL7LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Received spoken
RWR	HL7LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60	Received written

Table 16: LanguageAbilityProficiency

Value Set: LanguageAbilityProficiency urn:oid:2.16.840.1.113883.1.11.12199 Value Set Source: https://vsac.nlm.nih.gov/			
Code	**Code System**	**Code System OID**	**Print Name**
E	HL7LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.5.61	Excellent
F	HL7LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.5.61	Fair
G	HL7LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.5.61	Good
P	HL7LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.5.61	Poor

Table 17: 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: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.877			
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 18: 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:
https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.1066

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 19: INDRoleclassCodes

Value Set: INDRoleclassCodes urn:oid:2.16.840.1.113883.11.20.9.33 Value Set Source: https://vsac.nlm.nih.gov/			
Code	**Code System**	**Code System OID**	**Print Name**
PRS	HL7RoleClass	urn:oid:2.16.840.1.113883.5.110	personal relationship
NOK	HL7RoleClass	urn:oid:2.16.840.1.113883.5.110	next of kin
CAREGIVER	HL7RoleClass	urn:oid:2.16.840.1.113883.5.110	caregiver
AGNT	HL7RoleClass	urn:oid:2.16.840.1.113883.5.110	agent
GUAR	HL7RoleClass	urn:oid:2.16.840.1.113883.5.110	guarantor
ECON	HL7RoleClass	urn:oid:2.16.840.1.113883.5.110	emergency contact

Table 20: 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 21: 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: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
SNRS	HL7ParticipationFunction	urn:oid:2.16.840.1.113883.5.88	Scrub nurse
SASST	HL7ParticipationFunction	urn:oid:2.16.840.1.113883.5.88	Second assistant surgeon
_AuthorizedParticipationFunction	HL7ParticipationFunction	urn:oid:2.16.840.1.113883.5.88	AuthorizedParticipationFunction
_AuthorizedReceiverParticipationFunction	HL7ParticipationFunction	urn:oid:2.16.840.1.113883.5.88	AuthorizedReceiverParticipationFunction
AUCG	HL7ParticipationFunction	urn:oid:2.16.840.1.113883.5.88	caregiver information receiver
AULR	HL7ParticipationFunction	urn:oid:2.16.840.1.113883.5.88	legitimate relationship information receiver
AUTM	HL7ParticipationFunction	urn:oid:2.16.840.1.113883.5.88	care team information receiver
AUWA	HL7ParticipationFunction	urn:oid:2.16.840.1.113883.5.88	work area information receiver
_ConsenterParticipationFunction	HL7ParticipationFunction	urn:oid:2.16.840.1.113883.5.88	ConsenterParticipationFunction
GRDCON	HL7ParticipationFunction	urn:oid:2.16.840.1.113883.5.88	legal guardian consent author
…			

Figure 1: 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 2: 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 3: 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 4: 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 5: 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 6: 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 7: 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 8: 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 9: Digital signature Example

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


Figure 10: 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 11: 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 12: 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 13: 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 14: 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 15: 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 16: 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>
```

1.1.2 Initial Public Health Case Report Document (eICR) (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.15.2:2016-12-01 (open)]

Draft as part of Public Health Case Report, Release 1, STU Release 1.1 - US Realm

Table 22: Initial Public Health Case Report Document (eICR) (V2) Contexts

Contained By:	Contains:
	Encounters Section (entries required) (V3) History of Present Illness Section Immunizations Section (entries required) (V3) Medications Administered Section (V2) Plan of Treatment 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 STU1.1" Implementation Guide.

The Initial Public Health Case Report Document (eICR) (V2) template is a specialization of the C-CDA R2.1 US Realm Header (V3) (2.16.840.1.113883.10.20.22.1.1:2015-08-01). 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 eICR IG contains a set of templates ("trigger code templates") designed to flag the existence of reportable condition trigger codes in diagnoses and ordered/resulted laboratory tests. There may be more than one trigger code type and more than one trigger code of each type in an eICR CDA Document.

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 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, 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.

Table 23: Initial Public Health Case Report Document (eICR) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.15.2:2016-12-01)					
templateId	1..1	SHALL		3284-94	
@root	1..1	SHALL		3284-95	2.16.840.1.113883.10.20.15.2
@extension	1..1	SHALL		3284-96	2016-12-01
code	1..1	SHALL		3284-107	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 55751-2
title	1..1	SHALL		3284-109	Initial Public Health Case Report
effectiveTime	1..1	SHALL		3284-141	
@nullFlavor	0..0	SHALL NOT		3284-143	
recordTarget	1..1	SHALL		3284-103	
patientRole	1..1	SHALL		3284-104	
id	1..*	SHALL		3284-146	
addr	1..*	SHALL		3284-147	US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
patient	1..1	SHALL		3284-105	
sdtc:deceasedInd	1..1	SHALL		3284-306	
sdtc:deceasedTime	0..1	MAY		3284-106	
guardian	0..*	SHOULD		3284-110	
addr	1..*	SHALL		3284-115	US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
telecom	1..*	SHALL		3284-116	
guardianPerson	1..1	SHALL		3284-129	
languageCommunication	1..*	SHALL		3284-130	
author	1..*	SHALL		3284-	

				127	
time	1..1	SHALL		3284-142	US Realm Date and Time (DTM.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4
@nullFlavor	0..0	SHALL NOT		3284-144	
assignedAuthor	1..1	SHALL		3284-128	
documentationOf	0..1	MAY		3284-396	
serviceEvent	1..1	SHALL		3284-397	
code	1..1	SHALL		3284-398	
@code	1..1	SHALL		3284-399	PHC1464
@codeSystem	1..1	SHALL		3284-400	urn:oid:2.16.840.1.114222.4.5.274 (PHIN VS (CDC Local Coding System)) = 2.16.840.1.114222.4.5.274
componentOf	1..1	SHALL		3284-1	
encompassingEncounter	1..1	SHALL		3284-2	
id	1..*	SHALL		3284-3	
code	1..1	SHALL		3284-4	urn:oid:2.16.840.1.113883.1.11.13955 (ActEncounterCode)
effectiveTime	1..1	SHALL		3284-5	
@nullFlavor	0..0	SHALL NOT		3284-124	
low	1..1	SHALL		3284-20	
@nullFlavor	0..0	SHALL NOT		3284-402	
high	1..1	SHALL		3284-21	
@nullFlavor	0..0	SHALL NOT		3284-403	
responsibleParty	1..1	SHALL		3284-6	
assignedEntity	1..1	SHALL		3284-7	
id	1..*	SHALL		3284-8	
@root	1..1	SHALL		3284-22	
@extension	0..1	MAY		3284-23	
addr	1..*	SHALL		3284-125	US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.2

					0.22.5.2
telecom	1..*	SHALL		3284-24	
assignedPerson	1..1	SHALL		3284-9	
name	1..1	SHALL		3284-25	US Realm Person Name (PN.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1
representedOrganization	1..1	SHALL		3284-10	
name	1..1	SHALL		3284-26	
addr	1..1	SHALL		3284-27	US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
location	1..1	SHALL		3284-11	
healthCareFacility	1..1	SHALL		3284-12	
id	1..1	SHALL		3284-13	
@root	1..1	SHALL		3284-28	
@extension	0..1	MAY		3284-29	
code	1..1	SHALL		3284-14	urn:oid:2.16.840.1.113883.1.11.17660 (ServiceDeliveryLocationRoleType)
location	1..1	SHALL		3284-15	
addr	1..1	SHALL		3284-32	US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
serviceProviderOrganization	1..1	SHALL		3284-16	
name	1..1	SHALL		3284-33	
telecom	1..*	SHALL		3284-34	
addr	1..1	SHALL		3284-126	US Realm Address (AD.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2
component	1..1	SHALL		3284-35	
structuredBody	1..1	SHALL		3284-	

				85	
component	1..1	SHALL		3284-86	
section	1..1	SHALL		3284-90	Encounters Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.22.1:2015-08-01
component	1..1	SHALL		3284-97	
section	1..1	SHALL		3284-100	History of Present Illness Section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.4
component	1..1	SHALL		3284-98	
section	1..1	SHALL		3284-101	Reason for Visit Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.12
component	1..1	SHALL		3284-87	
section	1..1	SHALL		3284-91	Social History Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01
entry	1..1	SHALL		3284-326	
observation	1..1	SHALL		3284-327	Birth Sex Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.200:2016-06-01
entry	0..*	SHOULD		3284-334	
act	1..1	SHALL		3284-335	Travel History (identifier: urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.1:2016-12-01
component	1..1	SHALL		3284-99	
section	1..1	SHALL		3284-102	Problem Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.5.1:2015-08-01
component	1..1	SHALL		3284-88	
section	1..1	SHALL		3284-92	Medications Administered Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.38:2014-06-09
component	1..1	SHALL		3284-89	

section	1..1	SHALL		3284-93	Results Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2015-08-01
component	0..1	SHOULD		3284-148	
section	1..1	SHALL		3284-149	Immunizations Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.2.1:2015-08-01
component	0..1	MAY		3284-308	
section	1..1	SHALL		3284-309	Plan of Treatment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09

1.1.3 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:3284-94) 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:3284-95).
    b. **SHALL** contain exactly one [1..1] **@extension**="2016-12-01" (CONF:3284-96).
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:3284-107).
4. **SHALL** contain exactly one [1..1] **title**="Initial Public Health Case Report" (CONF:3284-109).
5. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:3284-141).
   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:3284-143).

1.1.3.1 recordTarget

6. **SHALL** contain exactly one [1..1] **recordTarget** (CONF:3284-103).
    a. This recordTarget **SHALL** contain exactly one [1..1] **patientRole** (CONF:3284-104).
        i. This patientRole **SHALL** contain at least one [1..*] **id** (CONF:3284-146).
        Note: If multiple identifiers are available, a medical record number, social security number, medicaid number, or all three SHOULD be provided in this field.

Although "county" is not explicitly specified in the US Realm Address, it is not precluded from use and for the purposes of this IG it is recommended to be included. See the eICR recordTarget example following this section for further details.

        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:3284-147).
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:3284-105).
    1. This patient **SHALL** contain exactly one [1..1] **sdtc:deceasedInd** (CONF:3284-306).
    2. This patient **MAY** contain zero or one [0..1] **sdtc:deceasedTime** (CONF:3284-106).
        a. If sdtc:deceasedInd is true then sdtc:deceasedTime **SHALL** be present (CONF:3284-307).
    3. This patient **SHOULD** contain zero or more [0..*] **guardian** (CONF:3284-110).
        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:3284-115).
        b. The guardian, if present, **SHALL** contain at least one [1..*] **telecom** (CONF:3284-116).
        c. The guardian, if present, **SHALL** contain exactly one [1..1] **guardianPerson** (CONF:3284-129).
    4. This patient **SHALL** contain at least one [1..*] **languageCommunication** (CONF:3284-130).

Figure 17: eICR recordTarget Example

```
<recordTarget>
    <!-- Patient demographic information -->
    <patientRole>
        <!-- Fake root for sample -->
        <id extension="123453" root="2.16.840.1.113883.19.5" />
        <!--SSN-->
        <id extension="111-00-1234" root="2.16.840.1.113883.4.1" />
        <!--Could have multiple addresses-->
        <addr use="H">
            <streetAddressLine>5101 Peachtree St NE</streetAddressLine>
            <city>Atlanta</city>
            <state>GA</state>
            <postalCode>30302</postalCode>
            <!-- Although "county" is not explicitly specified in the US Realm Address,
                   it is not precluded from use and for the purposes of this IG it is
                   recommended to be included. -->
            <county>Fulton County</county>
            <country>US</country>
        </addr>
        <telecom use="HP" value="tel:+1-(404)555-1212" />
        <telecom use="WP" value="tel:+1(555)555-2003" />
        <patient>
            <name use="L">
                <given>Jane</given>
                <given qualifier="IN">H</given>
                <family>Stinn</family>
            </name>
            <administrativeGenderCode code="F" codeSystem="2.16.840.1.113883.5.1" />
            <birthTime value="19741124" />
            <!-- If sdtc:deceasedInd is true then sdtc:deceasedTime must be present -->
            <sdtc:deceasedInd value="false" />
            <raceCode code="2106-3"
                codeSystem="2.16.840.1.113883.6.238"
                codeSystemName="Race &amp;amp; Ethnicity - CDC"
                displayName="White" />
            <ethnicGroupCode code="2186-5"
                codeSystem="2.16.840.1.113883.6.238"
                codeSystemName="Race &amp;amp; Ethnicity - CDC"
                displayName="Not Hispanic or Latino" />
            <!-- Parent/Guardian information-->
            <guardian>
                <!-- Parent/Guardian Address -->
                <addr use="H">
                    <streetAddressLine>1700 Dawes St</streetAddressLine>
                    <city>Lowell</city>
                    <state>MA</state>
                    <postalCode>02368</postalCode>
                    <country>US</country>
                </addr>
                <!-- Parent/Guardian phone -->
                <telecom use="HP" value="tel:+1(999)555-1212" />
                <!-- Parent/Guardian email -->
                <telecom value="mailto:mail@guardian.com" />
                <guardianPerson>
                    <!-- Parent/guardian name -->
```



```
                    <name use="L">
                        <given>Ruth</given>
                        <given qualifier="IN">L</given>
                        <family>Stinn</family>
                    </name>
                </guardianPerson>
            </guardian>
            <languageCommunication>
                <languageCode code="en" />
                <modeCode code="ESP"
                    codeSystem="2.16.840.1.113883.5.60"
                    codeSystemName="LanguageAbilityMode"
                    displayName="Expressed spoken" />
                <proficiencyLevelCode code="G"
                    codeSystem="2.16.840.1.113883.5.61"
                    codeSystemName="LanguageAbilityProficiency"
                    displayName="Good" />
                <!-- Preferred Language -->
                <preferenceInd value="true" />
            </languageCommunication>
        </patient>
    </patientRole>
</recordTarget>
```

1.1.3.2 author

7. **SHALL** contain at least one [1..*] **author** (CONF:3284-127).
   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:3284-142).
      i. This time **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:3284-144).
   b. Such authors **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:3284-128).

Figure 18: eICR author Example

```
<author>
    <time value="20161107094421-0500" />
    <!--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>4646 Brown Rd</streetAddressLine>
            <city>Salem</city>
            <state>MA</state>
            <postalCode>02368</postalCode>
            <country>US</country>
        </addr>
        <telecom use="WP" value="tel:+1-(555)555-1212;ext=9998" />
        <assignedAuthoringDevice>
            <manufacturerModelName displayName="Acme" />
            <softwareName displayName="Acme EHR" />
        </assignedAuthoringDevice>
    </assignedAuthor>
</author>
```

1.1.3.3 documentationOf

When documentationOf/serviceEvent is present, it indicates that this eICR document was manually initiated/generated by the provider.

8. **MAY** contain zero or one [0..1] **documentationOf** (CONF:3284-396).
    a. The documentationOf, if present, **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:3284-397).
        i. This serviceEvent **SHALL** contain exactly one [1..1] **code** (CONF:3284-398).
            1. This code **SHALL** contain exactly one [1..1] **@code**="PHC1464" Manually Initiated eICR (CONF:3284-399).
            2. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.114222.4.5.274" (CodeSystem: PHIN VS (CDC Local Coding System) urn:oid:2.16.840.1.114222.4.5.274) (CONF:3284-400).

Figure 19: eICR documentationOf/serviceProvider Example

```
<documentationOf>
    <serviceEvent>
        <code code="PHC1464"
            displayName="Manually Initiated eICR"
            codeSystem="2.16.840.1.114222.4.5.274"
            codeSystemName="PHIN VS (CDC Local Coding System)" />
        <effectiveTime>
            <low value="20161106000000-0500"/>
        </effectiveTime>
    </serviceEvent>
</documentationOf>
```

1.1.3.4 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, along with the visit/encounter ID.

9. **SHALL** contain exactly one [1..1] **componentOf** (CONF:3284-1).
    a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:3284-2).
        i. This encompassingEncounter **SHALL** contain at least one [1..*] **id** (CONF:3284-3).
        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** urn:oid:2.16.840.1.113883.1.11.13955 (CONF:3284-4).
        Note: PatientEncounter.typeCode
        iii. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:3284-5).
            1. This effectiveTime **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:3284-124).
            2. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:3284-20).
            Note: PatientEncounter.fromDateTime
                a. This low **SHALL NOT** contain [0..0] @nullFlavor (CONF:3284-402).
            3. This effectiveTime **SHALL** contain exactly one [1..1] **high** (CONF:3284-21).
            Note: PatientEncounter.thruDateTime. This value is associated with the patient's departure (e.g. discharge).
                a. This high **SHALL NOT** contain [0..0] @nullFlavor (CONF:3284-403).

iv. This encompassingEncounter **SHALL** contain exactly one [1..1] **responsibleParty** (CONF:3284-6).
    1. This responsibleParty **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:3284-7).
       Note: ResponsibleProvider
        a. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:3284-8).
           Note: ResponsibleProvider.identifier. If avalable, the NPI Idenitifier SHALL be provided.
            i. Such ids **SHALL** contain exactly one [1..1] **@root** (CONF:3284-22).
            ii. Such ids **MAY** contain zero or one [0..1] **@extension** (CONF:3284-23).
        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:3284-125).
        c. This assignedEntity **SHALL** contain at least one [1..*] **telecom** (CONF:3284-24).
           Note: ResponsibleProvider.telecomAddress
        d. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson** (CONF:3284-9).
            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:3284-25).
               Note: ResponsibleProvider.name
        e. This assignedEntity **SHALL** contain exactly one [1..1] **representedOrganization** (CONF:3284-10).
           Note: ResponsibleProviderFacility
            i. This representedOrganization **SHALL** contain exactly one [1..1] **name** (CONF:3284-26).
               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:3284-27).
               Note: ProviderFacility.postalAddress
v. This encompassingEncounter **SHALL** contain exactly one [1..1] **location** (CONF:3284-11).
    1. This location **SHALL** contain exactly one [1..1] **healthCareFacility** (CONF:3284-12).

a. This healthCareFacility **SHALL** contain exactly one [1..1] **id** (CONF:3284-13).
   Note: CareDeliveryFacility.identifier
   i. This id **SHALL** contain exactly one [1..1] **@root** (CONF:3284-28).
   ii. This id **MAY** contain zero or one [0..1] **@extension** (CONF:3284-29).

Please note: the binding to the ServiceDeliveryLocationRoleType value set is SHOULD, so, for concepts that are not represented in this value set, it is possible to use another code from a recognized code system.

To represent "Correctional Facility" use SNOMED CT code 257656006: Correctional Facility.

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:3284-14).
   Note: CareFacility.typeCode
   i. This code **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:3284-401).

c. This healthCareFacility **SHALL** contain exactly one [1..1] **location** (CONF:3284-15).
   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:3284-32).
   Note: CareDeliveryFacility.postalAddress

d. This healthCareFacility **SHALL** contain exactly one [1..1] **serviceProviderOrganization** (CONF:3284-16).
   i. This serviceProviderOrganization **SHALL** contain exactly one [1..1] **name** (CONF:3284-33).
   Note: CareDeliveryOrganization.name
   ii. This serviceProviderOrganization **SHALL** contain at least one [1..*] **telecom** (CONF:3284-34).
   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:3284-126).

Figure 20: eICR componentOf (encompassingEncounter) Example

