



Personal Health Notes

CDA Implementation Guide

26 June 2019 v2.0
Draft for external use
Document ID: DH-XXXX:2019
Draft Version 010

THIS SPECIFICATION IS AN UNTESTED DRAFT AND IS NOT SUITABLE FOR IMPLEMENTATION.

Australian Digital Health Agency ABN 84 425 496 912, Level 25, 175 Liverpool Street, Sydney, NSW 2000
Telephone 1300 901 001 or email help@digitalhealth.gov.au
www.digitalhealth.gov.au



Disclaimer

The Australian Digital Health Agency (“the Agency”) makes the information and other material (“Information”) in this document available in good faith but without any representation or warranty as to its accuracy or completeness. The Agency cannot accept any responsibility for the consequences of any use of the Information. As the Information is of a general nature only, it is up to any person using or relying on the Information to ensure that it is accurate, complete and suitable for the circumstances of its use.

Document control

This document is maintained in electronic form and is uncontrolled in printed form. It is the responsibility of the user to verify that this copy is the latest revision.

Security

The information contained herein must only be used for the purpose for which it is supplied and must not be disclosed other than explicitly agreed in writing with the Australian Digital Health Agency.

Copyright © 2019 Australian Digital Health Agency

This document is copyright. All rights reserved. Unless otherwise noted, no part of this document may be used, reproduced or altered in any form or by any means, without prior written consent of the Australian Digital Health Agency (Agency) No part of this document may be reproduced or used in any form or by any means whatsoever without the permission of the Agency. This document includes material that is HL7 FHIR Copyright © 2011+ HL7 licensed under Creative Commons No Rights Reserved. All copies of this document must include this copyright statement and the following information in its entirety.

OFFICIAL

Document Information

Key Information

Owner	National Health Chief Information Officer, Infrastructure Operations
Contact for enquiries	Australian Digital Health Agency Help Centre
	t: 1300 901 001
	e: help@digitalhealth.gov.au

Product Version History

Product version	Date	Release comments
1.0	9 Dec 2011	Initial release.
2.0	26 Jun 2019	This version implements terminology updates and transitions from openEHR based models to FHIR-based models. This is a backwards incompatible release

Related Documents

Name	Version/Release Date
Australian Base Profiles Implementation Guide	v1.0.0 (Standard for Trial Use), Continuous Integration Build
FHIR	Release 3 (STU), Issued 19 April 2017
Participant Model Specification	Version 1.0, Issued 01 November 2018
Common - Clinical Document	Version 1.5.2, Issued 28 February 2019
CDA Rendering Specification	Version 1.0, Issued 07 March 2012
Information Requirements - Consumer Entered Notes	Version 0.07, Issued 19 December 2011
Representing Coding in CDA Documents Implementation Guidance	Version 1.0, Issued 10 October 2011
Clinical Documents Common Conformance Profile	Version 1.7, Issued 21 December 2017

DRAFT

Acknowledgements

Council of Australian Governments

The Australian Digital Health Agency is jointly funded by the Australian Government and all state and territory governments.

Regenstrief Institute (LOINC)

This material contains content from LOINC™ (<http://loinc.org>). The LOINC table, LOINC codes, LOINC panels and forms file, and LOINC linguistic variants file are copyright © 1995-2015, Regenstrief Institute, Inc. and the Logical Observation Identifiers Names and Codes (LOINC) Committee and available at no cost under the license at <https://loinc.org/terms-of-use/>. LOINC is a trademark of Regenstrief Institute, Inc., registered in the United States.

IHTSDO (SNOMED CT)

This material includes SNOMED Clinical Terms™ (SNOMED CT®) which is used by permission of the International Health Terminology Standards Development Organisation (IHTSDO). All rights reserved. SNOMED CT® was originally created by The College of American Pathologists. "SNOMED" and "SNOMED CT" are registered trademarks of the IHTSDO, (<http://www.ihtsdo.org/>).

HL7 FHIR

This product includes all or a portion of material that is HL7 FHIR Copyright © 2011+ HL7 licensed under Creative Commons "No Rights Reserved".

