1.1.6 Continuity of Care Document (CCD) (V3)

`[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.2:2015-08-01 (open)]`

Table 29: Continuity of Care Document (CCD) (V3) Contexts

Contained By:	Contains:
	Medications Section (entries required) (V2) (required) Plan of Treatment Section (V2) (optional) Medical Equipment Section (V2) (optional) Nutrition Section (optional) Procedures Section (entries required) (V2) (optional) Functional Status Section (V2) (optional) Mental Status Section (V2) (optional) Immunizations Section (entries required) (V3) (optional) Results Section (entries required) (V3) (required) Vital Signs Section (entries required) (V3) (required) Problem Section (entries required) (V3) (required) Payers Section (V3) (optional) Social History Section (V3) (required) Advance Directives Section (entries optional) (V3) (optional) Family History Section (V3) (optional) Allergies and Intolerances Section (entries required) (V3) (required) Encounters Section (entries optional) (V3) (optional)

This document type was originally based on the Continuity of Care Document (CCD) Release 1.1 which itself was derived from HITSP C32 and CCD Release 1.0.

The Continuity of Care Document (CCD) represents a core data set of the most relevant administrative, demographic, and clinical information facts about a patient's healthcare, covering one or more healthcare encounters. It provides a means for one healthcare practitioner, system, or setting to aggregate all of the pertinent data about a patient and forward it to another to support the continuity of care.

The primary use case for the CCD is to provide a snapshot in time containing the germane clinical, demographic, and administrative data for a specific patient. The key characteristic of a CCD is that the ServiceEvent is constrained to "PCPR". This means it does not function to report new ServiceEvents associated with performing care. It reports on care that has already been provided. The CCD provides a historical tally of the care over a range of time and is not a record of new services delivered.

More specific use cases, such as a Discharge Summary, Transfer Summary, Referral Note, Consultation Note, or Progress Note, are available as alternative documents in this guide.

Table 30: Continuity of Care Document (CCD) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.2:2015-08-01)					

XPath	Card.	Verb	Data Type	CONF#	Value
templateId	1..1	SHALL		1198-8450	
@root	1..1	SHALL		1198-10038	2.16.840.1.113883.10.20.22.1.2
@extension	1..1	SHALL		1198-32516	2015-08-01
code	1..1	SHALL		1198-17180	
@code	1..1	SHALL		1198-17181	34133-9
@codeSystem	1..1	SHALL		1198-32138	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
author	1..*	SHALL		1198-9442	
assignedAuthor	1..1	SHALL		1198-9443	
documentationOf	1..1	SHALL		1198-8452	
serviceEvent	1..1	SHALL		1198-8480	
@classCode	1..1	SHALL		1198-8453	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PCPR
effectiveTime	1..1	SHALL		1198-8481	
low	1..1	SHALL		1198-8454	
high	1..1	SHALL		1198-8455	
performer	0..*	SHOULD		1198-8482	
@typeCode	1..1	SHALL		1198-8458	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRF
assignedEntity	0..1	MAY		1198-8459	
id	1..*	SHALL		1198-30882	
assignedPerson	0..1	MAY		1198-32467	
component	1..1	SHALL		1198-30659	
structuredBody	1..1	SHALL		1198-30660	
component	1..1	SHALL		1198-	

XPath	Card.	Verb	Data Type	CONF#	Value
				30661	
section	1..1	SHALL		1198-30662	Allergies and Intolerances Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.6.1:2015-08-01
component	1..1	SHALL		1198-30663	
section	1..1	SHALL		1198-30664	Medications Section (entries required) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.1.1:2014-06-09
component	1..1	SHALL		1198-30665	
section	1..1	SHALL		1198-30666	Problem Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.5.1:2015-08-01
component	0..1	SHOULD		1198-30667	
section	1..1	SHALL		1198-30668	Procedures Section (entries required) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.7.1:2014-06-09
component	1..1	SHALL		1198-30669	
section	1..1	SHALL		1198-30670	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	MAY		1198-30671	
section	1..1	SHALL		1198-30672	Advance Directives Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.21:2015-08-01
component	0..1	MAY		1198-30673	
section	1..1	SHALL		1198-30674	Encounters Section (entries optional) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.22:2015-08-01
component	0..1	MAY		1198-30675	
section	1..1	SHALL		1198-30676	Family History Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.1