```
<componentOf>
    <encompassingEncounter>
        <!--encounter ID-->
        <id extension="9937012" root="2.16.840.1.113883.19" />
        <!--CPT-4 E/M codes - granular-->
        <code code="99213"
            codeSystem="2.16.840.1.113883.6.12"
            codeSystemName="CPT-4"
            displayName="Office outpatient visit 15 minutes">
            <!--ActClassEncounterCodes - high level -->
            <translation code="AMB"
                codeSystem="2.16.840.1.113883.5.4"
                codeSystemName="HL7 ActEncounterCode"
                displayName="Ambulatory" />
        </code>
        <effectiveTime>
            <low value="20161107" />
            <high value="20161107" />
        </effectiveTime>
        <!--Provider in charge of care when case reported-->
        <responsibleParty>
            <assignedEntity>
                <id extension="6666666666666" root="2.16.840.1.113883.4.6" />
                <addr>
                    <streetAddressLine>2100 North Ave</streetAddressLine>
                    <city>Burlington</city>
                    <state>MA</state>
                    <postalCode>02368</postalCode>
                    <country>US</country>
                </addr>
                <!-- Provider Phone -->
                <telecom use="WP" value="tel:+1(555)555-1003" />
                <!-- Provider Fax -->
                <telecom use="WP" value="fax:+1(555)555-1234" />
                <!-- Provider Email -->
                <telecom use="WP" value="mailto:mail@provider_domain.com" />
                <assignedPerson>
                    <!-- Provider Name -->
                    <name>
                        <given>Michael</given>
                        <family>Coletta</family>
                        <suffix qualifier="AC">M.D.</suffix>
                    </name>
                </assignedPerson>
                <representedOrganization>
                    <!-- Provider Facility/Office Name -->
                    <name>BMass Doctors</name>
                    <!-- Provider Address -->
                    <addr>
                        <streetAddressLine>2100 North Ave</streetAddressLine>
                        <city>Burlington</city>
                        <state>MA</state>
                        <postalCode>02368</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="2.16.840.1.113883.5.111"
                    displayName="Outpatient facility" />
                <!-- Facility location within larger healthcare organization
                    e.g Kaiser Vacaville within Kaiser North-->
                <location>
                    <addr>
                        <streetAddressLine>4646 Brown Rd</streetAddressLine>
                        <city>Salem</city>
                        <state>MA</state>
                        <postalCode>02368</postalCode>
                        <country>US</country>
                    </addr>
                </location>
                <!--Facility contact information-->
                <serviceProviderOrganization>
                    <!-- Facility Name -->
                    <name>Salem Medical Center</name>
                    <!-- Facility Phone -->
                    <telecom use="WP" value="tel: 1+(555)-555-1212" />
                    <!-- Facility Fax -->
                    <telecom use="WP" value="fax: 1+(555)-555-3333" />
                    <!-- Facility Addr -->
                    <addr>
                        <streetAddressLine>4646 Brown Rd</streetAddressLine>
                        <city>Salem</city>
                        <state>MA</state>
                        <postalCode>02368</postalCode>
                        <country>US</country>
                    </addr>
                </serviceProviderOrganization>
            </healthCareFacility>
        </location>
    </encompassingEncounter>
</componentOf>
```

10. **SHALL** contain exactly one [1..1] **component** (CONF:3284-35).
    a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:3284-85).

1.1.3.5 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 mapped to this section are:

- Date of Diagnosis
- Date of Onset
- Diagnoses

i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3284-86) such that it

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:3284-90).

1.1.3.6 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:3284-97) such that it

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:3284-100).

1.1.3.7 component

Reason for Visit Section

The Reason for Visit Section template records the patient's reason for the visit (as documented by the provider).

The eICR data elements mapped to this section are:

- Reason for Visit

iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3284-98) such that it

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:3284-101).

1.1.3.8 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 mapped to this section are:

o Occupation: Occupation should include both current and past occupation information, if available. (Use the Social History Observation template - see sample file for example).

o Travel History

o Patient Sex (Birth Sex)

o Pregnant (Pregnancy Observation)

To assert that a patient was not pregnant during a specified date range, the Pregnancy Observation template should be used, but with a negationInd set to 'true' to indicate that the patient was not pregnant during the date range specified by the effectiveTime element. (An example is provided in the sample file to illustrate this.)

To indicate that a patient's pregnancy status was unknown, set nullFlavor="UNK" and an effectiveTime element can be included to assert the period over which it was unknown.

iv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3284-87) such that it
    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:3284-91) such that it
        a. **SHOULD** contain zero or one [0..1] **entry** (CONF:3284-326).
            i. This entry **SHALL** contain exactly one [1..1] **Birth Sex Observation** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.200:2016-06-01) (CONF:3284-327).
        b. **SHOULD** contain zero or more [0..*] **entry** (CONF:3284-334).
            i. The entry, if present, **SHALL** contain exactly one [1..1] **Travel History** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.1:2016-12-01) (CONF:3284-335).

1.1.3.9 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 mapped to this section are:

o Date of Diagnosis

o Date of Onset

o Diagnoses

o Symptoms (list)

v. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3284-99) such that it

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:3284-102).

1.1.3.10 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:

o Medications Administered (list)

vi. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3284-88) such that it

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:3284-92).

1.1.3.11 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:

o Lab Order Code

o Lab Results

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

o Lab Test Status

o Lab Test Abnormal Interpretation

vii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3284-89) such that it

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:3284-93).

1.1.3.12 component

Immunizations 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 element mapped to this section is:

- Immunization Status

viii. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:3284-148) such that it

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:3284-149).

1.1.3.13 component

Plan of Treatment Section (V2)

The Plan of Treatment section contains data that define pending orders, interventions, encounters, services, and procedures for the patient. It is limited to prospective, unfulfilled, or incomplete orders and requests only. These are indicated by the @moodCode of the entries within this section. All active, incomplete, or pending orders, appointments, referrals, procedures, services, or any other pending event of clinical significance to the current care of the patient should be listed.

The eICR data element mapped to this section is:

- Lab Order Code

ix. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:3284-308) such that it

1. **SHALL** contain exactly one [1..1] **Plan of Treatment Section (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09) (CONF:3284-309).

Table 24: ActEncounterCode

Value Set: ActEncounterCode urn:oid: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	HL7ActCode	urn:oid:2.16.840.1.113883.5.4	ambulatory
FLD	HL7ActCode	urn:oid:2.16.840.1.113883.5.4	field
HH	HL7ActCode	urn:oid:2.16.840.1.113883.5.4	home health
EMER	HL7ActCode	urn:oid:2.16.840.1.113883.5.4	emergency
IMP	HL7ActCode	urn:oid:2.16.840.1.113883.5.4	inpatient encounter
ACUTE	HL7ActCode	urn:oid:2.16.840.1.113883.5.4	inpatient acute
NONAC	HL7ActCode	urn:oid:2.16.840.1.113883.5.4	inpatient non-acute
PRENC	HL7ActCode	urn:oid:2.16.840.1.113883.5.4	pre-admission
SS	HL7ActCode	urn:oid:2.16.840.1.113883.5.4	short stay
VR	HL7ActCode	urn:oid:2.16.840.1.113883.5.4	Virtual

Table 25: ServiceDeliveryLocationRoleType

Value Set: ServiceDeliveryLocationRoleType urn:oid:2.16.840.1.113883.1.11.17660 Any subtype of ServiceDeliveryLocationRoleType			
Code	**Code System**	**Code System OID**	**Print Name**
DX	HL7RoleCode	urn:oid:2.16.840.1.113883.5.111	Diagnostics or therapeutics unit
CVDX	HL7RoleCode	urn:oid:2.16.840.1.113883.5.111	Cardiovascular diagnostics or therapeutics unit
CATH	HL7RoleCode	urn:oid:2.16.840.1.113883.5.111	Cardiac catheterization lab
ECHO	HL7RoleCode	urn:oid:2.16.840.1.113883.5.111	Echocardiography lab
GIDX	HL7RoleCode	urn:oid:2.16.840.1.113883.5.111	Gastroenterology diagnostics or therapeutics lab
ENDOS	HL7RoleCode	urn:oid:2.16.840.1.113883.5.111	Endoscopy lab
RADDX	HL7RoleCode	urn:oid:2.16.840.1.113883.5.111	adiology diagnostics or therapeutics unit
RADO	HL7RoleCode	urn:oid:2.16.840.1.113883.5.111	Radiation oncology unit
RNEU	HL7RoleCode	urn:oid:2.16.840.1.113883.5.111	Neuroradiology unit
HOSP	HL7RoleCode	urn:oid:2.16.840.1.113883.5.111	Hospital
…			

Figure 21: Initial Public Health Case Report Document (eICR) Example

```
<ClinicalDocument>
    <!-- US Realm Header template -->
    <realmCode code="US" />
    <typeId extension="POCD_HD000040" root="2.16.840.1.113883.1.3" />
    <!-- [C-CDA R1.1] US Realm Header -->
    <templateId root="2.16.840.1.113883.10.20.22.1.1" />
    <!-- [C-CDA R2.1] US Realm Header (V3) -->
    <templateId root="2.16.840.1.113883.10.20.22.1.1" extension="2015-08-01" />
    <!-- [eICR R2 STU1.1] Initial Public Health Case Report Document (eICR) (V2) -->
    <templateId root="2.16.840.1.113883.10.20.15.2" extension="2016-12-01" />
    <!-- Globally unique document ID (extension) is scoped by vendor/software -->
    <id root="db734647-fc99-424c-a864-7e3cda82e703" />
    <!-- Document Code -->
    <code displayName="Public Health Case report"
        code="55751-2"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC" />
    <title>Initial Public Health Case Report</title>
    <effectiveTime value="20161107094421-0500" />
    <confidentialityCode code="N"
        codeSystem="2.16.840.1.113883.5.25"
        displayName="Normal" />
    <languageCode code="en-US" />
    <recordTarget>
        ...
    </recordTarget>
    <author>
        ...
    </author>
    <custodian>
        <assignedCustodian>
            <representedCustodianOrganization>
                <id extension="88888888" root="2.16.840.1.113883.4.6" />
                <name>Salem Medical Center</name>
                <telecom use="WP" value="tel:+1(555)555-1212" />
                <addr>
                    <streetAddressLine>4646 Brown Rd</streetAddressLine>
                    <city>Salem</city>
                    <state>MA</state>
                    <postalCode>02368</postalCode>
                    <country>US</country>
                </addr>
            </representedCustodianOrganization>
        </assignedCustodian>
    </custodian>
    <componentOf>
        <encompassingEncounter>
            ...
        </encompassingEncounter>
    </componentOf>
    <component>
        <structuredBody>
            <component>
                <section>
                    <!-- [C-CDA R1.1] Plan of Care Section -->
```



```
                    <templateId root="2.16.840.1.113883.10.20.22.2.22.1" />
                    <!-- [C-CDA R2.0] Plan of Treatment Section (V2) -->
                    <templateId root="2.16.840.1.113883.10.20.22.2.22.1" extension="2014-
06-09" />
                    ...
                </section>
            </component>
            <component>
                <section>
                    <!-- [C-CDA R1.1] Encounters Section (entries optional) -->
                    <templateId root="2.16.840.1.113883.10.20.22.2.22" />
                    <!-- [C-CDA R2.1] Encounters Section (entries optional) (V3) -->
                    <templateId root="2.16.840.1.113883.10.20.22.2.22" extension="2015-08-
01" />
                    <!-- [C-CDA R1.1] Encounters Section (entries required) -->
                    <templateId root="2.16.840.1.113883.10.20.22.2.22.1" />
                    <!-- [C-CDA R2.1] Encounters Section (entries required) (V3) -->
                    <templateId root="2.16.840.1.113883.10.20.22.2.22.1" extension="2015-
08-01" />
                    ...
                </section>
            </component>
            <component>
                <section>
                    <!-- [C-CDA R1.1] History of Present Illness Section -->
                    <templateId root="1.3.6.1.4.1.19376.1.5.3.1.3.4" />
                    ...
                </section>
            </component>
            <component>
                <section>
                    <!-- [C-CDA R1.1] Medications Administered Section -->
                    <templateId root="2.16.840.1.113883.10.20.22.2.38" />
                    <!-- [C-CDA R2.0] Medications Administered Section (V2) -->
                    <templateId root="2.16.840.1.113883.10.20.22.2.38" extension="2014-06-
09" />
                    ...
                </section>
            </component>
            <component>
                <section>
                    <!-- [C-CDA R1.1] Problem Section (entries optional) -->
                    <templateId root="2.16.840.1.113883.10.20.22.2.5" />
                    <!-- [C-CDA R2.1] Problem Section (entries optional) (V3) -->
                    <templateId root="2.16.840.1.113883.10.20.22.2.5" extension="2015-08-
01" />
                    <!-- [C-CDA R1.1] Problem Section (entries required) -->
                    <templateId root="2.16.840.1.113883.10.20.22.2.5.1" />
                    <!-- [C-CDA R2.1] Problem Section (entries required) (V3) -->
                    <templateId root="2.16.840.1.113883.10.20.22.2.5.1" extension="2015-08-
01" />
                    ...
                </section>
            </component>
            <component>
                <section>
                    <!-- [C-CDA R1.1] Reason for Visit Section -->
```



```
                    <templateId root="2.16.840.1.113883.10.20.22.2.12" />
                    ...
                </section>
            </component>
            <component>
                <section>
                    <!-- [C-CDA R1.1] Results Section (entries optional) -->
                    <templateId root="2.16.840.1.113883.10.20.22.2.3" />
                    <!-- [C-CDA R2.1] Results Section (entries optional) (V3) -->
                    <templateId root="2.16.840.1.113883.10.20.22.2.3" extension="2015-08-
01" />
                    <!-- [C-CDA R1.1] Results Section (entries required) -->
                    <templateId root="2.16.840.1.113883.10.20.22.2.3.1" />
                    <!-- [C-CDA R2.1] Results Section (entries required) (V3) -->
                    <templateId root="2.16.840.1.113883.10.20.22.2.3.1" extension="2015-08-
01" />
                    ...
                </section>
            </component>
            <component>
                <section>
                    <!-- [C-CDA 1.1] Social History Section -->
                    <templateId root="2.16.840.1.113883.10.20.22.2.17" />
                    <!-- [C-CDA 2.1] Social History Section (V3) -->
                    <templateId root="2.16.840.1.113883.10.20.22.2.17" extension="2015-08-
01" />
                    ...
                </section>
            </component>
        </structuredBody>
    </component>
</ClinicalDocument>
```


2 SECTION-LEVEL TEMPLATES

This chapter contains the section-level templates referenced by the document type of this implementation guide. These templates describe the purpose of each section and the section-level constraints.

Section-level templates are always included in a document. One and only one of each section type is allowed in a given document instance. Please see the conformance verb in the conformance statements to determine if it is required (SHALL), strongly recommended (SHOULD), or optional (MAY).

Each section-level template contains the following:

- Template metadata (e.g., templateId, etc.)
- Description and explanatory narrative
- LOINC section code
- Section title
- Requirements for a text element
- Entry-level template names and Ids for referenced templates (required and optional)

Narrative Text

The text element within the section stores the narrative to be rendered, as described in the CDA R2 specification, and is referred to as the CDA narrative block.

The content model of the CDA narrative block schema is handcrafted to meet requirements of human readability and rendering. The schema is registered as a MIME type (text/x-hl7-text+xml), which is the fixed media type for the text element.

As noted in the CDA R2 specification, the document originator is responsible for ensuring that the narrative block contains the complete, human readable, attested content of the section. Structured entries support computer processing and computation and are not a replacement for the attestable, human-readable content of the CDA narrative block. The special case of structured entries with an entry relationship of "DRIV" (is derived from) indicates to the receiving application that the source of the narrative block is the structured entries, and that the contents of the two are clinically equivalent.

As for all CDA documents—even when a report consisting entirely of structured entries is transformed into CDA—the encoding application must ensure that the authenticated content (narrative plus multimedia) is a faithful and complete rendering of the clinical content of the structured source data. As a general guideline, a generated narrative block should include the same human readable content that would be available to users viewing that content in the originating system. Although content formatting in the narrative block need not be identical to that in the originating system, the narrative block should use elements from the CDA narrative block schema to provide sufficient formatting to support human readability when rendered according to the rules defined in Section Narrative Block (§ 4.3.5) of the CDA R2 specification.

By definition, a receiving application cannot assume that all clinical content in a section (i.e., in the narrative block and multimedia) is contained in the structured entries unless the entries in the section have an entry relationship of "DRIV".

Additional specification information for the CDA narrative block can be found in the CDA R2 specification in sections 1.2.1, 1.2.3, 1.3, 1.3.1, 1.3.2, 4.3.4.2, and 6.

2.1 Encounters Section (entries optional) (V3)

`[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.22:2015-08-01 (open)]`

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Table 26: Encounters Section (entries optional) (V3) Contexts

Contained By:	Contains:
	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, or 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.

Table 27: Encounters Section (entries optional) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.22:2015-08-01)					
templateId	1..1	SHALL		1198-7940	
@root	1..1	SHALL		1198-10386	2.16.840.1.113883.10.20.22.2.22
@extension	1..1	SHALL		1198-32547	2015-08-01
code	1..1	SHALL		1198-15461	
@code	1..1	SHALL		1198-15462	46240-8
@codeSystem	1..1	SHALL		1198-31136	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-7942	
text	1..1	SHALL		1198-7943	
entry	0..*	SHOULD		1198-7951	
encounter	1..1	SHALL		1198-15465	Encounter Activity (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2015-08-01

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7940) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.22" (CONF:1198-10386).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32547).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15461).
    a. This code **SHALL** contain exactly one [1..1] **@code**="46240-8" Encounters (CONF:1198-15462).
    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:1198-31136).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-7942).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7943).
5. **SHOULD** contain zero or more [0..*] **entry** (CONF:1198-7951) 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:1198-15465).

2.1.1 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 28: Encounters Section (entries required) (V3) Contexts

Contained By:	Contains:
Initial Public Health Case Report Document (eICR) (V2) (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.

Table 29: Encounters Section (entries required) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.22.1:2015-08-01)					
@nullFlavor	0..1	MAY		1198-32815	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1198-8705	
@root	1..1	SHALL		1198-10387	2.16.840.1.113883.10.20.22.2.22.1
@extension	1..1	SHALL		1198-32548	2015-08-01
code	1..1	SHALL		1198-15466	
@code	1..1	SHALL		1198-15467	46240-8
@codeSystem	1..1	SHALL		1198-31137	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-8707	
text	1..1	SHALL		1198-8708	
entry	1..*	SHALL		1198-8709	
encounter	1..1	SHALL		1198-15468	Encounter Activity (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2015-08-01

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 22: 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 30: History of Present Illness Section Contexts

Contained By:	Contains:
Initial Public Health Case Report Document (eICR) (V2) (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.

Table 31: History of Present Illness Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
section (identifier: urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.4)					
templateId	1..1	SHALL		81-7848	
@root	1..1	SHALL	UID	81-10458	1.3.6.1.4.1.19376.1.5.3.1.3.4
code	1..1	SHALL		81-15477	
@code	1..1	SHALL		81-15478	10164-2
@codeSystem	1..1	SHALL		81-26478	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-7850	
text	1..1	SHALL		81-7851	

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 23: 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 optional) (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.2:2015-08-01 (open)]

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Table 32: Immunizations Section (entries optional) (V3) Contexts

Contained By:	Contains:
	Immunization Activity (V3)

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.

Table 33: Immunizations Section (entries optional) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.2:2015-08-01)					
templateId	1..1	SHALL		1198-7965	
@root	1..1	SHALL		1198-10399	2.16.840.1.113883.10.20.22.2.2
@extension	1..1	SHALL		1198-32529	2015-08-01
code	1..1	SHALL		1198-15367	
@code	1..1	SHALL		1198-15368	11369-6
@codeSystem	1..1	SHALL		1198-32146	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-7967	
text	1..1	SHALL		1198-7968	
entry	0..*	SHOULD		1198-7969	
substanceAdministration	1..1	SHALL		1198-15494	Immunization Activity (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7965) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.2" (CONF:1198-10399).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32529).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15367).
    a. This code **SHALL** contain exactly one [1..1] **@code**="11369-6" Immunizations (CONF:1198-15368).
    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:1198-32146).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-7967).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7968).
5. **SHOULD** contain zero or more [0..*] **entry** (CONF:1198-7969) 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:1198-15494).

2.3.1 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 34: Immunizations Section (entries required) (V3) Contexts

Contained By:	Contains:
Initial Public Health Case Report Document (eICR) (V2) (optional)	Immunization Activity (V3)

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.

Table 35: Immunizations Section (entries required) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.2.1:2015-08-01)					
@nullFlavor	0..1	MAY		1198-32833	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1198-9015	
@root	1..1	SHALL		1198-10400	2.16.840.1.113883.10.20.22.2.2.1
@extension	1..1	SHALL		1198-32530	2015-08-01
code	1..1	SHALL		1198-15369	
@code	1..1	SHALL		1198-15370	11369-6
@codeSystem	1..1	SHALL		1198-32147	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-9017	
text	1..1	SHALL		1198-9018	
entry	1..*	SHALL		1198-9019	
substanceAdministration	1..1	SHALL		1198-15495	Immunization Activity (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01

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 24: 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 36: Medications Administered Section (V2) Contexts

Contained By:	Contains:
Initial Public Health Case Report Document (eICR) (V2) (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.

Table 37: Medications Administered Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.38:2014-06-09)					
templateId	1..1	SHALL		1098-8152	
@root	1..1	SHALL		1098-10405	2.16.840.1.113883.10.20.22.2.38
@extension	1..1	SHALL		1098-32525	2014-06-09
code	1..1	SHALL		1098-15383	
@code	1..1	SHALL		1098-15384	29549-3
@codeSystem	1..1	SHALL		1098-30829	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-8154	
text	1..1	SHALL		1098-8155	
entry	0..*	MAY		1098-8156	
substanceAdministration	1..1	SHALL		1098-15499	Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09

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 25: 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 Plan of Treatment Section (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09 (open)]

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Table 38: Plan of Treatment Section (V2) Contexts

Contained By:	Contains:
Initial Public Health Case Report Document (eICR) (V2) (optional)	Planned Observation (V2)

This section, formerly known as "Plan of Care", contains data that define pending orders, interventions, encounters, services, and procedures for the patient. It is limited to prospective, unfulfilled, or incomplete orders and requests only. These are indicated by the @moodCode of the entries within this section. All active, incomplete, or pending orders, appointments, referrals, procedures, services, or any other pending event of clinical significance to the current care of the patient should be listed.

This section may also contain information about ongoing care of the patient, clinical reminders, patient's values, beliefs, preferences, care expectations, and overarching care goals.

Clinical reminders are placed here to provide prompts for disease prevention and management, patient safety, and healthcare quality improvements, including widely accepted performance measures.

Values may include the importance of quality of life over longevity. These values are taken into account when prioritizing all problems and their treatments.

Beliefs may include comfort with dying or the refusal of blood transfusions because of the patient's religious convictions.

Preferences may include liquid medicines over tablets, or treatment via secure email instead of in person.

Care expectations may range from being treated only by female clinicians, to expecting all calls to be returned within 24 hours.

Overarching goals described in this section are not tied to a specific condition, problem, health concern, or intervention. Examples of overarching goals could be to minimize pain or dependence on others, or to walk a daughter down the aisle for her marriage.

The plan may also indicate that patient education will be provided.

Table 39: Plan of Treatment Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09)					
templateId	1..1	SHALL		1098-7723	
@root	1..1	SHALL		1098-10435	2.16.840.1.113883.10.20.22.2.10
@extension	1..1	SHALL		1098-32501	2014-06-09
code	1..1	SHALL		1098-14749	
@code	1..1	SHALL		1098-14750	18776-5
@codeSystem	1..1	SHALL		1098-30813	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1098-16986	
text	1..1	SHALL		1098-7725	
entry	0..*	MAY		1098-7726	
observation	1..1	SHALL		1098-14751	Planned Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09
entry	0..*	MAY		1098-8805	
encounter	1..1	SHALL		1098-30472	Planned Encounter (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09
entry	0..*	MAY		1098-8807	
act	1..1	SHALL		1098-30473	Planned Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09
entry	0..*	MAY		1098-8809	
procedure	1..1	SHALL		1098-30474	Planned Procedure (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09
entry	0..*	MAY		1098-8811	
substanceAdministration	1..1	SHALL		1098-30475	Planned Medication Activity (V2) (identifier:

					urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09
entry	0..*	MAY		1098-8813	
supply	1..1	SHALL		1098-30476	Planned Supply (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09
entry	0..*	MAY		1098-14695	
act	1..1	SHALL		1098-31397	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
entry	0..*	MAY		1098-29621	
act	1..1	SHALL		1098-30868	Handoff Communication Participants (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.141
entry	0..*	MAY		1098-31841	
act	1..1	SHALL		1098-31864	Nutrition Recommendation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.130
entry	0..*	MAY		1098-32353	
substanceAdministration	1..1	SHALL		1098-32354	Planned Immunization Activity (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.120
entry	0..*	MAY		1098-32887	
observation	1..1	SHALL		1098-32888	Goal Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.121

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-7723) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.10" (CONF:1098-10435).
    b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32501).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1098-14749).
    a. This code **SHALL** contain exactly one [1..1] **@code**="18776-5" Plan of Treatment (CONF:1098-14750).
    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:1098-30813).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1098-16986).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1098-7725).

5. **MAY** contain zero or more [0..*] **entry** (CONF:1098-7726) such that it
    a. **SHALL** contain exactly one [1..1] **Planned Observation (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09) (CONF:1098-14751).
6. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8805) such that it
    a. **SHALL** contain exactly one [1..1] Planned Encounter (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.40:2014-06-09) (CONF:1098-30472).
7. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8807) such that it
    a. **SHALL** contain exactly one [1..1] Planned Act (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.39:2014-06-09) (CONF:1098-30473).
8. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8809) such that it
    a. **SHALL** contain exactly one [1..1] Planned Procedure (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.41:2014-06-09) (CONF:1098-30474).
9. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8811) such that it
    a. **SHALL** contain exactly one [1..1] Planned Medication Activity (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.42:2014-06-09) (CONF:1098-30475).
10. **MAY** contain zero or more [0..*] **entry** (CONF:1098-8813) such that it
    a. **SHALL** contain exactly one [1..1] Planned Supply (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.43:2014-06-09) (CONF:1098-30476).
11. **MAY** contain zero or more [0..*] **entry** (CONF:1098-14695) such that it
    a. **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:1098-31397).
12. **MAY** contain zero or more [0..*] **entry** (CONF:1098-29621) such that it
    a. **SHALL** contain exactly one [1..1] Handoff Communication Participants (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.141) (CONF:1098-30868).
13. **MAY** contain zero or more [0..*] **entry** (CONF:1098-31841) such that it
    a. **SHALL** contain exactly one [1..1] Nutrition Recommendation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.130) (CONF:1098-31864).
14. **MAY** contain zero or more [0..*] **entry** (CONF:1098-32353) such that it
    a. **SHALL** contain exactly one [1..1] Planned Immunization Activity (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.120) (CONF:1098-32354).
15. **MAY** contain zero or more [0..*] **entry** (CONF:1098-32887) such that it
    a. **SHALL** contain exactly one [1..1] Goal Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.121) (CONF:1098-32888).

Figure 26: Plan of Treatment Section (V2) Example