HL7 International

This document includes excerpts of HL7™ International standards and other HL7 International material. HL7 International is the publisher and holder of copyright in the excerpts. The publication, reproduction and use of such excerpts is governed by the HL7 IP Policy (see <http://www.hl7.org/legal/ippolicy.cfm>) and the HL7 International License Agreement. HL7 and CDA are trademarks of Health Level Seven International and are registered with the United States Patent and Trademark Office. FHIR is a registered trademark of Health Level Seven International.

This product includes all or a portion of the HL7 Vocabulary, or is derived from the HL7 Vocabulary, subject to a license from Health Level Seven International. Your use of the HL7 Vocabulary also is subject to this license, a copy of which is accessible through the following link: <http://www.hl7.org/permalink/?VocabTables>. The current complete HL7 Vocabulary is also available through this link. The HL7 Vocabulary is copyright © 1989-2010, Health Level Seven International. All rights reserved. THE HL7 VOCABULARY IS PROVIDED "AS IS." ANY EXPRESS OR IMPLIED WARRANTIES ARE DISCLAIMED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

DRAFT

Table of Contents

1. Introduction	1
1.1. Document purpose and scope	1
1.2. Context and use	1
1.3. How to read this document	2
1.4. Editorial note	2
1.5. Intended audience	2
1.6. Known issues	2
2. Guidance	5
2.1. Clinical Document Architecture Release 2	5
2.2. Australian Digital Health Agency CDA extensions	6
2.3. Conformance conventions	7
2.4. Mapping presentation and structure	10
3. Conformance	13
3.1. Conformance requirements	13
3.2. CDA narratives	14
4. Personal Health Notes hierarchy	15
4.1. Hierarchy	15
4.2. Expanded hierarchy	16
5. CDA Header templates	19
5.1. ClinicalDocument	19
5.2. LegalAuthenticator	22
5.3. Administrative Observations	24
6. Document CDA templates	25
6.1. ClinicalDocument (Personal Health Notes)	25
7. Participation CDA templates	27
7.1. recordTarget (Patient with Mandatory IHI)	27
7.2. participant (Patient contact)	32
7.3. participant (generalPractitioner Base Organization)	33
7.4. participant (generalPractitioner Base Practitioner)	35
7.5. author (Patient with Mandatory IHI)	37
7.6. author (RelatedPerson with Mandatory IHI)	39
7.7. custodian (Organization with Mandatory Identifier)	41
8. Entity CDA templates	43
8.1. providerOrganization (Base Organization)	43
8.2. participant (Organization contact)	45
9. Section CDA templates	47
9.1. section (Notes)	47
10. Act CDA templates	49
10.1. ext:coverage (Practitioner qualification)	50
11. Common patterns	53
11.1. code	53
11.2. id	56
11.3. time	58
11.4. Entity Identifier	60
11.5. Personal Relationship	62
11.6. Qualification	64
A. Complex data type mappings to CDA (R2)	65
A.1. Identifier	66
A.2. HumanName	71
A.3. Address	73
A.4. Address as Australian Address	75
A.5. ContactPoint	77
B. Examples	79
B.1. Personal Health Notes - example 1	80
B.2. Personal Health Notes - example 2	82
C. Mapping from requirements	85
References	87

DRAFT

List of Examples

11.1. code	54
11.2. id	57
11.3. Simple timestamp	58
11.4. Low time	58
11.5. Interval timestamp 1	58
11.6. Interval timestamp 2	59
11.7. Width time	59
11.8. Entity Identifier	61
11.9. Personal Relationship	63
A.1. Identifier	68
A.2. HumanName	72
A.3. Address	74
A.4. Address	76
A.5. ContactPoint	78
B.1. Personal Health Notes - example 1	80
B.2. Personal Health Notes - example 2	82

DRAFT

DRAFT

1 Introduction

1.1 Document purpose and scope

The primary aim of the implementation guide is to take implementers step by step through mapping each element of the Personal Health Notes (PHN) model ([Personal Health Records FHIR Implementation Guide \[DH2019d\]](#)) to a corresponding CDA attribute or element. The resulting CDA document can be used for the electronic exchange of PHN information between healthcare providers.