XPath	Card.	Verb	Data Type	CONF#	Value
					0.20.22.2.15:2015-08-01
component	0..1	MAY		1198-30677	
section	1..1	SHALL		1198-30678	Functional Status Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.14:2014-06-09
component	0..1	MAY		1198-30679	
section	1..1	SHALL		1198-30680	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		1198-30681	
section	1..1	SHALL		1198-30682	Medical Equipment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.23:2014-06-09
component	0..1	MAY		1198-30683	
section	1..1	SHALL		1198-30684	Payers Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2015-08-01
component	0..1	SHOULD		1198-30685	
section	1..1	SHALL		1198-30686	Plan of Treatment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09
component	1..1	SHALL		1198-30687	
section	1..1	SHALL		1198-30688	Social History Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.17:2015-08-01
component	1..1	SHALL		1198-30689	
section	1..1	SHALL		1198-30690	Vital Signs Section (entries required) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2015-08-01
component	0..1	MAY		1198-32143	
section	1..1	SHALL		1198-32144	Mental Status Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.1

XPath	Card.	Verb	Data Type	CONF#	Value
					0.20.22.2.56:2015-08-01
component	0..1	MAY		1198-32624	
section	1..1	SHALL		1198-32625	Nutrition Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.57

1.1.7 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:1198-8450) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.2" (CONF:1198-10038).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32516).
    c. When asserting this templateId, all C-CDA 2.1 section and entry templates that had a previous version in C-CDA R1.1 **SHALL** include both the C-CDA 2.1 templateId and the C-CDA R1.1 templateId root without an extension. See C-CDA R2.1 Volume 1 - Design Considerations for additional detail (CONF:1198-32936).
3. **SHALL** contain exactly one [1..1] **code** (CONF:1198-17180).
    a. This code **SHALL** contain exactly one [1..1] **@code**="34133-9" Summarization of Episode Note (CONF:1198-17181).
    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:1198-32138).

1.1.7.1 author

4. **SHALL** contain at least one [1..*] **author** (CONF:1198-9442).
    a. Such authors **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:1198-9443).
        i. Such assignedAuthors **SHALL** contain (exactly one [1..1] assignedPerson) or (exactly one [1..1] assignedAuthoringDevice and exactly one [1..1] representedOrganization) (CONF:1198-8456).
        ii. If assignedAuthor has an associated representedOrganization with no assignedPerson or assignedAuthoringDevice, then the value for "ClinicalDocument/author/assignedAuthor/id/@NullFlavor" **SHALL** be "NA" "Not applicable" 2.16.840.1.113883.5.1008 NullFlavor STATIC (CONF:1198-8457).

1.1.7.2 documentationOf

The documentationOf relationship in a Continuity Care Document contains the representation of providers who are wholly or partially responsible for the safety and well-being of a subject of care.

5. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:1198-8452).

The main activity being described by a CCD is the provision of healthcare over a period of time. This is shown by setting the value of serviceEvent/@classCode to “PCPR” (care provision) and indicating the duration over which care was provided in serviceEvent/effectiveTime. Additional data from outside this duration may also be included if it is relevant to care provided during that time range (e.g., reviewed during the stated time range).

NOTE: Implementations originating a CCD should take care to discover what the episode of care being summarized is. For example, when a patient fills out a form providing relevant health history, the episode of care being documented might be from birth to the present.

a. This documentationOf **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:1198-8480).
    i. This serviceEvent **SHALL** contain exactly one [1..1] **@classCode="**PCPR**"** Care Provision (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-8453).
    ii. This serviceEvent **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-8481).
        1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1198-8454).
        2. This effectiveTime **SHALL** contain exactly one [1..1] **high** (CONF:1198-8455).

1.1.7.3 performer

The serviceEvent/performer represents the healthcare providers involved in the current or pertinent historical care of the patient. Preferably, the patient’s key healthcare providers would be listed, particularly their primary physician and any active consulting physicians, therapists, and counselors.

    iii. This serviceEvent **SHOULD** contain zero or more [0..*] **performer** (CONF:1198-8482).
        1. The performer, if present, **SHALL** contain exactly one [1..1] **@typeCode="**PRF**"** Participation physical performer (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1198-8458).
        2. The performer, if present, **MAY** contain zero or one [0..1] **assignedEntity** (CONF:1198-8459).
            a. The assignedEntity, if present, **SHALL** contain at least one [1..*] **id** (CONF:1198-30882) such that it
                i. If this assignedEntity is an assignedPerson, the assignedEntity/id **SHOULD** contain zero or one [0..1] @root="2.16.840.1.113883.4.6" National Provider Identifier (CONF:1198-32466).
            b. The assignedEntity, if present, **MAY** contain zero or one [0..1] **assignedPerson** (CONF:1198-32467).