```
<component>
    <section>
        <templateId root="2.16.840.1.113883.10.20.22.2.10" extension="2014-06-09" />
        <!--  **** Plan of Treatment Section V2 template  **** -->
        <code code="18776-5" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="Treatment plan" />
        <title>TREATMENT PLAN</title>
        <text>
           ...
        </text>
        <entry>
            <act classCode="ACT" moodCode="EVN">
                <!-- Handoff Communication  template -->
                <templateId root="2.16.840.1.113883.10.20.22.4.141" />
              ...

            </act>
        </entry>
        <entry>
            <encounter moodCode="INT" classCode="ENC">
                <templateId root="2.16.840.1.113883.10.20.22.4.40" extension="2014-06-09"
/>
                <!-- Plan Activity Encounter V2 template -->
              ...


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

2.6 Problem Section (entries optional) (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.5:2015-08-01 (open)]

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Table 40: Problem Section (entries optional) (V3) Contexts

Contained By:	Contains:
	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.

Table 41: Problem Section (entries optional) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.5:2015-08-01)					
templateId	1..1	SHALL		1198-7877	
@root	1..1	SHALL		1198-10440	2.16.840.1.113883.10.20.22.2.5
@extension	1..1	SHALL		1198-32511	2015-08-01
code	1..1	SHALL		1198-15407	
@code	1..1	SHALL		1198-15408	11450-4
@codeSystem	1..1	SHALL		1198-31141	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-7879	
text	1..1	SHALL		1198-7880	
entry	0..*	SHOULD		1198-7881	
act	1..1	SHALL		1198-15505	Problem Concern Act (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01
entry	0..1	MAY		1198-30481	
observation	1..1	SHALL		1198-30482	Health Status Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7877) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.5" (CONF:1198-10440).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32511).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15407).
    a. This code **SHALL** contain exactly one [1..1] **@code**="11450-4" Problem List (CONF:1198-15408).
    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:1198-31141).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-7879).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7880).

5. **SHOULD** contain zero or more [0..*] **entry** (CONF:1198-7881) 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:1198-15505).
6. **MAY** contain zero or one [0..1] **entry** (CONF:1198-30481) 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:1198-30482).

2.6.1 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 42: Problem Section (entries required) (V3) Contexts

Contained By:	Contains:
Initial Public Health Case Report Document (eICR) (V2) (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.

Table 43: Problem Section (entries required) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.5.1:2015-08-01)					
@nullFlavor	0..1	MAY		1198-32864	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1198-9179	
@root	1..1	SHALL		1198-10441	2.16.840.1.113883.10.20.22.2.5.1
@extension	1..1	SHALL		1198-32510	2015-08-01
code	1..1	SHALL		1198-15409	
@code	1..1	SHALL		1198-15410	11450-4
@codeSystem	1..1	SHALL		1198-31142	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-9181	
text	1..1	SHALL		1198-9182	
entry	1..*	SHALL		1198-9183	
act	1..1	SHALL		1198-15506	Problem Concern Act (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01
entry	0..1	MAY		1198-30479	
observation	1..1	SHALL		1198-30480	Health Status Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.5:2014-06-09

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 27: Problem Section (entries required) (V3) Example

```
<section>
  <!-- [C-CDA R2.1] Problem Section (entries optional) -->
  <templateId root="2.16.840.1.113883.10.20.22.2.5" extension="2015-08-01" />
  <!-- [C-CDA R2.1] Problem Section (entries required) -->
  <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">
      <!-- [C-CDA R2.1] Problem Concern Act (V3) -->
        <templateId root="2.16.840.1.113883.10.20.22.4.3" extension="2015-08-01" />
      ...

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


Figure 28: No Known Problems Section Example

```
<section>
  <!-- [C-CDA R2.1] Problem Section (entries optional) -->
  <templateId root="2.16.840.1.113883.10.20.22.2.5" extension="2015-08-01" />
  <!-- [C-CDA R2.1] Problem Section (entries required) -->
  <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 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">
    <act classCode="ACT" moodCode="EVN">
      <!-- [C-CDA R2.1] Problem Concern Act (V3) -->
      <templateId root="2.16.840.1.113883.10.20.22.4.3" extension="2015-08-01" />
      <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" />
      </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>
        <!--_ [C-CDA R2] Author Participation -->
        <templateId root="2.16.840.1.113883.10.20.22.4.119" />
        <time value="20130607160506" />
        <assignedAuthor>
          ...
        </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. -->
        <!-- [C-CDA R2.1] Problem Observation (V3) -->
        <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01" />
        <id root="4adc1021-7b14-11db-9fe1-0800200c9a67" />
        <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
        <text>
          <reference value="#problems1" />
        </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" />
          </originalText>
        </value>
      </observation>
    </entryRelationship>
  </act>
 </entry>
</section>
```

2.7 Reason for Visit Section

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

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Table 44: Reason for Visit Section Contexts

Contained By:	Contains:
Initial Public Health Case Report Document (eICR) (V2) (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.

Table 45: Reason for Visit Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.12)					
templateId	1..1	SHALL		81-7836	
@root	1..1	SHALL		81-10448	2.16.840.1.113883.10.20.22.2.12
code	1..1	SHALL		81-15429	
@code	1..1	SHALL		81-15430	29299-5
@codeSystem	1..1	SHALL		81-26494	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		81-7838	
text	1..1	SHALL		81-7839	

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 29: 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>
```

2.8 Results Section (entries optional) (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2015-08-01 (open)]

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Table 46: Results Section (entries optional) (V3) Contexts

Contained By:	Contains:
	Result Organizer (V3)

This section contains the results of observations generated by laboratories, imaging and other procedures. The scope includes observations of hematology, chemistry, serology, virology, toxicology, microbiology, plain x-ray, ultrasound, CT, MRI, angiography, echocardiography, nuclear medicine, pathology, and procedure observations.

This section often includes notable results such as abnormal values or relevant trends. It can 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.

Table 47: Results Section (entries optional) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2015-08-01)					
templateId	1..1	SHALL		1198-7116	
@root	1..1	SHALL		1198-9136	2.16.840.1.113883.10.20.22.2.3
@extension	1..1	SHALL		1198-32591	2015-08-01
code	1..1	SHALL		1198-15431	
@code	1..1	SHALL		1198-15432	30954-2
@codeSystem	1..1	SHALL		1198-31041	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-8891	
text	1..1	SHALL		1198-7118	
entry	0..*	SHOULD		1198-7119	
organizer	1..1	SHALL		1198-15515	Result Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2015-08-01

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-7116) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.2.3" (CONF:1198-9136).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32591).
2. **SHALL** contain exactly one [1..1] **code** (CONF:1198-15431).
    a. This code **SHALL** contain exactly one [1..1] **@code**="30954-2" Relevant diagnostic tests and/or laboratory data (CONF:1198-15432).
    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:1198-31041).
3. **SHALL** contain exactly one [1..1] **title** (CONF:1198-8891).
4. **SHALL** contain exactly one [1..1] **text** (CONF:1198-7118).
5. **SHOULD** contain zero or more [0..*] **entry** (CONF:1198-7119) 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:1198-15515).

2.8.1 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 48: Results Section (entries required) (V3) Contexts

Contained By:	Contains:
Initial Public Health Case Report Document (eICR) (V2) (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.

Table 49: Results Section (entries required) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2015-08-01)					
@nullFlavor	0..1	MAY		1198-32875	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
templateId	1..1	SHALL		1198-7108	
@root	1..1	SHALL		1198-9137	2.16.840.1.113883.10.20.22.2.3.1
@extension	1..1	SHALL		1198-32592	2015-08-01
code	1..1	SHALL		1198-15433	
@code	1..1	SHALL		1198-15434	30954-2
@codeSystem	1..1	SHALL		1198-31040	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-8892	
text	1..1	SHALL		1198-7111	
entry	1..*	SHALL		1198-7112	
organizer	1..1	SHALL		1198-15516	Result Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2015-08-01

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 30: 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>
```

2.9 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 50: Social History Section (V3) Contexts

Contained By:	Contains:
Initial Public Health Case Report Document (eICR) (V2) (required)	Pregnancy Observation 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.

Table 51: Social History Section (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01)					
templateId	1..1	SHALL		1198-7936	
@root	1..1	SHALL		1198-10449	2.16.840.1.113883.10.20.22.2.17
@extension	1..1	SHALL		1198-32494	2015-08-01
code	1..1	SHALL		1198-14819	
@code	1..1	SHALL		1198-14820	29762-2
@codeSystem	1..1	SHALL		1198-30814	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
title	1..1	SHALL		1198-7938	
text	1..1	SHALL		1198-7939	
entry	0..*	MAY		1198-7953	
observation	1..1	SHALL		1198-14821	Social History Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2015-08-01
entry	0..*	MAY		1198-9132	
observation	1..1	SHALL		1198-14822	Pregnancy Observation (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.8
entry	0..*	SHOULD		1198-14823	
observation	1..1	SHALL		1198-14824	Smoking Status - Meaningful Use (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09
entry	0..*	MAY		1198-16816	
observation	1..1	SHALL		1198-16817	Tobacco Use (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.85:2014-06-09
entry	0..*	MAY		1198-28361	

observation	1..1	SHALL		1198-28362	Caregiver Characteristics (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.72
entry	0..*	MAY		1198-28366	
observation	1..1	SHALL		1198-28367	Cultural and Religious Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.111
entry	0..*	MAY		1198-28825	
observation	1..1	SHALL		1198-28826	Characteristics of Home Environment (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.109

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 31: 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-LEVEL TEMPLATES

This chapter describes the clinical statement entry templates used within the sections of the document types of this implementation guide. Entry templates contain constraints that are required for conformance.

Entry-level templates are always contained in sections.

Each entry-level template description contains the following information:

- Key template metadata (e.g., template identifier, etc.)
- Description and explanatory narrative.
- Required CDA acts, participants and vocabularies.
- Optional CDA acts, participants and vocabularies.

3.1 Birth Sex Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.200:2016-06-01 (open)]

Draft as part of C-CDA Templates for Clinical Notes R2.1 Companion Guide, Release 1

Table 52: Birth Sex Observation Contexts

Contained By:	Contains:
Social History Section (V3) (optional [0..1])	

This observation represents the sex of the patient at birth. It is the sex that is entered on the person's birth certificate at time of birth.

This observation is not appropriate for recording patient gender (administrativeGender).

Table 53: Birth Sex Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.200:2016-06-01)					
@classCode	1..1	SHALL		3250-18230	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		3250-18231	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		3250-18232	
@root	1..1	SHALL		3250-18233	2.16.840.1.113883.10.20.22.4.200
@extension	1..1	SHALL		3250-32949	2016-06-01
code	1..1	SHALL		3250-18234	
@code	1..1	SHALL		3250-18235	76689-9
@codeSystem	1..1	SHALL		3250-21163	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		3250-18124	
@code	1..1	SHALL		3250-18125	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	3250-32947	urn:oid:2.16.840.1.113762.1.4.1 (ONC Administrative Sex)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:3250-18230).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3250-18231).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3250-18232) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.200" (CONF:3250-18233).
    b. **SHALL** contain exactly one [1..1] **@extension**="2016-06-01" (CONF:3250-32949).
4. **SHALL** contain exactly one [1..1] **code** (CONF:3250-18234).
    a. This code **SHALL** contain exactly one [1..1] **@code**="76689-9" Sex Assigned At Birth (CONF:3250-18235).
    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:3250-21163).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3250-18124).

a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:3250-18125).

6. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD", where the code **SHALL** be selected from ValueSet **ONC Administrative Sex** urn:oid:2.16.840.1.113762.1.4.1 **STATIC** 2016-06-01 (CONF:3250-32947).
    a. If value/@code not from value set ONC Administrative Sex urn:oid:2.16.840.1.113762.1.4.1 STATIC 2016-06-01, then value/@nullFlavor **SHALL** be "UNK" (CONF:3250-32948).

Table 54: ONC Administrative Sex

Value Set: ONC Administrative Sex urn:oid:2.16.840.1.113762.1.4.1 ONC Administrative Sex Value Set Source: https://vsac.nlm.nih.gov/			
Code	**Code System**	**Code System OID**	**Print Name**
F	HL7AdministrativeGender	urn:oid:2.16.840.1.113883.5.1	Female
M	HL7AdministrativeGender	urn:oid:2.16.840.1.113883.5.1	Male

Figure 32: Birth Sex Example

```
<!-- New Birth Sex Entry - for new C-CDA R2.1 Companion Guide -->
<observation classCode="OBS" moodCode="EVN">
    <!-- New templateId for Birth Sex -->
    <templateId root="2.16.840.1.113883.10.20.22.4.200" extension="2016-06-01"/>
    <code code="76689-9"
          codeSystem="2.16.840.1.113883.6.1"
          displayName="Sex Assigned At Birth"/>
    <text>
        <reference value="#BSex_Narrative1"/>
    </text>
    <statusCode code="completed"/>
    <!-- effectiveTime if present should match birthTime -->
    <!-- Request  name change to QRDA value set (2.16.840.1.113762.1.4.1)
         - ONC Birth Sex -->
    <value xsi:type="CD"
            codeSystem="2.16.840.1.113883.5.1"
            codeSystemName="AdministrativeGender"
            code="F"
            displayName="Female">
        <originalText>
            <reference value="#BSex_value"/>
        </originalText>
    </value>
    <author>
            ...
        </author>
</observation>
```


3.2 Encounter Activity (V3)

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

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

Table 55: Encounter Activity (V3) Contexts

Contained By:	Contains:
Encounters Section (entries optional) (V3) (optional) 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.

Table 56: Encounter Activity (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.49:2015-08-01)					
@classCode	1..1	SHALL		1198-8710	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1198-8711	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1198-8712	
@root	1..1	SHALL		1198-26353	2.16.840.1.113883.10.20.22.4.49
@extension	1..1	SHALL		1198-32546	2015-08-01
id	1..*	SHALL		1198-8713	
code	1..1	SHALL		1198-8714	urn:oid:2.16.840.1.113883.3.88.12.80.32 (EncounterTypeCode)
originalText	0..1	SHOULD		1198-8719	
reference	0..1	SHOULD		1198-15970	
@value	0..1	SHOULD		1198-15971	
translation	0..1	MAY		1198-32323	
effectiveTime	1..1	SHALL		1198-8715	
sdtc:dischargeDispositionCode	0..1	MAY		1198-32176	
performer	0..*	MAY		1198-8725	
assignedEntity	1..1	SHALL		1198-8726	
code	0..1	MAY		1198-8727	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy (HIPAA))
participant	0..*	SHOULD		1198-8738	
@typeCode	1..1	SHALL		1198-8740	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = LOC
participantRole	1..1	SHALL		1198-14903	Service Delivery Location (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.32
entryRelationship	0..*	MAY		1198-	

				8722	
@typeCode	1..1	SHALL		1198-8723	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1198-14899	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
entryRelationship	0..*	MAY		1198-15492	
act	1..1	SHALL		1198-15973	Encounter Diagnosis (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2015-08-01

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: HL7ActMood 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).

Table 57: 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: **https://vsac.nlm.nih.gov/**			
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)
…			

Figure 33: 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>
```

3.3 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 58: 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.