This implementation guide is not to be used as a guide to presentation (or rendering) of the data. Beyond defining conformance requirements on CDA narratives it contains no information as to how the data described by it should be displayed and no such guidance should be inferred from This implementation guide.

Reference has been made to International and Australian Standards, and to Standards from Health Level Seven. The following standard is referred to in the text in such a way that some or all of its content constitutes requirements for the purposes of this specification: [HL7 Clinical Document Architecture \[HL7CDAR2\]](#).

Wherever possible, material in this specification is based on existing standards. All efforts have been made to minimise divergence from the HL7 Australia profiles of HL7 International standards ([Australian Base Profiles Implementation Guide \[HL7AUBIG\]](#)) to provide for system interoperability and compatibility with other profiles. Issues of an editorial nature in the source material (such as spelling or punctuation errors) are intentionally reproduced.

1.2 Context and use

A CDA implementation guide is part of a package of documents and files that support the development of software to exchange a type of clinical document, a specification package.

An Agency clinical document specification package supports software developers to create and interpret instances of a clinical document. The core of each package is a specification of the information content of instances of the clinical document.

Supplementary contents of the package include statements of scenarios for which the specification is appropriate, guidance on implementing the specification, and guidance on testing purported instances.

The contents may include:

- statement of requirements
- CDA implementation guide (CDA IG) – a statement of constraints and custom extensions on [HL7 Clinical Document Architecture \[HL7CDAR2\]](#)
- FHIR implementation guide (FHIR IG) – a statement of constraints and custom extensions on [FHIR \[HL7FHIR3\]](#)
- template package library – a set of Schematron schema to test conformance of CDA documents with the specification
- conformance profile – a statement of conformance requirements for exchanging documents within a particular scenario such as the My Health Record
- A set of release notes

Specification packages contain only files relevant to the particular clinical document. Specifications that are common to many clinical documents and should be considered part of the specification package, as directed by the relevant release note and conformance profile, are contained in the [Common - Clinical Document \[DH2019a\]](#).

1.3 How to read this document

This implementation guide contains descriptions of both constraints on the CDA and, where necessary, custom extensions to the CDA, for the purposes of fulfilling the requirements for Australian implementations of PHN.

These descriptions are defined as a set of CDA templates (see [Conformance conventions](#)) presented in CDA mapping tables (see [Mapping presentation and structure](#)). The mapping tables take implementers step by step through mapping each element of the PHN model to a corresponding CDA attribute or element.

A logical view of the PHN model ([FHIR \[HL7FHIR3\] StructureDefinitions](#)) is presented as a tree structure in a hierarchical table (see [4 Personal Health Notes hierarchy](#)). The PHN model is published as a set of [FHIR \[HL7FHIR3\]](#) profiles in [Personal Health Records FHIR Implementation Guide \[DH2019d\]](#).

The starting point for the CDA templates is the clinical document model template defined in [ClinicalDocument \(Personal Health Notes\)](#), which references the additional templates necessary to assert conformance for this implementation guide.

1.4 Editorial note

This implementation guide is an early working specification that is available for comment and review. It may be used to solicit feedback and to provide insight as to the expected content in a forthcoming stable and approved version of the specification.

This implementation guide may not be considered to be complete enough or sufficiently reviewed to be safe for implementation and use in production systems. It may have known issues and still be in development.

It is intended to supersede [Consumer Entered Notes - Structured Content Specification \[NEHT2011bn\]](#) and [Consumer Entered Notes CDA Implementation Guide \[NEHT2011ap\]](#). This new, backwards incompatible version, is intended to address alignment to HL7 FHIR and is the result of work undertaken in conjunction with HL7 Australia.

1.5 Intended audience

This implementation guide is aimed at software development teams, architects, designers, clinicians and informatics researchers who are responsible for the delivery of clinical applications, infrastructure components and messaging interfaces, and also for those who wish to evaluate the clinical suitability of the Agency-endorsed specifications.

This implementation guide and related artefacts are technical in nature and the audience is expected to be familiar with the language of health data specifications and to have some familiarity with health information standards and specifications, such as CDA and Standards Australia IT-014 documents. Definitions and examples are provided to clarify relevant terminology usage and intent.