1.1.7.4 component

6. **SHALL** contain exactly one [1..1] **component** (CONF:1198-30659).
    a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:1198-30660).
        i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30661) such that it
            1. **SHALL** contain exactly one [1..1] **Allergies and Intolerances Section (entries required) (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.6.1:2015-08-01) (CONF:1198-30662).
        ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30663) such that it
            1. **SHALL** contain exactly one [1..1] **Medications Section (entries required) (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.1.1:2014-06-09) (CONF:1198-30664).
        iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30665) 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:1198-30666).
        iv. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-30667) such that it
            1. **SHALL** contain exactly one [1..1] **Procedures Section (entries required) (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.7.1:2014-06-09) (CONF:1198-30668).
        v. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30669) 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:1198-30670).
        vi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30671) such that it
            1. **SHALL** contain exactly one [1..1] **Advance Directives Section (entries optional) (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.21:2015-08-01) (CONF:1198-30672).
        vii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30673) such that it
            1. **SHALL** contain exactly one [1..1] **Encounters Section (entries optional) (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.22:2015-08-01) (CONF:1198-30674).

viii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30675) such that it
    1. **SHALL** contain exactly one [1..1] **Family History Section (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.15:2015-08-01) (CONF:1198-30676).

ix. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30677) such that it
    1. **SHALL** contain exactly one [1..1] **Functional Status Section (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.14:2014-06-09) (CONF:1198-30678).

x. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30679) 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:1198-30680).

xi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30681) such that it
    1. **SHALL** contain exactly one [1..1] **Medical Equipment Section (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.23:2014-06-09) (CONF:1198-30682).

xii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30683) such that it
    1. **SHALL** contain exactly one [1..1] **Payers Section (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.18:2015-08-01) (CONF:1198-30684).

xiii. This structuredBody **SHOULD** contain zero or one [0..1] **component** (CONF:1198-30685) 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:1198-30686).

xiv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30687) 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:1198-30688).

xv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30689) such that it
    1. **SHALL** contain exactly one [1..1] **Vital Signs Section (entries required) (V3)** (identifier:

urn:hl7ii:2.16.840.1.113883.10.20.22.2.4.1:2015-08-01) (CONF:1198-30690).

xvi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-32143) such that it

1. **SHALL** contain exactly one [1..1] **Mental Status Section (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.56:2015-08-01) (CONF:1198-32144).

xvii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-32624) such that it

1. **SHALL** contain exactly one [1..1] **Nutrition Section** (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.57) (CONF:1198-32625).

Figure 25: CCD (V2) author Example

```
<author>
    <time value="201209151030-0800" />
    <assignedAuthor>
        <id extension="5555555555" 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" />
        <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 26: CCD (V2) Performer Example

```
<performer typeCode="PRF">
    <functionCode code="PCP" displayName="Primary Care Physician"
codeSystem="2.16.840.1.113883.5.88" codeSystemName="HL7ParticipationFunction">
        <originalText>Primary Care Physician</originalText>
    </functionCode>
    <assignedEntity>
        <id extension="5555555555" root="2.16.840.1.113883.4.6" />
        <code code="207QA0505X" displayName="Adult Medicine"
codeSystem="2.16.840.1.113883.6.101" codeSystemName="NUCC" />
        <addr>
            ...
        </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>
           ...
        </representedOrganization>
    </assignedEntity>
</performer>
```

Figure 27: CCD (V2) serviceEvent 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">
           ....
        </performer>
    </serviceEvent>
</documentationOf>
```

1.1.8 Diagnostic Imaging Report (V3)

`[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.5:2015-08-01 (open)]`

Table 31: Diagnostic Imaging Report (V3) Contexts

Contained By:	Contains:
	DICOM Object Catalog Section - DCM 121181 (optional) Findings Section (DIR) (required) Fetus Subject Context (optional) Observer Context (optional) Procedure Context (optional) SOP Instance Observation (optional) Text Observation (optional) Code Observations (optional) Quantity Measurement Observation (optional) US Realm Person Name (PN.US.FIELDED) (optional) Physician Reading Study Performer (V2) (optional) Physician of Record Participant (V2) (optional) US Realm Date and Time (DT.US.FIELDED) (optional)

A Diagnostic Imaging Report (DIR) is a document that contains a consulting specialist's interpretation of image data. It conveys the interpretation to the referring (ordering) physician and becomes part of the patient's medical record. It is for use in Radiology, Endoscopy, Cardiology, and other imaging specialties.

Table 32: Diagnostic Imaging Report (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.5:2015-08-01)					
templateId	1..1	SHALL		1198-8404	
@root	1..1	SHALL		1198-10042	2.16.840.1.113883.10.20.22.1.5
@extension	1..1	SHALL		1198-32515	2015-08-01
id	1..1	SHALL		1198-30932	
@root	1..1	SHALL		1198-30933	
code	1..1	SHALL		1198-14833	
@code	1..1	SHALL		1198-14834	urn:oid:1.3.6.1.4.1.12009.10.2.5 (LOINC Imaging Document Codes)
informant	0..0	SHALL		1198-	