Table 59: Encounter Diagnosis (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.80:2015-08-01)					
@classCode	1..1	SHALL		1198-14889	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1198-14890	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1198-14895	
@root	1..1	SHALL		1198-14896	2.16.840.1.113883.10.20.22.4.80
@extension	1..1	SHALL		1198-32542	2015-08-01
code	1..1	SHALL		1198-19182	
@code	1..1	SHALL		1198-19183	29308-4
@codeSystem	1..1	SHALL		1198-32160	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entryRelationship	1..*	SHALL		1198-14892	
@typeCode	1..1	SHALL		1198-14893	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
observation	1..1	SHALL		1198-14898	Problem Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01

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: HL7ActMood 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 34: 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>
```

3.4 Estimated Date of Delivery

[observation: identifier urn:oid:2.16.840.1.113883.10.20.15.3.1 (closed)]

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Table 60: Estimated Date of Delivery Contexts

Contained By:	Contains:
Pregnancy Observation (optional)	

This clinical statement represents the anticipated date when a woman will give birth.

Table 61: Estimated Date of Delivery Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.1)					
@classCode	1..1	SHALL		81-444	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-445	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		81-16762	
@root	1..1	SHALL		81-16763	2.16.840.1.113883.10.20.15.3.1
code	1..1	SHALL		81-19139	
@code	1..1	SHALL		81-19140	11778-8
@codeSystem	1..1	SHALL		81-26503	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		81-448	
@code	1..1	SHALL		81-19096	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	TS	81-450	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-444).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-445).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-16762) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.15.3.1" (CONF:81-16763).
4. **SHALL** contain exactly one [1..1] **code** (CONF:81-19139).
    a. This code **SHALL** contain exactly one [1..1] **@code**="11778-8" Estimated date of delivery (CONF:81-19140).
    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:81-26503).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:81-448).
    a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:81-19096).
6. **SHALL** contain exactly one [1..1] **value** with @xsi:type="TS" (CONF:81-450).

Figure 35: Estimated Date of Delivery Example

```
<observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.15.3.1"/>
    <code code="11778-8" codeSystem="2.16.840.1.113883.6.1"
        displayName="Estimated date of delivery"/>
    <statusCode code="completed"/>
    <value xsi:type="TS" value="20110919" />
</observation>
```

3.5 Immunization Activity (V3)

[substanceAdministration: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01 (open)]

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Table 62: Immunization Activity (V3) Contexts

Contained By:	Contains:
Immunizations Section (entries required) (V3) (required) Immunizations Section (entries optional) (V3) (optional)	Immunization Medication Information (V2)

An Immunization Activity describes immunization substance administrations that have actually occurred or are intended to occur. Immunization Activities in "INT" mood are reflections of immunizations a clinician intends a patient to receive. Immunization Activities in "EVN" mood reflect immunizations actually received.

An Immunization Activity is very similar to a Medication Activity with some key differentiators. The drug code system is constrained to CVX codes. Administration timing is less complex. Patient refusal reasons should be captured. All vaccines administered should be fully documented in the patient's permanent medical record. Healthcare providers who administer vaccines covered by the National Childhood Vaccine Injury Act are required to ensure that the permanent medical record of the recipient indicates:

1) Date of administration

2) Vaccine manufacturer

3) Vaccine lot number

4) Name and title of the person who administered the vaccine and the address of the clinic or facility where the permanent record will reside

5) Vaccine information statement (VIS)

a. Date printed on the VIS

b. Date VIS given to patient or parent/guardian.

This information should be included in an Immunization Activity when available. (Reference: http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/D/vacc_admin.pdf)

Table 63: Immunization Activity (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01)					
@classCode	1..1	SHALL		1198-8826	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM
@moodCode	1..1	SHALL		1198-8827	urn:oid:2.16.840.1.113883.11.20.9.18 (MoodCodeEvnInt)
@negationInd	1..1	SHALL		1198-8985	
templateId	1..1	SHALL		1198-8828	
@root	1..1	SHALL		1198-10498	2.16.840.1.113883.10.20.22.4.52
@extension	1..1	SHALL		1198-32528	2015-08-01
id	1..*	SHALL		1198-8829	
code	0..1	MAY		1198-8830	
statusCode	1..1	SHALL		1198-8833	
@code	1..1	SHALL		1198-32359	urn:oid:2.16.840.1.113883.1.11.159331 (ActStatus)
effectiveTime	1..1	SHALL		1198-8834	
repeatNumber	0..1	MAY		1198-8838	
routeCode	0..1	MAY		1198-8839	urn:oid:2.16.840.1.113883.3.88.12.3221.8.7 (Medication Route FDA)
approachSiteCode	0..1	MAY	SET<CD>	1198-8840	urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 (Body Site)
doseQuantity	0..1	SHOULD		1198-8841	
@unit	0..1	SHOULD		1198-8842	urn:oid:2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive)
administrationUnitCode	0..1	MAY		1198-8846	urn:oid:2.16.840.1.113762.1.4.1021.30 (AdministrationUnitDoseForm)
consumable	1..1	SHALL		1198-8847	
manufacturedProduct	1..1	SHALL		1198-15546	Immunization Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09

performer	0..1	SHOULD		1198-8849	
author	0..*	SHOULD		1198-31151	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119
participant	0..*	MAY		1198-8850	
@typeCode	1..1	SHALL		1198-8851	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM
participantRole	1..1	SHALL		1198-15547	Drug Vehicle (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.24
entryRelationship	0..*	MAY		1198-8853	
@typeCode	1..1	SHALL		1198-8854	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1198-15537	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
entryRelationship	0..1	MAY		1198-8856	
@typeCode	1..1	SHALL		1198-8857	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1198-8858	true
act	1..1	SHALL		1198-31392	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
entryRelationship	0..1	MAY		1198-8860	
@typeCode	1..1	SHALL		1198-8861	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
supply	1..1	SHALL		1198-15539	Medication Supply Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
entryRelationship	0..1	MAY		1198-8863	
@typeCode	1..1	SHALL		1198-8864	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
supply	1..1	SHALL		1198-15540	Medication Dispense (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09
entryRelationship	0..1	MAY		1198-	

				8866	
@typeCode	1..1	SHALL		1198-8867	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = CAUS
observation	1..1	SHALL		1198-15541	Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09
entryRelationship	0..1	MAY		1198-8988	
@typeCode	1..1	SHALL		1198-8989	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1198-15542	Immunization Refusal Reason (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.53
entryRelationship	0..*	SHOULD		1198-31510	
@typeCode	1..1	SHALL		1198-31511	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
@inversionInd	1..1	SHALL		1198-31512	true
sequenceNumber	0..1	MAY		1198-31513	
act	1..1	SHALL		1198-31514	Substance Administered Act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.118
precondition	0..*	MAY		1198-8869	
@typeCode	1..1	SHALL		1198-8870	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = PRCN
criterion	1..1	SHALL		1198-15548	Precondition for Substance Administration (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09

1. **SHALL** contain exactly one [1..1] **@classCode**="SBADM" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-8826).
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** (CONF:1198-8827).
3. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:1198-8985).
   Note: Use negationInd="true" to indicate that the immunization was not given.
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8828) such that it

    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.52" (CONF:1198-10498).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32528).
5. **SHALL** contain at least one [1..*] **id** (CONF:1198-8829).
6. **MAY** contain zero or one [0..1] **code** (CONF:1198-8830).
   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.
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-8833).
    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:1198-32359).
8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-8834).

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:1198-8838).
10. **MAY** 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:1198-8839).
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:1198-8840).
12. **SHOULD** contain zero or one [0..1] **doseQuantity** (CONF:1198-8841).
    a. The doseQuantity, if present, **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:1198-8842).
13. **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:1198-8846).
14. **SHALL** contain exactly one [1..1] **consumable** (CONF:1198-8847).
    a. This consumable **SHALL** contain exactly one [1..1] **Immunization Medication Information (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) (CONF:1198-15546).
15. **SHOULD** contain zero or one [0..1] **performer** (CONF:1198-8849).
16. **SHOULD** contain zero or more [0..*] Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-31151).
17. **MAY** contain zero or more [0..*] **participant** (CONF:1198-8850) 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:1198-8851).
b. **SHALL** contain exactly one [1..1] Drug Vehicle (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.24) (CONF:1198-15547).

18. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-8853) 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:1198-8854).
    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:1198-15537).
19. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8856) 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:1198-8857).
    b. **SHALL** contain exactly one [1..1] **@inversionInd**="true" True (CONF:1198-8858).
    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:1198-31392).
20. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8860) 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:1198-8861).
    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:1198-15539).
21. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8863) 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:1198-8864).
    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:1198-15540).
22. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8866) 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:1198-8867).
    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:1198-15541).
23. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8988) 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:1198-8989).

b. **SHALL** contain exactly one [1..1] Immunization Refusal Reason `(identifier: urn:oid:2.16.840.1.113883.10.20.22.4.53)` (CONF:1198-15542).

The following entryRelationship is used to indicate a given immunization'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.

24. **SHOULD** contain zero or more [0..*] **entryRelationship** (CONF:1198-31510) 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:1198-31511).
    b. **SHALL** contain exactly one [1..1] **@inversionInd**="true" (CONF:1198-31512).
    c. **MAY** contain zero or one [0..1] **sequenceNumber** (CONF:1198-31513).
    d. **SHALL** contain exactly one [1..1] Substance Administered Act `(identifier: urn:oid:2.16.840.1.113883.10.20.22.4.118)` (CONF:1198-31514).
25. **MAY** contain zero or more [0..*] **precondition** (CONF:1198-8869) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="PRCN" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-8870).
    b. **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:1198-15548).

Table 64: MoodCodeEvnInt

Value Set: MoodCodeEvnInt urn:oid:2.16.840.1.113883.11.20.9.18 Contains moodCode EVN and INT Value Set Source: https://vsac.nlm.nih.gov/			
Code	**Code System**	**Code System OID**	**Print Name**
EVN	HL7ActMood	urn:oid:2.16.840.1.113883.5.1001	Event
INT	HL7ActMood	urn:oid:2.16.840.1.113883.5.1001	Intent

Table 65: 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: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.1.11.15933			
Code	**Code System**	**Code System OID**	**Print Name**
normal	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	normal
aborted	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	aborted
active	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	active
cancelled	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	cancelled
completed	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	completed
held	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	held
new	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	new
suspended	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	suspended
nullified	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	nullified
obsolete	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	obsolete

Table 66: 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 67: 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: **https://vsac.nlm.nih.gov/**			
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 68: 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 69: 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.			
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
…			

Figure 36: Immunization Activity (V3) Example

```
<substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="false">
    <!-- ** Immunization activity ** -->
    <templateId root="2.16.840.1.113883.10.20.22.4.52" extension="2015-08-01" />
    <id root="e6f1ba43-c0ed-4b9b-9f12-f435d8ad8f92" />
    <statusCode code="completed" />
    <effectiveTime value="19981215" />
    <routeCode code="C28161" codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="National Cancer Institute (NCI) Thesaurus" displayName="Intramuscular
injection" />
    <doseQuantity value="50" unit="ug" />
    <consumable>
        <manufacturedProduct classCode="MANU">
            <!-- ** Immunization medication information ** -->
            <templateId root="2.16.840.1.113883.10.20.22.4.54" extension="2014-06-09" />
            <manufacturedMaterial>
                <code code="33" codeSystem="2.16.840.1.113883.6.59"
displayName="Pneumococcal polysaccharide vaccine" codeSystemName="CVX">
                    <translation code="854981" displayName="Pneumovax 23 (Pneumococcal
vaccine polyvalent) Injectable Solution" codeSystemName="RxNORM"
codeSystem="2.16.840.1.113883.6.88" />
                </code>
                <lotNumberText>1</lotNumberText>
            </manufacturedMaterial>
            <manufacturerOrganization>
                <name>Health LS - Immuno Inc.</name>
            </manufacturerOrganization>
        </manufacturedProduct>
    </consumable>
    <performer>
        <assignedEntity>
            <id root="2.16.840.1.113883.19.5.9999.456" extension="2981824" />
            <addr>
                <streetAddressLine>1007 Health Drive</streetAddressLine>
                <city>Portland</city>
                <state>OR</state>
                <postalCode>99123</postalCode>
                <country>US</country>
            </addr>
            <telecom use="WP" value="tel: +(555)-555-1030" />
            <assignedPerson>
                <name>
                    <given>Harold</given>
                    <family>Hippocrates</family>
                </name>
            </assignedPerson>
            <representedOrganization>
                <id root="2.16.840.1.113883.19.5.9999.1394" />
                <name>Good Health Clinic</name>
                <telecom use="WP" value="tel: +(555)-555-1030" />
                <addr>
                    <streetAddressLine>1007 Health Drive</streetAddressLine>
                    <city>Portland</city>
                    <state>OR</state>
                    <postalCode>99123</postalCode>
                    <country>US</country>
```



```
                </addr>
            </representedOrganization>
        </assignedEntity>
    </performer>
</substanceAdministration>
```

3.6 Immunization Medication Information (V2)

[manufacturedProduct: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 (open)]

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Table 70: Immunization Medication Information (V2) Contexts

Contained By:	Contains:
Immunization Activity (V3) (required)	

The Immunization Medication Information represents product information about the immunization substance. The vaccine manufacturer and vaccine lot number are typically recorded in the medical record and should be included if known.

Table 71: Immunization Medication Information (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
manufacturedProduct (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09)					
@classCode	1..1	SHALL		1098-9002	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU
templateId	1..1	SHALL		1098-9004	
@root	1..1	SHALL		1098-10499	2.16.840.1.113883.10.20.22.4.54
@extension	1..1	SHALL		1098-32602	2014-06-09
id	0..*	MAY		1098-9005	
manufacturedMaterial	1..1	SHALL		1098-9006	
code	1..1	SHALL		1098-9007	urn:oid:2.16.840.1.113762.1.4.1010.6 (CVX Vaccines Administered - Vaccine Set)
translation	0..*	MAY		1098-31543	urn:oid:2.16.840.1.113762.1.4.1010.8 (Vaccine Clinical Drug)
translation	0..*	MAY		1098-31881	urn:oid:2.16.840.1.113762.1.4.1010.10 (Specific Vaccine Clinical Drug)
lotNumberText	1..1	SHALL		1098-9014	
manufacturerOrganization	0..1	SHOULD		1098-9012	

1. **SHALL** contain exactly one [1..1] **@classCode**="MANU" (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 **STATIC**) (CONF:1098-9002).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-9004) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.54" (CONF:1098-10499).
    b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32602).
3. **MAY** contain zero or more [0..*] **id** (CONF:1098-9005).
4. **SHALL** contain exactly one [1..1] **manufacturedMaterial** (CONF:1098-9006).
    a. This manufacturedMaterial **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet **CVX Vaccines Administered - Vaccine Set** urn:oid:2.16.840.1.113762.1.4.1010.6 **DYNAMIC** (CONF:1098-9007).
        i. This code **MAY** contain zero or more [0..*] **translation**, which **MAY** be selected from ValueSet **Vaccine Clinical Drug** urn:oid:2.16.840.1.113762.1.4.1010.8 **DYNAMIC** (CONF:1098-31543).
        ii. This code **MAY** contain zero or more [0..*] **translation**, which **MAY** be selected from ValueSet **Specific Vaccine Clinical Drug** urn:oid:2.16.840.1.113762.1.4.1010.10 **DYNAMIC** (CONF:1098-31881).

b. This manufacturedMaterial **SHALL** contain exactly one [1..1] **lotNumberText** (CONF:1098-9014).

5. **SHOULD** contain zero or one [0..1] **manufacturerOrganization** (CONF:1098-9012).

Table 72: CVX Vaccines Administered - Vaccine Set

Value Set: CVX Vaccines Administered - Vaccine Set urn:oid:2.16.840.1.113762.1.4.1010.6 CVX vaccine concepts that represent actual vaccines types. This does not include the identifiers for CVX codes that do not represent vaccines. Value set intensionally defined from CVX (OID: 2.16.840.1.113883.12.292) FilterOnProperty(nonvaccine,FALSE). Value Set Source: http://www2a.cdc.gov/vaccines/iis/iisstandards/vaccines.asp?rpt=cvx			
Code	**Code System**	**Code System OID**	**Print Name**
19	CDC Vaccine Code (CVX)	urn:oid:2.16.840.1.113883.12.292	BCG
26	CDC Vaccine Code (CVX)	urn:oid:2.16.840.1.113883.12.292	Cholera
24	CDC Vaccine Code (CVX)	urn:oid:2.16.840.1.113883.12.292	Anthrax
27	CDC Vaccine Code (CVX)	urn:oid:2.16.840.1.113883.12.292	Botulinum antitoxin
...			

Table 73: Vaccine Clinical Drug

Value Set: Vaccine Clinical Drug urn:oid:2.16.840.1.113762.1.4.1010.8 Administrable vaccine medication formulations represented using either a "generic" or "brand-specific" concept. Value set intensionally defined from RXNORM (OID: 2.16.840.1.113883.6.88), comprised of those codes whose ingredients map to NDC codes that the CDC associates with CVX codes. Value Set Source: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
898572	RxNorm	urn:oid:2.16.840.1.113883.6.88	0.17 ML Rho(D) Immune Globulin 0.3 MG/ML Prefilled Syringe [HyperRHO]
807276	RxNorm	urn:oid:2.16.840.1.113883.6.88	0.5 ML diphtheria toxoid vaccine, inactivated 4 UNT/ML / tetanus toxoid vaccine, inactivated 10 UNT/ML Prefilled Syringe [Decavac]
798482	RxNorm	urn:oid:2.16.840.1.113883.6.88	0.5 ML Hepatitis A Vaccine (Inactivated) Strain HM175 1440 UNT/ML Prefilled Syringe [Havrix]
836636	RxNorm	urn:oid:2.16.840.1.113883.6.88	0.5 ML Hepatitis A Vaccine, Inactivated 50 UNT/ML Prefilled Syringe [Vaqta]
…			

Table 74: Specific Vaccine Clinical Drug

Value Set: Specific Vaccine Clinical Drug urn:oid:2.16.840.1.113762.1.4.1010.10 This value set contains extensionally identified RxNorm vaccine codes. It should be used to supplement the Vaccine Clinical Drug Value Set (Value Set OID 2.16.840.1.113762.1.4.1010.8). Intensional rules for the latter value set are being refined, but at this time lack complete sensitivity, and as a result can miss including relevant codes. This Specific Vaccine Clinical Drug Value Set is used to manually provide for these other RxNorm codes. (At the time of Consolidated CDA R2 publication, the value set has no members) Value Set Source: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
NA	RxNorm	urn:oid:2.16.840.1.113883.6.88	At the time of Consolidated CDA R2 publication, the value set has no members
…			

Figure 37: Immunization Medication Information (V2) Example