1.6 Known issues

This section lists known issues with this specification at the time of publishing. We are working on solutions to these issues and encourage comments to help us develop these solutions.

Reference	Description
Personal Health Records FHIR Implementation Guide [DH2019d]	Alignment with examples between the CDA-IG and FHIR-IG is in progress.
Terminology publication	The following value sets are not yet available in NCTS: <ul style="list-style-type: none">Address Type HL7 v3

Reference	Description
<i>Personal Health Records FHIR Implementation Guide [DH2019d]</i>	The Personal Health Notes FHIR IG is not yet published; draft content is held in the following repository: https://github.com/-/AuDigitalHealth/ci-fhir-stu3 (public) https://stash.digitalhealth.gov.au/projects/CIL/repos/ci-fhir-stu3/-/browse (internal).

DRAFT

DRAFT

2 Guidance

2.1 Clinical Document Architecture Release 2

A CDA document is an XML document built following the rules described in the CDA specification, which conforms to the HL7 CDA schema provided by HL7. The CDA document is based on the semantics provided by the [HL7 V3 RIM, Data types and Vocabulary \[HL7V3DT\]](#).

A CDA document has two main parts: the header and the body.

The CDA document header is consistent across all CDA documents, regardless of document type. The header identifies and classifies the document and provides information on authentication, the encounter, the patient, and the involved providers.

The body contains the clinical report. The body can be marked-up text (narrative, renderable text) or a combination of both marked-up text and structured data. The marked-up text can be transformed to XHTML and displayed to a human. The structured data allows machine processing of the information shown in the narrative section.

All clinical information is required to be marked up in CDA narratives. These narratives are CDA-defined hypertext, able to be rendered in web browsers with only a standard accompanying transformation. This transformation is produced and distributed by HL7.

The rendered narrative can stand alone as a source of authenticated information for consuming parties. Content from the CDA body is not to be omitted from the narrative.

Further information and conformance requirements on the CDA narrative is available in [CDA narratives](#).

The following references are recommended to gain a better understanding of CDA:

- [HL7 Clinical Document Architecture \[HL7CDAR2\]](#)
- [HL7 V3 RIM, Data types and Vocabulary \[HL7V3DT\]](#)
- [CDA Examples \[RING2009\]](#)
- [CDA Validation Tools: infoway_release_2_2X_18.zip \[INFO2009\]](#)

2.2 Australian Digital Health Agency CDA extensions

As part of the CDA, standard extensions are allowed as follows:

Locally-defined markup may be used when local semantics have no corresponding representation in the CDA specification. CDA seeks to standardize the highest level of shared meaning while providing a clean and standard mechanism for tagging meaning that is not shared. In order to support local extensibility requirements, it is permitted to include additional XML elements and attributes that are not included in the CDA schema. These extensions should not change the meaning of any of the standard data items, and receivers must be able to safely ignore these elements. Document recipients must be able to faithfully render the CDA document while ignoring extensions.

Extensions may be included in the instance in a namespace other than the HL7v3 namespace, but must not be included within an element of type ED (e.g., <text> within <procedure>) since the contents of an ED datatype within the conformant document may be in a different namespace. Since all conformant content (outside of elements of type ED) is in the HL7 namespace, the sender can put any extension content into a foreign namespace (any namespace other than the HL7 namespace). Receiving systems must not report an error if such extensions are present. [HL7 Clinical Document Architecture \[HL7CDAR2\]](#)

A number of extensions to CDA have been defined in this implementation guide. To maintain consistency, the same development paradigm has been used as CDA.

These Australian Digital Health Agency CDA extensions have been added to the Australian Digital Health Agency CDA schema and are incorporated in the namespace `http://ns.electronichealth.net.au/Ci/Cda/Extensions/3.0` as shown in [Appendix B, Examples](#). Future versions of CDA extensions will be versioned as per the following example:

`http://ns.electronichealth.net.au/Ci/Cda/Extensions/4.0`

The Australian Digital Health Agency CDA schema therefore differs from the base HL7 CDA W3C XML Schema (referred to in this document as the HL7 CDA Schema). CDA documents which include extensions will fail to validate against the HL7 CDA Schema – this is a known limitation.