```
<manufacturedProduct classCode="MANU">
    <!-- ** Immunization medication information ** -->
    <templateId root="2.16.840.1.113883.10.20.22.4.54" extension="2014-06-09" />
    <manufacturedMaterial>
        <code code="33" codeSystem="2.16.840.1.113883.12.292" displayName="Pneumococcal
polysaccharide vaccine" codeSystemName="CVX">
            <translation code="854981" displayName="Pneumovax 23 (Pneumococcal vaccine
polyvalent) Injectable Solution" codeSystemName="RxNORM"
codeSystem="2.16.840.1.113883.6.88" />
        </code>
        <lotNumberText>1</lotNumberText>
    </manufacturedMaterial>
    <manufacturerOrganization>
        <name>Health LS - Immuno Inc.</name>
    </manufacturerOrganization>
</manufacturedProduct>
```

3.7 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 75: 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".

Table 76: Medication Activity (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.16:2014-06-09)					
@classCode	1..1	SHALL		1098-7496	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM
@moodCode	1..1	SHALL		1098-7497	urn:oid:2.16.840.1.113883.11.20.9.18 (MoodCodeEvnInt)
templateId	1..1	SHALL		1098-7499	
@root	1..1	SHALL		1098-10504	2.16.840.1.113883.10.20.22.4.16
@extension	1..1	SHALL		1098-32498	2014-06-09
id	1..*	SHALL		1098-7500	
code	0..1	MAY		1098-7506	
statusCode	1..1	SHALL		1098-7507	
@code	1..1	SHALL		1098-32360	urn:oid:2.16.840.1.113883.1.11.159331 (ActStatus)
effectiveTime	1..1	SHALL	IVL_TS	1098-7508	
@value	0..1	SHOULD		1098-32775	
low	0..1	SHOULD		1098-32776	
high	0..1	MAY		1098-32777	
effectiveTime	0..1	SHOULD		1098-7513	
@operator	1..1	SHALL		1098-9106	A
repeatNumber	0..1	MAY		1098-7555	
routeCode	0..1	SHOULD		1098-7514	urn:oid:2.16.840.1.113883.3.88.12.3221.8.7 (Medication Route FDA)
approachSiteCode	0..1	MAY	SET<CD>	1098-7515	urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 (Body Site)
doseQuantity	1..1	SHALL		1098-7516	
@unit	0..1	SHOULD		1098-7526	urn:oid:2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive)
rateQuantity	0..1	MAY		1098-	

				7517	
@unit	1..1	SHALL		1098-7525	urn:oid:2.16.840.1.113883.1.11.12839 (UnitsOfMeasureCaseSensitive)
maxDoseQuantity	0..1	MAY	RTO<PQ, PQ>	1098-7518	
administrationUnitCode	0..1	MAY		1098-7519	urn:oid:2.16.840.1.113762.1.4.1021.30 (AdministrationUnitDoseForm)
consumable	1..1	SHALL		1098-7520	
manufacturedProduct	1..1	SHALL		1098-16085	Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09
performer	0..1	MAY		1098-7522	
author	0..*	SHOULD		1098-31150	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119
participant	0..*	MAY		1098-7523	
@typeCode	1..1	SHALL		1098-7524	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM
participantRole	1..1	SHALL		1098-16086	Drug Vehicle (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.24
entryRelationship	0..*	MAY		1098-7536	
@typeCode	1..1	SHALL		1098-7537	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-16087	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
entryRelationship	0..1	MAY		1098-7539	
@typeCode	1..1	SHALL		1098-7540	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1098-7542	true
act	1..1	SHALL		1098-31387	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
entryRelationship	0..1	MAY		1098-7543	
@typeCode	1..1	SHALL		1098-7547	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) =

					REFR
supply	1..1	SHALL		1098-16089	Medication Supply Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09
entryRelationship	0..*	MAY		1098-7549	
@typeCode	1..1	SHALL		1098-7553	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
supply	1..1	SHALL		1098-16090	Medication Dispense (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09
entryRelationship	0..*	MAY		1098-7552	
@typeCode	1..1	SHALL		1098-7544	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = CAUS
observation	1..1	SHALL		1098-16091	Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09
entryRelationship	0..1	MAY		1098-30820	
@typeCode	1..1	SHALL		1098-30821	COMP
act	1..1	SHALL		1098-30822	Drug Monitoring Act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.123
entryRelationship	0..*	MAY		1098-31515	
@typeCode	1..1	SHALL		1098-31516	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
@inversionInd	1..1	SHALL		1098-31517	true
sequenceNumber	0..1	MAY		1098-31518	
act	1..1	SHALL		1098-31519	Substance Administered Act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.118
entryRelationship	0..*	MAY		1098-32907	
@typeCode	1..1	SHALL		1098-32908	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
substanceAdministration	1..1	SHALL		1098-	Medication Free Text Sig (identifier:

				32909	urn:oid:2.16.840.1.113883.10.20.22.4.147
precondition	0..*	MAY		1098-31520	
@typeCode	1..1	SHALL		1098-31882	PRCN
criterion	1..1	SHALL		1098-31883	Precondition for Substance Administration (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09

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 38: 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 39: 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>
```

3.8 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 77: 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".

Table 78: Medication Information (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
manufacturedProduct (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.23:2014-06-09)					
@classCode	1..1	SHALL		1098-7408	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU
templateId	1..1	SHALL		1098-7409	
@root	1..1	SHALL		1098-10506	2.16.840.1.113883.10.20.22.4.23
@extension	1..1	SHALL		1098-32579	2014-06-09
id	0..*	MAY		1098-7410	
manufacturedMaterial	1..1	SHALL		1098-7411	
code	1..1	SHALL		1098-7412	urn:oid:2.16.840.1.113762.1.4.1010.4 (Medication Clinical Drug)
translation	0..*	MAY		1098-31884	urn:oid:2.16.840.1.113762.1.4.1010.2 (Clinical Substance)
manufacturerOrganization	0..1	MAY		1098-7416	

1. **SHALL** contain exactly one [1..1] **@classCode**="MANU" (CodeSystem: HL7RoleClass 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).

Table 79: 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 80: 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)
...			

Figure 40: 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>
```

3.9 Planned Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09 (open)]

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Table 81: Planned Observation (V2) Contexts

Contained By:	Contains:
Plan of Treatment Section (V2) (optional)	

This template represents planned observations that result in new information about the patient which cannot be classified as a procedure according to the HL7 RIM, i.e., procedures alter the patient's body. Examples of these observations are laboratory tests, diagnostic imaging tests, EEGs, and EKGs.

The importance of the planned observation to the patient and provider is communicated through Priority Preference. The effectiveTime indicates the time when the observation is intended to take place and authorTime indicates when the documentation of the plan occurred.

The Planned Observation template may also indicate the potential insurance coverage for the observation.

Table 82: Planned Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09)					
@classCode	1..1	SHALL		1098-8581	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1098-8582	urn:oid:2.16.840.1.113883.11.20.9.25 (Planned moodCode (Observation))
templateId	1..1	SHALL		1098-30451	
@root	1..1	SHALL		1098-30452	2.16.840.1.113883.10.20.22.4.44
@extension	1..1	SHALL		1098-32555	2014-06-09
id	1..*	SHALL		1098-8584	
code	1..1	SHALL		1098-31030	urn:oid:2.16.840.1.113883.6.1 (LOINC)
statusCode	1..1	SHALL		1098-30453	
@code	1..1	SHALL		1098-32032	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = active
effectiveTime	0..1	SHOULD		1098-30454	
value	0..1	MAY		1098-31031	
methodCode	0..1	MAY		1098-32043	
targetSiteCode	0..*	SHOULD		1098-32044	urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 (Body Site)
performer	0..*	MAY		1098-30456	
author	0..*	SHOULD		1098-32033	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119
entryRelationship	0..*	MAY		1098-31073	
@typeCode	1..1	SHALL		1098-31074	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1098-31075	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143
entryRelationship	0..*	MAY		1098-32034	
@typeCode	1..1	SHALL		1098-	urn:oid:2.16.840.1.113883.5.10

				32035	02 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1098-32036	Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09
entryRelationship	0..*	MAY		1098-32037	
@typeCode	1..1	SHALL		1098-32038	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
act	1..1	SHALL		1098-32039	Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09
entryRelationship	0..*	MAY		1098-32040	
@typeCode	1..1	SHALL		1098-32041	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
act	1..1	SHALL		1098-32042	Planned Coverage (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.129

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1098-8581).
2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet **Planned moodCode (Observation)** urn:oid:2.16.840.1.113883.11.20.9.25 **STATIC** 2011-09-30 (CONF:1098-8582).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1098-30451) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.44" (CONF:1098-30452).
    b. **SHALL** contain exactly one [1..1] **@extension**="2014-06-09" (CONF:1098-32555).
4. **SHALL** contain at least one [1..*] **id** (CONF:1098-8584).
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:1098-31030).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1098-30453).
    a. This statusCode **SHALL** contain exactly one [1..1] **@code**="active" Active (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1098-32032).

The effectiveTime in a planned observation represents the time that the observation should occur.

7. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:1098-30454).
8. **MAY** contain zero or one [0..1] **value** (CONF:1098-31031).

In a planned observation the provider may suggest that an observation should be performed using a particular method.

9. **MAY** contain zero or one [0..1] **methodCode** (CONF:1098-32043).

The targetSiteCode is used to identify the part of the body of concern for the planned observation.

10. **SHOULD** contain zero or more [0..*] **targetSiteCode**, which **SHALL** be selected from ValueSet **Body Site** urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1098-32044).

The clinician who is expected to perform the observation could be identified using procedure/performer.

11. **MAY** contain zero or more [0..*] **performer** (CONF:1098-30456).

The author in a planned observation represents the clinician who is requesting or planning the observation.

12. **SHOULD** contain zero or more [0..*] Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1098-32033).

The following entryRelationship represents the priority that a patient or a provider places on the observation.

13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-31073) 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:1098-31074).
    b. **SHALL** contain exactly one [1..1] Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1098-31075).

The following entryRelationship represents the indication for the observation.

14. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32034) 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) (CONF:1098-32035).
    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:1098-32036).

The following entryRelationship captures any instructions associated with the planned observation.

15. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32037) 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) (CONF:1098-32038).
    b. **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:1098-32039).

The following entryRelationship represents the insurance coverage the patient may have for the observation.

16. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1098-32040) 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:1098-32041).
b. **SHALL** contain exactly one [1..1] Planned Coverage (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.129) (CONF:1098-32042).

Table 83: Planned moodCode (Observation)

Value Set: Planned moodCode (Observation) urn:oid:2.16.840.1.113883.11.20.9.25 This value set is used to restrict the moodCode on an Observation to future moods. Value Set Source: https://vsac.nlm.nih.gov/			
Code	**Code System**	**Code System OID**	**Print Name**
INT	HL7ActMood	urn:oid:2.16.840.1.113883.5.1001	Intent
PRMS	HL7ActMood	urn:oid:2.16.840.1.113883.5.1001	Promise
PRP	HL7ActMood	urn:oid:2.16.840.1.113883.5.1001	Proposal
RQO	HL7ActMood	urn:oid:2.16.840.1.113883.5.1001	Request

Figure 41: Planned Observation (V2) Example

```
<observation classCode="OBS" moodCode="INT">
    <templateId root="2.16.840.1.113883.10.20.22.4.44"
        extension="2014-06-09" />
    <id root="b52bee94-c34b-4e2c-8c15-5ad9d6def205" />
    <code code="59408-5"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        displayName="Oxygen saturation in Arterial blood by Pulse oximetry" />
    <statusCode code="active" />
    <effectiveTime value="20130903" />
    <author typeCode="AUT">
        <!-- Author Participation -->
    </author>
    <entryRelationship typeCode="REFR">
        <!-- Priority Preference -->
    ...

    </entryRelationship>
    <entryRelationship typeCode="RSON">
        <!-- Indication (V2) -->
    ...

    </entryRelationship>
    <entryRelationship typeCode="SUBJ">
        <!-- Instruction (V2) -->
    ...

    </entryRelationship>
    <entryRelationship typeCode="COMP">
        <!-- Planned Coverage -->
    ...

    </entryRelationship>
</observation>
```

3.9.1 Initial Case Report Trigger Code Lab Test Order

`[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.4:2016-12-01 (open)]`

`Draft as part of Public Health Case Report, Release 1, STU Release 1.1 - US Realm`

Table 84: Initial Case Report Trigger Code Lab Test Order Contexts

Contained By:	**Contains:**
Plan of Treatment Section (V2) (optional [0..*])	

This template is designed for optional use in the Plan of Treatment Section (V2) contained in an Initial Public Health Case Report Document (eICR) (V2). This template **MAY** be included zero or more times [0..*] in the Plan of Treatment Section (V2).

The Initial Case Report Trigger Code Lab Test Order flags that the observation code is a trigger code contained in the **Reportable Condition Trigger Codes table** - specifically, one of the codes in the Trigger Code for Laboratory Test Orders value set (RCTC subset).

This template further constrains the C-CDA R2.1 Planned Observation (V3). It specifies that code/@sdtc:valueSet and code/@sdtc:valueSetVersion must be present in order to capture the RCTC OID (2.16.840.1.114222.4.11.7508) and RCTC definition version.

This template represents trigger code ordered lab tests only. Trigger code resulted lab tests should be contained in the Initial Case Report Trigger Code Result Observation.

Table 85: Initial Case Report Trigger Code Lab Test Order Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.4:2016-12-01)					
@classCode	1..1	SHALL		3284-317	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		3284-318	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = RQO
templateId	1..1	SHALL		3284-311	
@root	1..1	SHALL		3284-319	2.16.840.1.113883.10.20.15.2.3.4
@extension	1..1	SHALL		3284-320	2016-12-01
code	1..1	SHALL		3284-325	urn:oid:2.16.840.1.113883.6.1 (LOINC)
@code	1..1	SHALL		3284-336	urn:oid:2.16.840.1.113762.1.4.1146.166 (Trigger code for laboratory test orders (RCTC subset))
@sdtc:valueSet	1..1	SHALL		3284-337	2.16.840.1.114222.4.11.7508
@sdtc:valueSetVersion	1..1	SHALL		3284-338	

1. Conforms to **Planned Observation (V2)** template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:3284-317).
3. **SHALL** contain exactly one [1..1] **@moodCode**="RQO" Request (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3284-318).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3284-311) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.15.2.3.4" (CONF:3284-319).
    b. **SHALL** contain exactly one [1..1] **@extension**="2016-12-01" (CONF:3284-320).

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:3284-325).
   Note: Lab order code
   a. This code **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet **Trigger code for laboratory test orders (RCTC subset)** urn:oid:2.16.840.1.113762.1.4.1146.166 **DYNAMIC** (CONF:3284-336).
   b. This code **SHALL** contain exactly one [1..1] **@sdtc:valueSet**="2.16.840.1.114222.4.11.7508" (CONF:3284-337).
   c. This code **SHALL** contain exactly one [1..1] **@sdtc:valueSetVersion** (CONF:3284-338).
      Note: RCTC Definition Version used (e.g. 19/05/2016)

Table 86: Trigger code for laboratory test orders (RCTC subset)

Value Set: Trigger code for laboratory test orders (RCTC subset) urn:oid:2.16.840.1.113762.1.4.1146.166 This value set is a subset of the Reportable Condition Trigger Code (RCTC) value set and contains trigger codes for laboratory test orders. Use the superset RCTC OID (2.16.840.1.114222.4.11.7508) and RCTC Definition Version (e.g. 19/05/2016) when populating @sdtc:valueSet and @sdtc:valueSetVersion.			
Code	**Code System**	**Code System OID**	**Print Name**
Code from RCTC	Multiple Code Systems	Multiple Code Systems	See link above for latest value set
...			

Figure 42: Initial Case Report Trigger Code Lab Test Order Example

```
<!-- This is a request for a test to be performed (a lab test order) -->
<observation classCode="OBS" moodCode="RQO">
    <!-- [C-CDA R1.1] Plan of Care Activity Observation -->
    <templateId root="2.16.840.1.113883.10.20.22.4.44" />
    <!-- [C-CDA R2.0] Planned Observation (V2) -->
    <templateId root="2.16.840.1.113883.10.20.22.4.44" extension="2014-06-09" />
    <!-- [eICR R2 STU1.1] Initial Case Report Trigger Code Lab Test Order -->
    <templateId root="2.16.840.1.113883.10.20.22.4.44" extension="2016-12-01" />
    <id root="b52bee94-c34b-4e2c-8c15-5ad9d6def205" />
    <!-- This code is from the trigger codes for laboratory test order
         value set (2.16.840.1.113762.1.4.1146.166) -->
    <code code="80825-3"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        displayName="Zika virus envelope (E) gene [Presence] in Serum
                     by Probe and target amplification method"
        sdtc:valueSet="2.16.840.1.114222.4.11.7508"
        sdtc:valueSetVersion="19/05/2016" />
    <statusCode code="active" />
    <!-- Date on which the lab test should take place -->
    <effectiveTime value="20161108" />
</observation>
```


3.10 Pregnancy Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.15.3.8 (open)]

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

Table 87: Pregnancy Observation Contexts

Contained By:	Contains:
Social History Section (V3) (optional)	Estimated Date of Delivery

This clinical statement represents current and/or prior pregnancy dates enabling investigators to determine if the subject of the case report was pregnant during the course of a condition.

Table 88: Pregnancy Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.8)					
@classCode	1..1	SHALL		81-451	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		81-452	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		81-16768	
@root	1..1	SHALL		81-16868	2.16.840.1.113883.10.20.15.3.8
code	1..1	SHALL		81-19153	
@code	1..1	SHALL		81-19154	ASSERTION
@codeSystem	1..1	SHALL		81-26505	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		81-455	
@code	1..1	SHALL		81-19110	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	0..1	SHOULD		81-2018	
value	1..1	SHALL	CD	81-457	
@code	1..1	SHALL		81-26460	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 77386006
entryRelationship	0..1	MAY		81-458	
@typeCode	1..1	SHALL		81-459	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		81-15584	Estimated Date of Delivery (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.1

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-451).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-452).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-16768) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.15.3.8" (CONF:81-16868).
4. **SHALL** contain exactly one [1..1] **code** (CONF:81-19153).
    a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:81-19154).

b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:81-26505).

5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:81-455).
   a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:81-19110).
6. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:81-2018).
7. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:81-457).
   a. This value **SHALL** contain exactly one [1..1] **@code**="77386006" Pregnant (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:81-26460).
8. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:81-458) 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 **STATIC**) (CONF:81-459).
   b. **SHALL** contain exactly one [1..1] **Estimated Date of Delivery** (identifier: urn:oid:2.16.840.1.113883.10.20.15.3.1) (CONF:81-15584).

Figure 43: Pregnancy Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.15.3.8"/>
  <id extension="123456789" root="2.16.840.1.113883.19"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="20110410"/>
  </effectiveTime>
  <value xsi:type="CD" code="77386006"
         displayName="pregnant"
         codeSystem="2.16.840.1.113883.6.96"/>
  <entryRelationship typeCode="REFR">
    <templateId root="2.16.840.1.113883.10.20.15.3.1"/>
    . . .
  </entryRelationship>
</observation>
```

3.11 Problem Concern Act (V3)

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

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

Table 89: Problem Concern Act (V3) Contexts

Contained By:	Contains:
Problem Section (entries optional) (V3) (optional) 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.

Table 90: Problem Concern Act (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.3:2015-08-01)					
@classCode	1..1	SHALL		1198-9024	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1198-9025	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1198-16772	
@root	1..1	SHALL		1198-16773	2.16.840.1.113883.10.20.22.4.3
@extension	1..1	SHALL		1198-32509	2015-08-01
id	1..*	SHALL		1198-9026	
code	1..1	SHALL		1198-9027	
@code	1..1	SHALL		1198-19184	CONC
@codeSystem	1..1	SHALL		1198-32168	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = 2.16.840.1.113883.5.6
statusCode	1..1	SHALL		1198-9029	
@code	1..1	SHALL		1198-31525	urn:oid:2.16.840.1.113883.11.20.9.19 (ProblemAct statusCode)
effectiveTime	1..1	SHALL		1198-9030	
low	1..1	SHALL		1198-9032	
high	0..1	MAY		1198-9033	
author	0..*	SHOULD		1198-31146	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119
entryRelationship	1..*	SHALL		1198-9034	
@typeCode	1..1	SHALL		1198-9035	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
observation	1..1	SHALL		1198-15980	Problem Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01
entryRelationship	0..*	MAY		1198-31638	

@typeCode	1..1	SHALL		1198-31639	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31640	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143

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: HL7ActMood 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).

Table 91: 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	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	Completed
aborted	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	Aborted
active	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	Active
suspended	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	Suspended

Figure 44: 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>
```

3.12 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 92: Problem Observation (V3) Contexts

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

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".

Table 93: Problem Observation (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01)					
@classCode	1..1	SHALL		1198-9041	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1198-9042	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	0..1	MAY		1198-10139	
templateId	1..1	SHALL		1198-14926	
@root	1..1	SHALL		1198-14927	2.16.840.1.113883.10.20.22.4.4
@extension	1..1	SHALL		1198-32508	2015-08-01
id	1..*	SHALL		1198-9043	
code	1..1	SHALL		1198-9045	urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 (Problem Type)
translation	1..*	SHALL		1198-32848	urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 (Problem Type)
statusCode	1..1	SHALL		1198-9049	
@code	1..1	SHALL		1198-19112	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		1198-9050	
low	1..1	SHALL		1198-15603	
high	0..1	MAY		1198-15604	
value	1..1	SHALL	CD	1198-9058	urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 (Problem)
qualifier	0..*	MAY		1198-31870	
translation	0..*	MAY		1198-16749	
@code	0..1	MAY		1198-16750	urn:oid:2.16.840.1.113883.6.90 (ICD-10-CM)
@code	0..1	MAY		1198-31871	
author	0..*	SHOULD		1198-31147	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119
entryRelationship	0..1	MAY		1198-9059	

@typeCode	1..1	SHALL		1198-9060	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1198-9069	true
observation	1..1	SHALL		1198-15590	Age Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.31
entryRelationship	0..1	MAY		1198-29951	
@typeCode	1..1	SHALL		1198-31531	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-29952	Prognosis Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.113
entryRelationship	0..*	MAY		1198-31063	
@typeCode	1..1	SHALL		1198-31532	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31064	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143
entryRelationship	0..1	MAY		1198-9063	
@typeCode	1..1	SHALL		1198-9068	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-15591	Problem Status (DEPRECATED) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2014-06-09

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: HL7ActMood 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: HL7ActStatus 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).

Table 94: 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
…			

Figure 45: 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>
```

3.12.1 Initial Case Report Manual Initiation Reason Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.5:2016-12-01 (open)]

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Table 95: Initial Case Report Manual Initiation Reason Observation Contexts

Contained By:	Contains:
Encounter Activity (V3) (optional [0..*])	

This template is designed for optional use in the Encounter Activity (V3) template contained in an Initial Public Health Case Report Document (eICR) (V2). This template **MAY** be included zero or one times [0..1] in an Encounter Activity (V3) template.

This template represents the problem that is the reason for the manual initiation of the eICR CDA document. The information will be entered as free text in value/originalText by the provider who made the decision to initiate.

Table 96: Initial Case Report Manual Initiation Reason Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.5:2016-12-01)					
@classCode	1..1	SHALL		3284-366	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		3284-367	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		3284-340	
@root	1..1	SHALL		3284-352	2.16.840.1.113883.10.20.15.2.3.5
@extension	1..1	SHALL		3284-353	2016-12-01
value	1..1	SHALL	CD	3284-343	
@nullFlavor	1..1	SHALL		3284-395	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = OTH
originalText	1..1	SHALL		3284-372	

1. Conforms to **Problem Observation (V3)** template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:3284-366).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3284-367).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3284-340) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.15.2.3.5" (CONF:3284-352).
    b. **SHALL** contain exactly one [1..1] **@extension**="2016-12-01" (CONF:3284-353).
5. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3284-343).
    a. This value **SHALL** contain exactly one [1..1] **@nullFlavor**="OTH" Other (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:3284-395).

Free text description of the reason for manually initiating an eICR.

    b. This value **SHALL** contain exactly one [1..1] **originalText** (CONF:3284-372).

Figure 46: Initial Case Report Manual Trigger Observation

```
<observation classCode="OBS" moodCode="EVN">
    <!-- [C-CDA R2.1] Problem Observation (V3) -->
    <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01" />
    <!-- [eICR R2 STU1.1] Initial Case Report Manual Initiation Reason Observation -->
    <templateId root="2.16.840.1.113883.10.20.15.2.3.5" extension="2016-12-01" />
    <id root="ab1791b0-5c71-11db-b0de-0800200c9a65" />
    <code code="75322-8"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        displayName="Complaint">
        <translation code="409586006"
            codeSystem="2.16.840.1.113883.6.96"
            codeSystemName="SNOMED CT"
            displayName="Complaint" />
    </code>
    <statusCode code="completed" />
    <effectiveTime>
        <low value="20161106000000-0500" />
    </effectiveTime>
    <value xsi:type="CD" nullFlavor="OTH">
        <originalText>
            Free text containing the reason
            for the manual eICR document
        </originalText>
    </value>
</observation>
```

3.12.2 Initial Case Report Trigger Code Problem Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.3:2016-12-01 (open)]

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Table 97: Initial Case Report Trigger Code Problem Observation Contexts

Contained By:	Contains:
Encounter Diagnosis (V3) (optional [0..*]) Problem Concern Act (V3) (optional [0..*])	

This template is designed for optional use in an Encounter Diagnosis (V3) or a Problem Concern Act (V3) contained in an Initial Public Health Case Report Document (eICR) (V2). This template **MAY** be included zero or more times [0..*] in an Encounter Diagnosis (V3) or a Problem Concern Act (V3).

The Initial Case Report Trigger Code Problem Observation is a flag to indicate that the problem observation code (diagnosis) is a trigger code contained in the **Reportable Condition Trigger Codes table** - specifically, one of the codes in the Trigger Code for Condition Name value set (RCTC subset).

This template further constrains the C-CDA R2.1 Problem Observation (V3). It constrains @negationInd to "false" to ensure that this is the positive assertion of a condition. It specifies that code/@sdtc:valueSet and code/@sdtc:valueSetVersion must be present in order to capture the RCTC OID (2.16.840.1.114222.4.11.7508) and RCTC definition version and it constrains code/@code to the value set "Trigger code for condition name (RCTC subset)".

Table 98: Initial Case Report Trigger Code Problem Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.3:2016-12-01)					
@classCode	1..1	SHALL		3284-183	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		3284-184	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		3284-296	false
templateId	1..1	SHALL		3284-157	
@root	1..1	SHALL		3284-169	2.16.840.1.113883.10.20.15.2.3.3
@extension	1..1	SHALL		3284-170	2016-12-01
value	1..1	SHALL	CD	3284-160	
@code	1..1	SHALL		3284-176	urn:oid:2.16.840.1.113762.1.4.1146.28 (Trigger code for condition name (RCTC subset))
@sdtc:valueSet	1..1	SHALL		3284-187	2.16.840.1.114222.4.11.7508
@sdtc:valueSetVersion	1..1	SHALL		3284-188	

1. Conforms to **Problem Observation (V3)** template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:3284-183).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3284-184).
4. **SHALL** contain exactly one [1..1] **@negationInd**="false" (CONF:3284-296).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:3284-157) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.15.2.3.3" (CONF:3284-169).
    b. **SHALL** contain exactly one [1..1] **@extension**="2016-12-01" (CONF:3284-170).
6. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:3284-160).

a. This value **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet **Trigger code for condition name (RCTC subset)** urn:oid:2.16.840.1.113762.1.4.1146.28 **DYNAMIC** (CONF:3284-176).
b. This value **SHALL** contain exactly one [1..1] **@sdtc:valueSet="**2.16.840.1.114222.4.11.7508**"** (CONF:3284-187).
c. This value **SHALL** contain exactly one [1..1] **@sdtc:valueSetVersion** (CONF:3284-188).
Note: RCTC Definition Version used (e.g. 19/05/2016)

Table 99: Trigger code for condition name (RCTC subset)

Value Set: Trigger code for condition name (RCTC subset) urn:oid:2.16.840.1.113762.1.4.1146.28
This value set is a subset of the Reportable Condition Trigger Code (RCTC) value set and contains trigger codes for condition names. Use the superset RCTC OID (2.16.840.1.114222.4.11.7508) and RCTC Definition Version (e.g. 19/05/2016) when populating @sdtc:valueSet and @sdtc:valueSetVersion.
Value Set Source:
https://phinvads.cdc.gov/vads/DownloadHotTopicDetailFile.action?filename=42399A0D-011E-E611-BD10-0017A477041A

Code	Code System	Code System OID	Print Name
Code from RCTC	Multiple Code Systems	Multiple Code Systems	See link above for latest value set
…			

Figure 47: Initial Case Report Trigger Code Problem Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
    <!-- [C-CDA R1.1] Problem Observation -->
    <templateId root="2.16.840.1.113883.10.20.22.4.4" />
    <!-- [C-CDA R2.1] Problem Observation (V3) -->
    <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01" />
    <!-- [eICR R2 STU1.1] Initial Case Report Trigger Code Problem Observation -->
    <templateId root="2.16.840.1.113883.10.20.15.2.3.3" extension="2016-12-01" />
    <id root="db734647-fc99-424c-a864-7e3cda82e705" />
    <code code="29308-4"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        displayName="Diagnosis">
        <translation code="282291009"
            codeSystem="2.16.840.1.113883.6.96"
            codeSystemName="SNOMED CT"
            displayName="Diagnosis" />
    </code>
    <statusCode code="completed" />
    <effectiveTime>
        <low value="20161107" />
    </effectiveTime>
    <value xsi:type="CD" code="27836007"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT"
        displayName="Pertussis (disorder)"
        sdtc:valueSet="2.16.840.1.114222.4.11.7508"
        sdtc:valueSetVersion="19/05/2016" />
</observation>
```

3.13 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 100: 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.

Table 101: Result Observation (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2015-08-01)					
@classCode	1..1	SHALL		1198-7130	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1198-7131	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1198-7136	
@root	1..1	SHALL		1198-9138	2.16.840.1.113883.10.20.22.4.2
@extension	1..1	SHALL		1198-32575	2015-08-01
id	1..*	SHALL		1198-7137	
code	1..1	SHALL		1198-7133	urn:oid:2.16.840.1.113883.6.1 (LOINC)
statusCode	1..1	SHALL		1198-7134	
@code	1..1	SHALL		1198-14849	urn:oid:2.16.840.1.113883.11.20.9.39 (Result Status)
effectiveTime	1..1	SHALL		1198-7140	
value	1..1	SHALL		1198-7143	
interpretationCode	0..*	SHOULD		1198-7147	
@code	1..1	SHALL		1198-32476	urn:oid:2.16.840.1.113883.1.11.78 (Observation Interpretation (HL7))
methodCode	0..1	MAY	SET<CE>	1198-7148	
targetSiteCode	0..1	MAY	SET<CD>	1198-7153	
author	0..*	SHOULD		1198-7149	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119
referenceRange	0..*	SHOULD		1198-7150	
observationRange	1..1	SHALL		1198-7151	
code	0..0	SHALL NOT		1198-7152	
value	1..1	SHALL		1198-32175	

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: HL7ActMood 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).

Table 102: Result Status

Value Set: Result Status urn:oid:2.16.840.1.113883.11.20.9.39 Value Set Source: https://vsac.nlm.nih.gov/			
Code	**Code System**	**Code System OID**	**Print Name**
aborted	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	aborted
active	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	active
cancelled	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	cancelled
completed	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	completed
held	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	held
suspended	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	suspended

Table 103: Observation Interpretation (HL7)

Value Set: Observation Interpretation (HL7) urn:oid:2.16.840.1.113883.1.11.78 Value Set Source: https://vsac.nlm.nih.gov/			
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
…			

Figure 48: 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>
```


3.13.1 Initial Case Report Trigger Code Result Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.2:2016-12-01 (open)]

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Table 104: Initial Case Report Trigger Code Result Observation Contexts

Contained By:	Contains:
Result Organizer (V3) (optional [0..*])	

This template is designed for optional use in a Result Organizer (V3) contained in an Initial Public Health Case Report Document (eICR) (V2). This template **MAY** be included zero or more times [0..*] in a Result Organizer (V3).

The Initial Case Report Trigger Code Result Observation is a flag to indicate that the result observation code (test name) and/or result observation value (test result) are/is a trigger code contained in the **Reportable Condition Trigger Codes table** - specifically, one of the codes in the Trigger Code for Laboratory Test Names value set and/or the Trigger Code for Organism or Substance value sets (RCTC subsets).

This template further constrains the C-CDA R2.1 Result Observation (V3). It specifies that code/@sdtc:valueSet and code/@sdtc:valueSetVersion and/or value/@sdtc:valueSet and value/@sdtc:valueSetVersion must be present in order to capture the RCTC OID (2.16.840.1.114222.4.11.7508) and RCTC definition version.

Result Observation (V3) includes a statusCode to record the status of the result. This template has further constrained the statusCode to either "active" or "completed" and requires that a value must have been reported:

- "Preliminary" results (e.g. a test has been run and preliminary results have been reported) are represented with a statusCode of "active" and a reported preliminary result must be contained in the value element.
- "Final" results (e.g. a test has been run and final results have been reported) are represented with a statusCode of "completed" and a reported final result must be contained in the value element.

This template represents trigger code resulted lab tests only. Trigger code tests that have been ordered but not performed should be contained in the Initial Case Report Trigger Code Lab Test Order. Trigger code tests that have been performed and have pending results will not be reported in any of the Initial Case Report Trigger code templates because:

- if the test is is flagged as an ordered lab test trigger code it will have been reported at a previous point in time in the Initial Case Report Trigger Code Lab Test Order
- if the test is flagged as a resulted lab test trigger code it will be reported using this template once it has been resulted at a later point in time.

Lab test abnormal interpretation is recorded in the observation/interpretationCode.

See the examples following this template for further implementation guidance.

Table 105: Initial Case Report Trigger Code Result Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.2:2016-12-01)					
@classCode	1..1	SHALL		3284-288	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		3284-289	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		3284-270	
@root	1..1	SHALL		3284-278	2.16.840.1.113883.10.20.15.2.3.2
@extension	1..1	SHALL		3284-279	2016-12-01
code	1..1	SHALL		3284-271	
@code	1..1	SHALL		3284-305	urn:oid:2.16.840.1.113762.1.4.1146.42 (Trigger code for laboratory test names (RCTC subset))
@sdtc:valueSet	0..1	MAY		3284-290	2.16.840.1.114222.4.11.7508
@sdtc:valueSetVersion	0..1	MAY		3284-291	
statusCode	1..1	SHALL		3284-298	
@code	1..1	SHALL		3284-299	urn:oid:2.16.840.1.113883.10.20.15.2.5.1 (Initial Case Report Trigger Code Result Status)
value	1..1	SHALL		3284-273	
@nullFlavor	0..0	SHALL NOT		3284-297	

1. Conforms to **Result Observation (V3)** template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2015-08-01).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:3284-288).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3284-289).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3284-270) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.15.2.3.2" (CONF:3284-278).
    b. **SHALL** contain exactly one [1..1] **@extension**="2016-12-01" (CONF:3284-279).

Either code or value or both shall contain a trigger code.

5. **SHALL** contain exactly one [1..1] **code** (CONF:3284-271).
    a. This code **SHALL** contain exactly one [1..1] **@code**, which **MAY** be selected from ValueSet **Trigger code for laboratory test names (RCTC subset)** urn:oid:2.16.840.1.113762.1.4.1146.42 **DYNAMIC** (CONF:3284-305).
    b. This code **MAY** contain zero or one [0..1] **@sdtc:valueSet="**2.16.840.1.114222.4.11.7508**"** (CONF:3284-290).
    c. This code **MAY** contain zero or one [0..1] **@sdtc:valueSetVersion** (CONF:3284-291).
    Note: Version of the RCTC value set used (e.g. 2016-07-01)
    d. If either code/@sdtc:valueSet or code/@sdtc:valueSetVersion is present then both code/@sdtc:valueSet and code/@sdtc:valueSetVersion **SHALL** be present (CONF:3284-301).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3284-298).
    a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet **Initial Case Report Trigger Code Result Status** urn:oid:2.16.840.1.113883.10.20.15.2.5.1 **STATIC** 2016-11-01 (CONF:3284-299).

Either code or value or both shall contain a trigger code.

7. **SHALL** contain exactly one [1..1] **value** (CONF:3284-273).
    a. This value **SHALL NOT** contain [0..0] **@nullFlavor** (CONF:3284-297).
    b. If value data type is CD (**xsi:type**="**CD**") then value **SHALL** contain exactly 1..1] @code, which **MAY** be selected from ValueSet **Trigger code for organism or substance (RCTC subset)**
    c. urn:oid:2.16.840.1.113762.1.4.1146.68 **DYNAMIC** (CONF:3284-303).
    d. If value data type is CD (**xsi:type**="**CD**") and the contained value/@code is an RCTC trigger code, value **SHALL** contain @sdtc:valueSet='2.16.840.1.114222.4.11.7508' and sdtc:valueSetVersion (RCTC Definition Version used (e.g. 19/05/2016) (CONF:3284-302).
        i. If either value/@sdtc:valueSet or value/@sdtc:valueSetVersion is present then both value/@sdtc:valueSet and value/@sdtc:valueSetVersion **SHALL** be present (CONF:3284-304).
8. At least one of (code/@sdtc:valueSet and code/@sdtc:valueSetVersion) or (value/@sdtc:valueSet and value/@sdtc:valueSetVersion) **SHALL** be present (CONF:3284-300).

Table 106: Initial Case Report Trigger Code Result Status

Value Set: Initial Case Report Trigger Code Result Status urn:oid:2.16.840.1.113883.10.20.15.2.5.1 Contains the allowable statusCode values for the Initial Case Report Trigger Code Result Observation template: active and completed.			
Code	**Code System**	**Code System OID**	**Print Name**
active	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	Active
completed	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	Completed

Table 107: Trigger code for organism or substance (RCTC subset)

Value Set: Trigger code for organism or substance (RCTC subset) urn:oid:2.16.840.1.113762.1.4.1146.68 This value set is a subset of the Reportable Condition Trigger Code (RCTC) value set and contains trigger codes for organisms or substances. Use the superset RCTC OID (2.16.840.1.114222.4.11.7508) and RCTC Definition Version (e.g. 19/05/2016) when populating @sdtc:valueSet and @sdtc:valueSetVersion. Value Set Source: **https://phinvads.cdc.gov/vads/DownloadHotTopicDetailFile.action?filename=42399A0D-011E-E611-BD10-0017A477041A**			
Code	**Code System**	**Code System OID**	**Print Name**
Code from RCTC	Multiple Code Systems	Multiple Code Systems	See link above for latest value set
…			

Table 108: Trigger code for laboratory test names (RCTC subset)

Value Set: Trigger code for laboratory test names (RCTC subset) urn:oid:2.16.840.1.113762.1.4.1146.42 This value set is a subset of the Reportable Condition Trigger Code (RCTC) value set and contains trigger codes for laboratory test names. Use the superset RCTC OID (2.16.840.1.114222.4.11.7508) and RCTC Definition Version (e.g. 19/05/2016) when populating @sdtc:valueSet and @sdtc:valueSetVersion. Value Set Source: **https://phinvads.cdc.gov/vads/DownloadHotTopicDetailFile.action?filename=42399A0D-011E-E611-BD10-0017A477041A**			
Code	**Code System**	**Code System OID**	**Print Name**
Code from RCTC	Multiple Code Systems	Multiple Code Systems	See link above for latest value set
…			

Figure 49: Initial Case Report Trigger Code Result Observation - Final Result Example

```
<!-- This observation is a trigger code final result observation -
     only the code is a trigger code and thus
     only the code must contain @sdtc:valueSet and @sdtc:valueSetVersion.
     Final result is indicated by statusCode="final"  -->
<observation classCode="OBS" moodCode="EVN">
    <!-- [C-CDA R1.1] Result Observation -->
    <templateId root="2.16.840.1.113883.10.20.22.4.2" />
    <!-- [C-CDA R2.1] Result Observation (V3) -->
    <templateId root="2.16.840.1.113883.10.20.22.4.2" extension="2015-08-01" />
    <!-- [eICR R2 STU1.1] Initial Case Report Trigger Code Result Observation -->
    <templateId root="2.16.840.1.113883.10.20.15.2.3.2" extension="2016-12-01" />
    <id root="bf9c0a26-4524-4395-b3ce-100450b9c9ad" />
    <!-- This code is a trigger code from RCTC subset: "Trigger code for laboratory test
names"
         @sdtc:valueSet and @sdtc:valueSetVersion shall be present -->
    <code code="11585-7"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        displayName="Bordetella pertussis Ab [Units/volume] in Serum"
        sdtc:valueSet="2.16.840.1.114222.4.11.7508"
        sdtc:valueSetVersion="19/05/2016" />
    <!-- statusCode is set to completed indicating that this is a final result -->
    <statusCode code="completed" />
    <effectiveTime value="20161107" />

    <!-- This value is a physical quantity and thus cannot be a trigger code -->
    <value xsi:type="PQ" unit="[iU]/mL" value="100" />

    <!-- This interpretation code denotes that this patient value is above high normal -->
    <interpretationCode code="H"
        displayName="High"
        codeSystem="2.16.840.1.113883.5.83"
        codeSystemName="ObservationInterpretation" />
    <referenceRange>
        <observationRange>

            <!-- Reference range: PT IgG: <45 IU/mL -->
            <value xsi:type="IVL_PQ">
                <high inclusive="false" unit="[iU]/mL" value="45" />
            </value>

            <!-- This interpretation code denotes that this reference range is for normal
results.
                 This is not the interpretation of a specific patient value-->
            <interpretationCode code="N"
                codeSystem="2.16.840.1.113883.5.83"
                displayName="Normal" />
        </observationRange>
    </referenceRange>
</observation>
```


Figure 50: Initial Case Report Trigger Code Result Observation - Preliminary Result Example

```
<!-- This observation is a trigger code preliminary result observation -
     both the code and value are trigger codes and thus
     both the code and the value must contain @sdtc:valueSet and @sdtc:valueSetVersion.
     Preliminary result is indicated by statusCode="active" -->
<observation classCode="OBS" moodCode="EVN">
    <!-- [C-CDA R1.1] Result Observation -->
    <templateId root="2.16.840.1.113883.10.20.22.4.2" />
    <!-- [C-CDA R2.1] Result Observation (V3) -->
    <templateId root="2.16.840.1.113883.10.20.22.4.2" extension="2015-08-01" />
    <!-- [eICR R2 STU1.1] Initial Case Report Trigger Code Result Observation -->
    <templateId root="2.16.840.1.113883.10.20.15.2.3.2" extension="2016-12-01" />
    <id root="bf9c0a26-4524-4395-b3ce-100450b9c9ac" />

    <!-- This code is a trigger code from RCTC subset: "Trigger code for laboratory test
names"
         @sdtc:valueSet and @sdtc:valueSetVersion shall be present -->
    <code code="548-8"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        displayName="Bordetella pertussis [Presence] in Throat by Organism specific
culture"
        sdtc:valueSet="2.16.840.1.114222.4.11.7508"
        sdtc:valueSetVersion="19/05/2016" />

    <!-- statusCode is set to active indicating that this is a preliminary result -->
    <statusCode code="active" />
    <effectiveTime value="20161107" />

    <!-- This value is a trigger code from RCTC subset: "Trigger code for organism or
substance"
         @sdtc:valueSet and @sdtc:valueSetVersion shall be present -->
    <value xsi:type="CD"
        code="5247005"
        displayName="Bordetella pertussis (organism)"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT"
        sdtc:valueSet="2.16.840.1.114222.4.11.7508"
        sdtc:valueSetVersion="19/05/2016" />

    <!-- This interpretation code denotes that this patient value is abnormal
         (bordetella pertussis (organism) was present in the culture) -->
    <interpretationCode code="A"
        displayName="Abnormal"
        codeSystem="2.16.840.1.113883.5.83"
        codeSystemName="ObservationInterpretation"/>
</observation>
```


3.14 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 109: Result Organizer (V3) Contexts

Contained By:	Contains:
Results Section (entries optional) (V3) (optional) 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".