A Personal Health Notes document that conforms to this specification will validate against the Australian Digital Health Agency CDA schema that accompanies this specification, and will validate against the HL7 CDA Schema once the extensions have been removed. Note that merely passing schema validation does not ensure conformance. For more information, refer to [Conformance requirements](#).

2.3 Conformance conventions

Templates

This implementation guide specifies the CDA templates for implementing the document model that is the subject of this implementation guide, i.e. Personal Health Notes. >A CDA template is a set of constraints, and where necessary, custom extensions to [HL7 Clinical Document Architecture \[HL7CDAR2\]](#).

In this implementation guide CDA templates are presented in a CDA mapping table and indicated by the presence of a `templateId`.

Template identifiers (`templateId`) are unique to each CDA template. When valued in an instance, the template identifier signals the imposition of a set of template-defined constraints. The root value of this attribute (e.g. `@root="1.2.36.1.2001.1001.100.1002.226"`) provides a unique identifier for the template in question. The extension value of this attribute (e.g. `@extension="1.0"`) provides the version identifier for the template in question.

Open and closed templates

A CDA template may be either an open template or a closed template. In an open template all of the features of the CDA R2 base specification [HL7 V3 RIM, Data types and Vocabulary \[HL7V3DT\]](#) are allowed except as constrained by explicitly specified constraints. In a closed template everything that is allowed must be explicitly specified and nothing further may be allowed.

For example if a specification of a CDA template says nothing about the use of the `id` element:

- In an open template context this means that `id` is allowed as specified in the schema
- In a closed template context this means that no use of `id` is allowed

The template context in this implementation guide is that of an open template unless otherwise stated.

Terminology binding

Vocabulary is specified in this implementation guide, in some cases binding an element to a value set or binding an attribute to a single fixed code. For guidance on coding common clinical concepts in CDA documents see [Representing Coding in CDA Documents Implementation Guidance \[NEHT2011bv\]](#).

A value set binding, if present in this specification, will be specified in the "Constraints and comments" column of a CDA mapping table as the title of the value set (hyperlinked to its definition) followed by identification of the binding strength (hyperlinked to its definition), e.g. [v3 Code System ParticipationFunction](#) (required).

Conformance verbs

Where used in this document, the keywords **SHALL**, **SHOULD**, **MAY**, **SHALL NOT** and **SHOULD NOT** from [Key Words for Use in RFCs to Indicate Requirement Levels \[RFC2119\]](#) are to be interpreted as described in the table below.

Conformance verbs

Conformance verb	Interpretation
SHALL	<p>An absolute requirement.</p> <p>Where SHALL appears in any conformance constraint it indicates a mandatory requirement.</p> <p>Where SHALL is applied to the occurrences of an element or attribute then that element or attribute must be present but can be null if the value is not known and the value has not been constrained to not allow a null value.</p>
SHOULD	<p>A requirement that is considered best practice or recommendation for inclusion. There may be valid reasons to ignore an item, but the full implications must be understood and carefully weighed before choosing a different course.</p> <p>Where SHOULD appears in an conformance constraint that constrains the allowed occurrences of an item it indicates that the item may not be present but does not override the upper bound of the cardinality range.</p> <p>For a sending application where SHOULD is applied to the occurrences of an item then that item must be present if a sending application has the data for that data element. If the value is not known the element or attribute does not need to be included.</p> <p>Implementers must support an ‘optional’ requirement.</p>
MAY	<p>A requirement that can be included or omitted as the author decides with no implications.</p> <p>Where MAY appears in a conformance constraint that constrains the allowed occurrences of an item it indicates that the item may not be present but does not override the upper bound of the cardinality range.</p> <p>Implementers must support an ‘optional’ requirement.</p>
SHALL NOT	<p>An absolute prohibition.</p> <p>Where SHALL NOT appears in any conformance constraint it indicates a mandatory prohibition requirement.</p>