Table 110: Result Organizer (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2015-08-01)					
@classCode	1..1	SHALL		1198-7121	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass)
@moodCode	1..1	SHALL		1198-7122	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1198-7126	
@root	1..1	SHALL		1198-9134	2.16.840.1.113883.10.20.22.4.1
@extension	1..1	SHALL		1198-32588	2015-08-01
id	1..*	SHALL		1198-7127	
code	1..1	SHALL		1198-7128	
statusCode	1..1	SHALL		1198-7123	
@code	1..1	SHALL		1198-14848	urn:oid:2.16.840.1.113883.11.20.9.39 (Result Status)
effectiveTime	0..1	MAY		1198-31865	
low	1..1	SHALL		1198-32488	
high	1..1	SHALL		1198-32489	
author	0..*	SHOULD		1198-31149	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119
component	1..*	SHALL		1198-7124	
observation	1..1	SHALL		1198-14850	Result Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2015-08-01

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: `HL7ActMood` `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 51: 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>
```

3.15 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 111: 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.

Table 112: Social History Observation (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2015-08-01)					
@classCode	1..1	SHALL		1198-8548	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1198-8549	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1198-8550	
@root	1..1	SHALL		1198-10526	2.16.840.1.113883.10.20.22.4.38
@extension	1..1	SHALL		1198-32495	2015-08-01
id	1..*	SHALL		1198-8551	
code	1..1	SHALL		1198-8558	urn:oid:2.16.840.1.113883.3.88.12.80.60 (Social History Type)
translation	1..*	SHALL		1198-32853	urn:oid:2.16.840.1.113883.6.1 (LOINC)
statusCode	1..1	SHALL		1198-8553	
@code	1..1	SHALL		1198-19117	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		1198-31868	
value	0..1	SHOULD		1198-8559	
author	0..*	SHOULD		1198-31869	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119

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: HL7ActMood 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: HL7ActStatus 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).

Table 113: 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)
…			

Figure 52: 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>
```

3.16 Travel History

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.1:2016-12-01 (open)]

Draft as part of Public Health Case Report, Release 1, STU Release 1.1 - US Realm

Table 114: Travel History Contexts

Contained By:	Contains:
Social History Section (V3) (optional [0..*])	

This template is designed for optional use in the Social History Section (V3). This template **MAY** be included zero or more times [0..*] in the Social History Section (V3).

The Travel History template represents a location in a person's travel history.

The participant contains a location (either an address or a coded location) and the effectiveTime contains the date(s) spent in that location. Free text describing the travel history details and location can be entered using the text element.

It is possible to have multiple participants, each containing a different location in one Travel History template, but there is only a single effectiveTime. This allows for cases where a patient cannot remember exact dates of travel (e.g. I traveled to London, Paris and Berlin in July and August 2016). Most uses of this template will involve a single location participant.

Table 115: Travel History Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.1:2016-12-01)					
@classCode	1..1	SHALL		3284-248	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		3284-249	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		3284-240	
@root	1..1	SHALL		3284-244	2.16.840.1.113883.10.20.15.2.3.1
@extension	1..1	SHALL		3284-245	2016-12-01
id	1..1	SHALL		3284-250	
code	1..1	SHALL		3284-251	
@code	1..1	SHALL		3284-253	420008001
@codeSystem	1..1	SHALL		3284-254	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
text	0..1	MAY		3284-269	
effectiveTime	1..1	SHALL		3284-295	
participant	0..*	SHOULD		3284-257	
@typeCode	1..1	SHALL		3284-258	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
participantRole	1..1	SHALL		3284-262	
@classCode	1..1	SHALL		3284-265	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = TERR
code	0..1	MAY		3284-263	urn:oid:2.16.840.1.114222.4.11.3201 (Geographical location history)
addr	0..1	SHOULD		3284-264	
country	1..1	SHALL		3284-266	urn:oid:2.16.840.1.113883.3.88.12.80.63 (Country)
state	0..1	SHOULD		3284-267	
city	0..1	MAY		3284-268	

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3284-248).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3284-249).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3284-240) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.15.2.3.1" (CONF:3284-244).
    b. **SHALL** contain exactly one [1..1] **@extension**="2016-12-01" (CONF:3284-245).
4. **SHALL** contain exactly one [1..1] **id** (CONF:3284-250).
5. **SHALL** contain exactly one [1..1] **code** (CONF:3284-251).
    a. This code **SHALL** contain exactly one [1..1] **@code**="420008001" Travel (CONF:3284-253).
    b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3284-254).
6. **MAY** contain zero or one [0..1] **text** (CONF:3284-269).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:3284-295).
   Note: Date(s) spent in the location, using any format for effectiveTime that is supported by CDA. See the the figure "effectiveTime Examples" in the Examples section of this template.

This participant contains the location to which the person traveled. It is possible to have multiple participants, each containing a different location, but there is only a single effectiveTime allowed. This allows for cases where a patient cannot remember exact dates of travel (e.g. I traveled to London, Paris and Berlin in July and August 2016). Most uses of this template will involve a single location participant.

8. **SHOULD** contain zero or more [0..*] **participant** (CONF:3284-257) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3284-258).
    b. **SHALL** contain exactly one [1..1] **participantRole** (CONF:3284-262).
        i. This participantRole **SHALL** contain exactly one [1..1] **@classCode**="TERR" Territory (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3284-265).
        ii. This participantRole **MAY** contain zero or one [0..1] **code**, which **SHOULD** be selected from ValueSet **Geographical location history** urn:oid:2.16.840.1.114222.4.11.3201 **DYNAMIC** (CONF:3284-263).
        Note: Coded value of the location

At the least, address must contain the country.

        iii. This participantRole **SHOULD** contain zero or one [0..1] **addr** (CONF:3284-264).
        Note: Address value of the location
            1. The addr, if present, **SHALL** contain exactly one [1..1] **country**, which **SHALL** be selected from ValueSet **Country** urn:oid:2.16.840.1.113883.3.88.12.80.63 **DYNAMIC** (CONF:3284-266).

2. The addr, if present, **SHOULD** contain zero or one [0..1] **state** (CONF:3284-267).
3. The addr, if present, **MAY** contain zero or one [0..1] **city** (CONF:3284-268).

Table 116: Geographical location history

Value Set: Geographical location history urn:oid:2.16.840.1.114222.4.11.3201
Locations out of US (Birth Country) and jurisdictions within US (states) that are potentially relevant to current condition. This value set is based upon ISO 3166 (Countries) as well as FIPS 5-2 (States).
Value Set Source:
https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3201

Code	Code System	Code System OID	Print Name
AFG	Country (ISO 3166-1)	urn:oid:1.0.3166.1	AFGHANISTAN
01	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Alabama
02	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	Alaska
ALB	Country (ISO 3166-1)	urn:oid:1.0.3166.1	ALBANIA
DZA	Country (ISO 3166-1)	urn:oid:1.0.3166.1	ALGERIA
ASM	Country (ISO 3166-1)	urn:oid:1.0.3166.1	AMERICAN SAMOA
60	FIPS 5-2 (State)	urn:oid:2.16.840.1.113883.6.92	American Samoa
AND	Country (ISO 3166-1)	urn:oid:1.0.3166.1	ANDORRA
AGO	Country (ISO 3166-1)	urn:oid:1.0.3166.1	ANGOLA
AIA	Country (ISO 3166-1)	urn:oid:1.0.3166.1	ANGUILLA
…			

Figure 53: Travel History - Street Level Address Example

```
<act classCode="ACT" moodCode="EVN">
    <!-- [eICR R2 STU1.1] Travel History -->
    <templateId root="2.16.840.1.113883.10.20.15.2.3.1" extension="2016-12-01" />
    <id root="37c76c51-6411-4e1d-8a37-957fd49d2cda" />
    <code code="420008001"
        displayName="Travel"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT" />
    <statusCode code="completed" />
    <!-- Duration -->
    <effectiveTime>
        <low value="20161022" />
        <high value="20161030" />
    </effectiveTime>
    <participant typeCode="LOC">
        <participantRole classCode="TERR">
            <addr>
                <streetAddressLine>1170 N Rancho Robles Rd</streetAddressLine>
                <city>Oracle</city>
                <state>AZ</state>
                <postalCode>8562</postalCode>
                <country>US</country>
            </addr>
        </participantRole>
    </participant>
</act>
```


Figure 54: Travel History - City/State Level Address Example

```
<act classCode="ACT" moodCode="EVN">
    <!-- [eICR R2 STU1.1] Travel History -->
    <templateId root="2.16.840.1.113883.10.20.15.2.3.1" extension="2016-12-01" />
    <id root="37f76a51-6411-4e1d-8a37-957fd49d2cdb" />
    <code code="420008001"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT"
        displayName="Travel" />
    <statusCode code="completed" />
    <!-- Duration -->
    <effectiveTime>
        <low value="20160506" />
        <high value="20160515" />
    </effectiveTime>
    <participant typeCode="LOC">
        <participantRole classCode="TERR">
            <addr>
                <country>CA</country>
                <city>Montreal</city>
                <state>QC</state>
            </addr>
        </participantRole>
    </participant>
</act>
```

Figure 55: Travel History - Country Level Address Example

```
<act classCode="ACT" moodCode="EVN">
    <!-- [eICR R2 STU1.1] Travel History -->
    <templateId root="2.16.840.1.113883.10.20.15.2.3.1" extension="2016-12-01" />
    <id root="37f76c51-6411-4e1d-8a37-957fd49d2cdc" />
    <code displayName="Travel"
        code="420008001"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT" />
    <statusCode code="completed" />
    <!-- Duration -->
    <effectiveTime>
        <low value="20160429" />
        <high value="20161030" />
    </effectiveTime>
    <participant typeCode="LOC">
        <participantRole classCode="TERR">
            <addr>
                <country>FJ</country>
            </addr>
        </participantRole>
    </participant>
</act>
```


Figure 56: Travel History - Coded Location Example

```
<act classCode="ACT" moodCode="EVN">
    <!-- [eICR R2 STU1.1] Travel History -->
    <templateId root="2.16.840.1.113883.10.20.15.2.3.1" extension="2016-12-01" />
    <id root="37f76f51-6411-4f1d-8a37-957fd49d2add" />
    <code displayName="Travel"
        code="420008001"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT" />
    <statusCode code="completed" />
    <!-- Denotes "past 3 weeks" with the high value
         being the date the statement was made -->
    <effectiveTime>
        <width value="3" unit="weeks" />
        <high value="20161109" />
    </effectiveTime>
    <participant typeCode="LOC">
        <participantRole classCode="TERR">
            <!-- Code specifiying the location traveled -->
            <code code="BRA"
                displayName="Brazil"
                codeSystem="1.0.3166.1"
                codeSystemName="Country (ISO 3166-1)" />
        </participantRole>
    </participant>
</act>
```

Figure 57: Travel History - Text Location Description Example

```
<act classCode="ACT" moodCode="EVN">
    <!-- [eICR R2 STU1.1] Travel History -->
    <templateId root="2.16.840.1.113883.10.20.15.2.3.1" extension="2016-12-01" />
    <id root="37f76f51-6411-4e1d-8a37-957fd49d2ade" />
    <code code="420008001"
        displayName="Travel"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT" />
    <text>Spent 8 years in the UK during the BSE outbreak</text>
    <statusCode code="completed" />
    <!-- Duration (from 1999 to 2007) -->
    <effectiveTime>
        <low value="1999" />
        <high value="2007" />
    </effectiveTime>
</act>
```


Figure 58: effectiveTime Examples

```
<!-- A single day -->
<effectiveTime value="20110505" />
<!-- A single month -->
<effectiveTime value="201105" />
<!-- A single year -->
<effectiveTime value="2011" />
<!-- Past 3 weeks (high denotes the day the statement was made -->
<effectiveTime >
    <width value="3" unit="wk" />
    <high value="20161109" />
</effectiveTime>
<!-- In the 3 weeks after a certain date -->
<effectiveTime >
    <low value="20160909" />
    <width value="3" unit="wk" />
</effectiveTime>
<!-- Duration -->
<effectiveTime>
    <low value="20160506" />
    <high value="20160515" />
</effectiveTime>
```


4 PARTICIPATION AND OTHER TEMPLATES

The participation and other templates chapter contains templates for CDA participations (e.g., author, performer), and other fielded items (e.g., address, name) that cannot stand on their own without being nested in another template.

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 117: US Realm Address (AD.US.FIELDED) Contexts

Contained By:	Contains:
US Realm Header (V3) (required) Initial Public Health Case Report Document (eICR) (V2) (required)	

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

Table 118: US Realm Address (AD.US.FIELDED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
addr (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.2)					
@use	0..1	SHOULD		81-7290	urn:oid:2.16.840.1.113883.1.11.10637 (PostalAddressUse)
country	0..1	SHOULD		81-7295	urn:oid:2.16.840.1.113883.3.88.12.80.63 (Country)
state	0..1	SHOULD		81-7293	urn:oid:2.16.840.1.113883.3.88.12.80.1 (StateValueSet)
city	1..1	SHALL		81-7292	
postalCode	0..1	SHOULD		81-7294	urn:oid:2.16.840.1.113883.3.88.12.80.2 (PostalCode)
streetAddressLine	1..1	SHALL		81-7291	

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).

Table 119: 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: https://vsac.nlm.nih.gov/			
Code	**Code System**	**Code System OID**	**Print Name**
BAD	HL7AddressUse	urn:oid:2.16.840.1.113883.5.1119	bad address
CONF	HL7AddressUse	urn:oid:2.16.840.1.113883.5.1119	confidential
DIR	HL7AddressUse	urn:oid:2.16.840.1.113883.5.1119	direct
H	HL7AddressUse	urn:oid:2.16.840.1.113883.5.1119	home address
HP	HL7AddressUse	urn:oid:2.16.840.1.113883.5.1119	primary home
HV	HL7AddressUse	urn:oid:2.16.840.1.113883.5.1119	vacation home
PHYS	HL7AddressUse	urn:oid:2.16.840.1.113883.5.1119	physical visit address
PST	HL7AddressUse	urn:oid:2.16.840.1.113883.5.1119	postal address
PUB	HL7AddressUse	urn:oid:2.16.840.1.113883.5.1119	public
TMP	HL7AddressUse	urn:oid:2.16.840.1.113883.5.1119	temporary
…			

Table 120: 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
…			

Figure 59: 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 121: US Realm Date and Time (DTM.US.FIELDED) Contexts

Contained By:	Contains:
US Realm Header (V3) (required) Initial Public Health Case Report Document (eICR) (V2) (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.

Table 122: US Realm Date and Time (DTM.US.FIELDED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
effectiveTime (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.4)					

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 60: 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/).

Table 123: US Realm Patient Name (PTN.US.FIELDED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
name (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1)					
@use	0..1	MAY		81-7154	urn:oid:2.16.840.1.113883.1.11.15913 (EntityNameUse)
family	1..1	SHALL	ST	81-7159	
@qualifier	0..1	MAY		81-7160	urn:oid:2.16.840.1.113883.11.20.9.26 (EntityPersonNamePartQualifier)
given	1..*	SHALL	ST	81-7157	
@qualifier	0..1	MAY		81-7158	urn:oid:2.16.840.1.113883.11.20.9.26 (EntityPersonNamePartQualifier)
prefix	0..*	MAY	ST	81-7155	
@qualifier	0..1	MAY		81-7156	urn:oid:2.16.840.1.113883.11.20.9.26 (EntityPersonNamePartQualifier)
suffix	0..1	MAY	ST	81-7161	
@qualifier	0..1	MAY		81-7162	urn:oid:2.16.840.1.113883.11.20.9.26 (EntityPersonNamePartQualifier)

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).

Table 124: EntityNameUse

Value Set: EntityNameUse urn:oid:2.16.840.1.113883.1.11.15913 Value Set Source: **https://vsac.nlm.nih.gov/**			
Code	**Code System**	**Code System OID**	**Print Name**
A	HL7EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Artist/Stage
ABC	HL7EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Alphabetic
ASGN	HL7EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Assigned
C	HL7EntityNameUse	urn:oid:2.16.840.1.113883.5.45	License
I	HL7EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Indigenous/Tribal
IDE	HL7EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Ideographic
L	HL7EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Legal
P	HL7EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Pseudonym
PHON	HL7EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Phonetic
R	HL7EntityNameUse	urn:oid:2.16.840.1.113883.5.45	Religious
…			

Table 125: EntityPersonNamePartQualifier

Value Set: EntityPersonNamePartQualifier urn:oid:2.16.840.1.113883.11.20.9.26 Value Set Source: https://vsac.nlm.nih.gov/			
Code	**Code System**	**Code System OID**	**Print Name**
AC	HL7EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	academic
AD	HL7EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	adopted
BR	HL7EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	birth
CL	HL7EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	callme
IN	HL7EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	initial
NB	HL7EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	nobility
PR	HL7EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	professional
SP	HL7EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	spouse
TITLE	HL7EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	title
VV	HL7EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43	voorvoegsel

Figure 61: 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)]

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Table 126: US Realm Person Name (PN.US.FIELDED) Contexts

Contained By:	Contains:
US Realm Header (V3) (required) Initial Public Health Case Report Document (eICR) (V2) (required)	

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

Table 127: US Realm Person Name (PN.US.FIELDED) Constraints Overview

XPath	Card.	Verb	Data Type	CONF #	Value
name (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.1.1)					
name	1..1	SHALL		81-9368	

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 128: Template List

Template Title	Template Type	templateId
Initial Public Health Case Report Document (eICR) (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.15.2:2016-12-01
US Realm Header (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01
Encounters Section (entries optional) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.22:2015-08-01
Encounters Section (entries required) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.22.1:2015-08-01
History of Present Illness Section	section	urn:oid:1.3.6.1.4.1.19376.1.5.3.1.3.4
Immunizations Section (entries optional) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.2:2015-08-01
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
Plan of Treatment Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09
Problem Section (entries optional) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.5:2015-08-01
Problem Section (entries required) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.5.1:2015-08-01
Reason for Visit Section	section	urn:oid:2.16.840.1.113883.10.20.22.2.12
Results Section (entries optional) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.3:2015-08-01
Results Section (entries required) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.3.1:2015-08-01
Social History Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01
Birth Sex Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.200:2016-06-01
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
Estimated Date of Delivery	entry	urn:oid:2.16.840.1.113883.10.20.15.3.1
Immunization Activity (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01
Immunization Medication	entry	urn:hl7ii:2.16.840.1.113883.10.20.

Template Title	Template Type	templateId
Information (V2)		22.4.54:2014-06-09
Initial Case Report Manual Initiation Reason Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.5:2016-12-01
Initial Case Report Trigger Code Lab Test Order	entry	urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.4:2016-12-01
Initial Case Report Trigger Code Problem Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.3:2016-12-01
Initial Case Report Trigger Code Result Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.2:2016-12-01
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
Planned Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09
Pregnancy Observation	entry	urn:oid:2.16.840.1.113883.10.20.15.3.8
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
Result Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.2:2015-08-01
Result Organizer (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.1:2015-08-01
Smoking Status - Meaningful Use (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09
Social History Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2015-08-01
Travel History	entry	urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.1:2016-12-01
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 Patient Name (PTN.US.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1
US Realm Person Name (PN.US.FIELDED)	unspecified	urn:oid:2.16.840.1.113883.10.20.22.5.1.1

Table 129: Template Containments

Template Title	Template Type	templateId
Initial Public Health Case Report Document (eICR) (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.15.2:2016-12-01
Birth Sex Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.200:2016-06-01
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
Immunization Activity (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01
Immunization Medication Information (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09
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
Plan of Treatment Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09
Planned Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.44:2014-06-09
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

Template Title	Template Type	templateId
Social History Section (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01
Pregnancy Observation	entry	urn:oid:2.16.840.1.113883.10.20.15.3.8
Estimated Date of Delivery	entry	urn:oid:2.16.840.1.113883.10.20.15.3.1
Smoking Status - Meaningful Use (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.78:2014-06-09
Social History Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2015-08-01
Travel History	entry	urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.1:2016-12-01
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
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
Initial Case Report Manual Initiation Reason Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.5:2016-12-01
Initial Case Report Trigger Code Lab Test Order	entry	urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.4:2016-12-01
Initial Case Report Trigger Code Problem Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.3:2016-12-01
Initial Case Report Trigger Code Result Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.2:2016-12-01

6 VALUE SETS IN THIS GUIDE

Table 130: Value Sets

Name	OID	URL
ActEncounterCode	urn:oid:2.16.840.1.113883.1.11.13955	http://www.hl7.org
ActStatus	urn:oid:2.16.840.1.113883.1.11.159331	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.1.11.15933
AdministrationUnitDoseForm	urn:oid:2.16.840.1.113762.1.4.1021.30	N/A
Administrative Gender (HL7 V3)	urn:oid:2.16.840.1.113883.1.11.1	https://vsac.nlm.nih.gov/
Body Site	urn:oid:2.16.840.1.113883.3.88.12.3221.8.9	https://vsac.nlm.nih.gov/
Clinical Substance	urn:oid:2.16.840.1.113762.1.4.1010.2	https://vsac.nlm.nih.gov/
Country	urn:oid:2.16.840.1.113883.3.88.12.80.63	http://www.iso.org/iso/country_codes/iso_3166_code_lists.htm
Current Smoking Status	urn:oid:2.16.840.1.113883.11.20.9.38	https://vsac.nlm.nih.gov/
CVX Vaccines Administered - Vaccine Set	urn:oid:2.16.840.1.113762.1.4.1010.6	http://www2a.cdc.gov/vaccines/iis/iisstandards/vaccines.asp?rpt=cvx
Detailed Ethnicity	urn:oid:2.16.840.1.114222.4.11.877	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.877
EncounterTypeCode	urn:oid:2.16.840.1.113883.3.88.12.80.32	https://vsac.nlm.nih.gov/
EntityNameUse	urn:oid:2.16.840.1.113883.1.11.15913	https://vsac.nlm.nih.gov/
EntityPersonNamePartQualifier	urn:oid:2.16.840.1.113883.11.20.9.26	https://vsac.nlm.nih.gov/
Ethnicity	urn:oid:2.16.840.1.114222.4.11.837	https://vsac.nlm.nih.gov/
Geographical location history	urn:oid:2.16.840.1.114222.4.11.3201	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3201
Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.114222.4.11.1066	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.1066
HL7 BasicConfidentialityKind	urn:oid:2.16.840.1.113883.1.11.16926	https://vsac.nlm.nih.gov/
INDRoleclassCodes	urn:oid:2.16.840.1.113883.11.20.9.33	https://vsac.nlm.nih.gov/
Initial Case Report Trigger Code Result Status	urn:oid:2.16.840.1.113883.10.20.15.2.5.1	N/A

Name	OID	URL
Language	urn:oid:2.16.840.1.113883.1.11.11526	http://www.loc.gov/standards/iso639-2/php/code_list.php
LanguageAbilityMode	urn:oid:2.16.840.1.113883.1.11.12249	https://vsac.nlm.nih.gov/
LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.1.11.12199	https://vsac.nlm.nih.gov/
Marital Status	urn:oid:2.16.840.1.113883.1.11.12212	https://vsac.nlm.nih.gov/
Medication Clinical Drug	urn:oid:2.16.840.1.113762.1.4.1010.4	http://phinvads.cdc.gov/vads/ViewValueSet.action?id=239BEF3E-971C-DF11-B334-0015173D1785
Medication Route FDA	urn:oid:2.16.840.1.113883.3.88.12.3221.8.7	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.3221.8.7
MoodCodeEvnInt	urn:oid:2.16.840.1.113883.11.20.9.18	https://vsac.nlm.nih.gov/
Observation Interpretation (HL7)	urn:oid:2.16.840.1.113883.1.11.78	https://vsac.nlm.nih.gov/
ONC Administrative Sex	urn:oid:2.16.840.1.113762.1.4.1	https://vsac.nlm.nih.gov/
ParticipationFunction	urn:oid:2.16.840.1.113883.1.11.10267	https://vsac.nlm.nih.gov/
Personal And Legal Relationship Role Type	urn:oid:2.16.840.1.113883.11.20.12.1	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.11.20.12.1
Planned moodCode (Observation)	urn:oid:2.16.840.1.113883.11.20.9.25	https://vsac.nlm.nih.gov/
PostalAddressUse	urn:oid:2.16.840.1.113883.1.11.10637	https://vsac.nlm.nih.gov/
PostalCode	urn:oid:2.16.840.1.113883.3.88.12.80.2	http://ushik.ahrq.gov/ViewItemDetails?system=mdr&itemKey=86671000
Problem	urn:oid:2.16.840.1.113883.3.88.12.3221.7.4	http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.3221.7.4
Problem Type	urn:oid:2.16.840.1.113883.3.88.12.3221.7.2	http://www.loinc.org
ProblemAct statusCode	urn:oid:2.16.840.1.113883.11.20.9.19	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html
Race	urn:oid:2.16.840.1.113883.1.11.14914	https://vsac.nlm.nih.gov/
Race Category Excluding Nulls	urn:oid:2.16.840.1.113883.3.2074.1.1.3	https://vsac.nlm.nih.gov/
Religious Affiliation	urn:oid:2.16.840.1.113883.1.11.19185	https://vsac.nlm.nih.gov/
Result Status	urn:oid:2.16.840.1.113883.11.20.9.39	https://vsac.nlm.nih.gov/

Name	OID	URL
ServiceDeliveryLocationRoleType	urn:oid:2.16.840.1.113883.1.11.17660	N/A
Social History Type	urn:oid:2.16.840.1.113883.3.88.12.80.60	https://vsac.nlm.nih.gov
Specific Vaccine Clinical Drug	urn:oid:2.16.840.1.113762.1.4.1010.10	https://vsac.nlm.nih.gov/
StateValueSet	urn:oid:2.16.840.1.113883.3.88.12.80.1	http://www.census.gov/geo/reference/ansi_statetables.html
Telecom Use (US Realm Header)	urn:oid:2.16.840.1.113883.11.20.9.20	https://vsac.nlm.nih.gov/
Trigger code for condition name (RCTC subset)	urn:oid:2.16.840.1.113762.1.4.1146.28	https://phinvads.cdc.gov/vads/DownloadHotTopicDetailFile.action?filename=42399A0D-011E-E611-BD10-0017A477041A
Trigger code for laboratory test names (RCTC subset)	urn:oid:2.16.840.1.113762.1.4.1146.42	https://phinvads.cdc.gov/vads/DownloadHotTopicDetailFile.action?filename=42399A0D-011E-E611-BD10-0017A477041A
Trigger code for laboratory test orders (RCTC subset)	urn:oid:2.16.840.1.113762.1.4.1146.166	N/A
Trigger code for organism or substance (RCTC subset)	urn:oid:2.16.840.1.113762.1.4.1146.68	https://phinvads.cdc.gov/vads/DownloadHotTopicDetailFile.action?filename=42399A0D-011E-E611-BD10-0017A477041A
UnitsOfMeasureCaseSensitive	urn:oid:2.16.840.1.113883.1.11.12839	http://unitsofmeasure.org/ucum.html
Vaccine Clinical Drug	urn:oid:2.16.840.1.113762.1.4.1010.8	https://vsac.nlm.nih.gov/
x_ServiceEventPerformer	urn:oid:2.16.840.1.113883.1.11.19601	http://www.hl7.org/documentcenter/public/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/vocabulary.html

7 CODE SYSTEMS IN THIS GUIDE

Table 131: Code Systems

Name	OID
CDC Vaccine Code (CVX)	urn:oid:2.16.840.1.113883.12.292
Country	urn:oid:2.16.840.1.113883.3.88.12.80.63
Country (FIPS 10-4)	urn:oid:2.16.840.1.114222.4.5.300
Country (ISO 3166-1)	urn:oid:1.0.3166.1
CPT4	urn:oid:2.16.840.1.113883.6.12
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
HL7ActClass	urn:oid:2.16.840.1.113883.5.6
HL7ActCode	urn:oid:2.16.840.1.113883.5.4
HL7ActMood	urn:oid:2.16.840.1.113883.5.1001
HL7ActRelationshipType	urn:oid:2.16.840.1.113883.5.1002
HL7ActStatus	urn:oid:2.16.840.1.113883.5.14
HL7AddressUse	urn:oid:2.16.840.1.113883.5.1119
HL7AdministrativeGender	urn:oid:2.16.840.1.113883.5.1
HL7Confidentiality	urn:oid:2.16.840.1.113883.5.25
HL7EntityNamePartQualifier	urn:oid:2.16.840.1.113883.5.43
HL7EntityNameUse	urn:oid:2.16.840.1.113883.5.45
HL7LanguageAbilityMode	urn:oid:2.16.840.1.113883.5.60
HL7LanguageAbilityProficiency	urn:oid:2.16.840.1.113883.5.61
HL7MaritalStatus	urn:oid:2.16.840.1.113883.5.2
HL7NullFlavor	urn:oid:2.16.840.1.113883.5.1008
HL7ParticipationFunction	urn:oid:2.16.840.1.113883.5.88
HL7ParticipationSignature	urn:oid:2.16.840.1.113883.5.89
HL7ParticipationType	urn:oid:2.16.840.1.113883.5.90
HL7Race	urn:oid:2.16.840.1.113883.5.104
HL7ReligiousAffiliation	urn:oid:2.16.840.1.113883.5.1076
HL7RoleClass	urn:oid:2.16.840.1.113883.5.110
HL7RoleCode	urn:oid:2.16.840.1.113883.5.111
ICD-10-CM	urn:oid:2.16.840.1.113883.6.90
Language	urn:oid:2.16.840.1.113883.6.121
LOINC	urn:oid:2.16.840.1.113883.6.1
NCI Thesaurus (NCIt)	urn:oid:2.16.840.1.113883.3.26.1.1
Obsolete Country Codes (ISO 3166-3)	urn:oid:1.0.3166.3
PHIN VS (CDC Local Coding System)	urn:oid:2.16.840.1.114222.4.5.274

Name	OID
Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238
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
USPostalCodes	urn:oid:2.16.840.1.113883.6.231

8 CHANGES FROM PREVIOUS VERSION

8.1 Initial Public Health Case Report Document (eICR) (V2)

Initial Public Health Case Report Document (eICR) (V2) (urn:hl7ii:2.16.840.1.113883.10.20.15.2:2016-12-01)

Change	Old	New
Name	Initial Public Health Case Report Document (eICR)	Initial Public Health Case Report Document (eICR) (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.15.2:20160422	urn:hl7ii:2.16.840.1.113883.10.20.15.2:2016-12-01
Description	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	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 STU1.1" Implementation Guide. The Initial Public Health Case Report Document (eICR) (V2) template is a specialization of the C-CDA R2.1 US Realm Header (V3) (2.16.840.1.113883.10.20.22.1.1:2015-08-01). 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 eICR IG contains a set of templates ("trigger code templates") designed to flag the existence of reportable condition trigger codes in diagnoses and ordered/resulted

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	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.	laboratory tests. There may be more than one trigger code type and more than one trigger code of each type in an eICR CDA Document. 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 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, 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.
CONF #: 3284-306 Added		This patient SHALL contain exactly one [1..1] sdtc:deceasedInd (CONF:3284-306).
CONF #: 3284-307 Added		If sdtc:deceasedInd is true then sdtc:deceasedTime *SHALL* be present (CONF:3284-307).
CONF #: 3284-308 Added		Heading: component (Plan of Treatment Section (V2)) The Plan of Treatment section contains data that define pending

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		orders, interventions, encounters, services, and procedures for the patient. It is limited to prospective, unfulfilled, or incomplete orders and requests only. These are indicated by the @moodCode of the entries within this section. All active, incomplete, or pending orders, appointments, referrals, procedures, services, or any other pending event of clinical significance to the current care of the patient should be listed. The eICR data element mapped to this section is: o Lab Order Code This structuredBody MAY contain zero or one [0..1] component (CONF:3284-308) such that it
CONF #: 3284-309 Added		SHALL contain exactly one [1..1] Plan of Treatment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09) (CONF:3284-309).
CONF #: 3284-326 Added		This section SHOULD contain zero or one [0..1] entry (CONF:3284-326).
CONF #: 3284-327 Added		The entry, if present, SHALL contain exactly one [1..1] Birth Sex Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.200:2016-06-01) (CONF:3284-327).
CONF #: 3284-334 Added		This section SHOULD contain zero or more [0..*] entry (CONF:3284-334).
CONF #: 3284-335 Added		The entry, if present, SHALL contain exactly one [1..1] Travel History (identifier: urn:hl7ii:2.16.840.1.113883.10.20.15.2.3.1:2016-12-01) (CONF:3284-335).
CONF #: 3284-396 Added		Heading: documentationOf When documentationOf/serviceEvent is present, it indicates that this eICR document was manually initiated/generated by the provider. MAY contain zero or one [0..1] documentationOf (CONF:3284-396).

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CONF #: 3284-397 Added		The documentationOf, if present, SHALL contain exactly one [1..1] serviceEvent (CONF:3284-397).
CONF #: 3284-398 Added		This serviceEvent SHALL contain exactly one [1..1] code (CONF:3284-398).
CONF #: 3284-399 Added		This code SHALL contain exactly one [1..1] @code="PHC1464" Manually Initiated eICR (CONF:3284-399).
CONF #: 3284-400 Added		This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.114222.4.5.274" (CodeSystem: PHIN VS (CDC Local Coding System) urn:oid:2.16.840.1.114222.4.5.274) (CONF:3284-400).
CONF #: 3284-401 Added		This code SHALL NOT contain [0..0] @nullFlavor (CONF:3284-401).
CONF #: 3284-402 Added		This low SHALL NOT contain [[]0..0] @nullFlavor (CONF:3284-402).
CONF #: 3284-403 Added		This high SHALL NOT contain [[]0..0] @nullFlavor (CONF:3284-403).
CONF #: 3284-147 Modified	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.	Although "county" is not explicitly specified in the US Realm Address, it is not precluded from use and for the purposes of this IG it is recommended to be included. See the eICR recordTarget example following this section for further details. 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:3284-147). 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.
CONF #: 3284-1 Modified	Heading: componentOf (Initial Public Health Case Report ComponentOf) The encompassing encounter represents the setting of the	Heading: componentOf The encompassing encounter represents the setting of the clinical encounter during which the document act(s) or ServiceEvent(s)

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	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. SHALL contain exactly one [1..1] componentOf (CONF:2218-1). Note: eICR-ComponentOf	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, along with the visit/encounter ID. SHALL contain exactly one [1..1] componentOf (CONF:3284-1).
CONF #: 3284-35 Modified	Heading: component (Component Structural Body) SHALL contain exactly one [1..1] component (CONF:2218-35).	SHALL contain exactly one [1..1] component (CONF:3284-35).
CONF #: 3284-86 Modified	Heading: 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: o Date of Diagnosis o Date of Onset o Diagnoses This structuredBody SHALL contain exactly one [1..1] component (CONF:2218-86) such that it Note: Encounters Section (entries required) (V3)	Heading: 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 mapped to this section are: o Date of Diagnosis o Date of Onset o Diagnoses This structuredBody SHALL contain exactly one [1..1] component (CONF:3284-86) such that it
CONF #: 3284-87 Modified	Heading: 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: o Occupation This structuredBody SHALL contain exactly one [1..1] component (CONF:2218-87) such that it	Heading: 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 mapped to this section are: o Occupation: Occupation should include both current and past occupation information, if available. (Use the Social History

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	Note: Social History Section (V3)	Observation template - see sample file for example). o Travel History o Patient Sex (Birth Sex) o Pregnant (Pregnancy Observation) To assert that a patient was not pregnant during a specified date range, the Pregnancy Observation template should be used, but with a negationInd set to 'true' to indicate that the patient was not pregnant during the date range specified by the effectiveTime element. (An example is provided in the sample file to illustrate this.) To indicate that a patient's pregnancy status was unknown, set nullFlavor="UNK" and an effectiveTime element can be included to assert the period over which it was unknown. This structuredBody SHALL contain exactly one [1..1] component (CONF:3284-87) such that it
CONF #: 3284-88 Modified	Heading: 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: o Medications Administered (list) This structuredBody SHALL contain exactly one [1..1] component (CONF:2218-88) such that it Note: Medications Administered Section (V2)	Heading: 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: o Medications Administered (list) This structuredBody SHALL contain exactly one [1..1] component (CONF:3284-88) such that it
CONF #: 3284-89 Modified	Heading: 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	Heading: 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

Change	Old	New
	entry templates. The eICR data elements mapped to this section are: o Lab Order Code o Lab Results o Filler Order Number (Note: If available, the placing system order identifer (Placer Order number) as well) This structuredBody SHALL contain exactly one [1..1] component (CONF:2218-89) such that it Note: Results Section (entries required) (V3)	entry templates. The eICR data elements mapped to this section are: o Lab Order Code o Lab Results o Filler Order Number (Note: If available, the placing system order identifier (Placer Order number) as well) o Lab Test Status o Lab Test Abnormal Interpretation This structuredBody SHALL contain exactly one [1..1] component (CONF:3284-89) such that it
CONF #: 3284-96 Modified	SHALL contain exactly one [1..1] @extension="2015-11-28" (CONF:2218-96).	SHALL contain exactly one [1..1] @extension="2016-12-01" (CONF:3284-96).
CONF #: 3284-97 Modified	Heading: 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. o History of Present Illness This structuredBody SHALL contain exactly one [1..1] component (CONF:2218-97) such that it Note: History of Present Illness Section	Heading: 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. o History of Present Illness This structuredBody SHALL contain exactly one [1..1] component (CONF:3284-97) such that it
CONF #: 3284-98 Modified	Heading: 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: o Reason for Visit This structuredBody SHALL contain exactly one [1..1] component (CONF:2218-98) such that it Note: Reason for Visit Section	Heading: component (Reason for Visit Section) The Reason for Visit Section template records the patient's reason for the visit (as documented by the provider). The eICR data elements mapped to this section are: o Reason for Visit This structuredBody SHALL contain exactly one [1..1] component (CONF:3284-98) such that it
CONF #: 3284-99 Modified	Heading: component (Problem Section (entries required) (V3)) The Problem Section template lists	Heading: component (Problem Section (entries required) (V3)) The Problem Section template lists

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	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: o Pregnant o Symptoms (list) 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 structuredBody SHALL contain exactly one [1..1] component (CONF:2218-99) such that it Note: Problem Section (entries required) (V3)	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 mapped to this section are: o Date of Diagnosis o Date of Onset o Diagnoses o Symptoms (list) This structuredBody SHALL contain exactly one [1..1] component (CONF:3284-99) such that it
CONF #: 3284-103 Modified	SHALL contain exactly one [1..1] recordTarget (CONF:2218-103).	Heading: recordTarget SHALL contain exactly one [1..1] recordTarget (CONF:3284-103).
CONF #: 3284-106 Modified	This patient SHALL contain exactly one [1..1] sdtc:deceasedTime (CONF:2218-106).	This patient MAY contain zero or one [0..1] sdtc:deceasedTime (CONF:3284-106).
CONF #: 3284-127 Modified	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.	Heading: author SHALL contain at least one [1..*] author (CONF:3284-127). 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.
CONF #: 3284-14 Modified	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).	*Please note*: the binding to the ServiceDeliveryLocationRoleType value set is SHOULD, so, for concepts that are not represented in this value set, it is possible to use another code from a recognized code system.

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	Note: CareFacility.typeCode	To represent "Correctional Facility" use SNOMED CT code 257656006: Correctional Facility. 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:3284-14). Note: CareFacility.typeCode
CONF #: 3284-148 Modified	Heading: 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 This structuredBody SHOULD contain zero or one [0..1] component (CONF:2218-148) such that it Note: The Immunization Section (entries required) (V3)	Heading: component (Immunizations 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 element mapped to this section is: o Immunization Status This structuredBody SHOULD contain zero or one [0..1] component (CONF:3284-148) such that it