Conformance verb	Interpretation
SHOULD NOT	<p>A requirement that is considered best practice or recommendation for against inclusion. There may be valid reasons to ignore an item, but the full implications must be understood and carefully weighed before choosing a different course.</p> <p>Where SHOULD NOT appears in an conformance constraint that constrains the allowed occurrences of an item it indicates that the item may not be present but does not override the upper bound of the cardinality range.</p> <p>For a sending application where SHOULD NOT is applied to the occurrences of then that element or attribute must be present if a sending application has the data for that data element. If the value is not known the element or attribute does not need to be included.</p> <p>Implementers must support an 'optional' requirement.</p>

Cardinality

The cardinality range specifies the allowable occurrences within a document instance. Cardinality range is specified in the format "m..n" where m is the minimum allowed members of the set (lower bound) and n is the maximum allowed members of the set (upper bound). The allowed values for m and n are 0, any positive integer, and *.

The table below demonstrates a representative set of examples of cardinality range and how to interpret that cardinality range; p is positive integer greater than the minimum allowed members of the set.

Cardinality range	Interpretation
0..0	zero (explicitly prohibited)
0..1	zero or one
1..1	exactly one
0..*	zero or more
1..*	at least one
2..*	at least two
1..p	at least one and not more than p
2..p	at least two and not more than p

2.4 Mapping presentation and structure

The content of this implementation guide is a set of CDA templates that are presented as a mapping from the logical view of a set of models (i.e. [FHIR \[HL7FHIR3\]](#) StructureDefinitions) to CDA. These models are published as [FHIR \[HL7FHIR3\]](#) profiles in [Personal Health Records FHIR Implementation Guide \[DH2019d\]](#).

CDA templates are located within a 'templates' chapter, e.g. [9 Section CDA templates](#). The heading for each child section identifies the CDA schema element that is templated, and may also identify the name of part of the PHN model that template corresponds to, e.g. observation (Summary Statement of Allergy or Intolerance) defines the CDA template of the observation CDA schema element to represent the model for Summary Statement of Allergy or Intolerance.

A CDA mapping table aims to take implementers step by step through mapping each element of the PHN model to a corresponding CDA attribute or element. The following section describes in more detail the fields used to present the mapping content in this implementation guide.

x.x CDA schema element (model / element)

Implementation guidance specific to the usage scenarios expected to be supported by this implementation guide may be present above the mapping table. This content is informative; there may be valid reasons not to follow this guidance, but the full implications must be understood and carefully weighed before choosing a different course.

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
CDA conformance level, e.g. CDA Header, CDA Body Level 3 Data Elements				Context: The root context that is applied as a prefix to the CDA schema element paths in the mapping rows below	
<p>The logical hierarchical path in the PHN model expressed using names of the elements in the PHN model.</p> <p>If there is a name in round brackets after the path, this is the label for that element or resource.</p> <p>The text in bold (the last in the path) is the subject for this row.</p> <p>i.e. Parent (Label) > Child</p> <p>e.g. AllergyIntolerance (Summary Statement of Allergy or Intolerance) > patient</p>	<p>The description of the element in the PHN model.</p>	<p>The cardinality of the element in the PHN model.</p> <p>(See Conformance conventions)</p>	<p>The type of the element (hyperlinked to the definition of the [HL7FHIR3] type) in the PHN model.</p> <p>This may be expressed as a type that is further constrained by a model in the convention <type> as <model name>, e.g. Patient as Patient with Mandatory IHI.</p>	<p>The CDA schema element(s) in the CDA template that correspond to the model element.</p> <p>The syntax for this is similar to XPath:</p> <p><code>{/name{[index]}}n</code></p> <p>Where:</p> <ul style="list-style-type: none">• {} indicates optional• {}n means a section that may repeat• [index] differentiates two similar mappings <p>Example:</p> <p>participant[location]</p> <p>participant[location]/@typeCode="ORG"</p> <p>participant[location]/associatedEntity</p> <p>participant[location]/associatedEntity/@classCode="SDLOC"</p> <p>participant[location]/associatedEntity/code</p> <p>A sequence of names refers to the XML path in the CDA document. The path always starts from the context as defined in the grey header row above each group of mapping rows.</p> <p>The last name is shown in bold to make the path easier to read. The last name may be a reference to an attribute or an element, as defined in the Australian Digital Health Agency CDA schema.</p> <p>An index after the name, such as ‘participation[location]’ implies that there can be two or more templates of a participation CDA schema element or that the CDA schema element name may be repeated in one or more templates. The indexes differentiate which CDA schema element is referenced in the path.</p> <p>It is possible for one model element to map to more than one CDA schema element.</p>	<p>Constraints on the CDA schema element(s).</p> <p>Terminology binding, identified by a hyperlinked value set title followed by the terminology binding strength (hyperlinked to the definition of the binding strength).</p> <p>e.g. Route of Administration (extensible)</p> <p>Additional information about the mapping and/or constraints which are identified by conformance verbs (See Conformance conventions).</p> <p>e.g.</p> <p>See code for available attributes.</p>

3 Conformance

3.1 Conformance requirements

This document describes how the PHN model is implemented as a CDA document. Conformance claims are not made against this implementation guide directly; rather, they are made against additional conformance profiles documented elsewhere. Any document that claims conformance to any derived conformance profile **SHALL** meet these base requirements:

- It **SHALL** be a valid HL7 CDA instance. In particular:
 - It **SHALL** be valid against the HL7 CDA schema (once extensions have been removed).
 - It **SHALL** conform to the HL7 V3 R1 data type specification.
 - It **SHALL** conform to the semantics of the RIM and Structural Vocabulary.
- It **SHALL** be valid against the Australian Digital Health Agency CDA schema that accompanies this implementation guide after any additional extensions not in the Australian Digital Health Agency extension namespace have been removed, along with any other CDA content not described by this implementation guide.
- It **SHALL** use the mappings as they are stated in this document.
- It **SHALL** use all fixed values specified in the mappings (e.g. `@attribute="FIXED_VALUE"`).
- It **SHALL** be valid against the additional conformance requirements that are established in this document (i.e. any normative use of the word 'shall' identified by the term presented in uppercase and bold typeface).
- The narrative **SHALL** conform to the requirements described in this implementation guide.
- The document **SHALL** conform to the requirements specified in the CDA Rendering Specification [\[NEHT2012s\]](#).
- Any additional content included in the CDA document that is not described by this implementation guide **SHALL NOT** qualify or negate content described by this implementation guide and it **SHALL** be clinically safe for receivers of the document to ignore the non-narrative additions when interpreting the existing content.

A system that *consumes* PHN CDA documents may claim conformance if it correctly processes conformant instance documents, including correctly understanding all the information in the header. It may, but is not required to, reject non-conformant documents. Conformant systems that consume PHN CDA documents are not required to process any or all of the structured data entries in the CDA document, but they **SHALL** be able to correctly render the document for end-users when appropriate (see [Clinical Document Architecture Release 2](#)).

Conformance profiles of this document **MAY** make additional rules that override this document in regard to:

- Allowing the use of alternative value sets in place of the value sets specified in this document.
- Allowing the use of alternative identifiers in place of the Healthcare Identifiers Service identifiers.
- Making required data elements and section divisions optional.

3.2 CDA narratives

CDA requires that each section in its body include a narrative block, containing a clinically complete version of the section's encoded content using custom hypertext markup defined by HL7. The narrative is the human-readable and attestable part of a CDA document, and can stand alone as an accurate representation of the content of the document without any need to consult entries in the body.

It is a [HL7 Clinical Document Architecture \[HL7CDAR2\]](#) requirement that all clinical information **SHALL** be marked up in CDA narratives.

It is a [HL7 Clinical Document Architecture \[HL7CDAR2\]](#) requirement that the rendered narrative **SHALL** be able to stand alone as a source of authenticated information for consuming parties. Content from the CDA body **SHALL NOT** be omitted from the narrative.

There is no canonical markup for specific CDA components, but some conformance requirements apply:

- The narrative block **SHALL** be encapsulated within the text component of the CDA section.
- The narrative contents **SHALL** conform to the requirements specified in the CDA Rendering Specification.
 - In accordance with the requirement to completely represent section contents, elements of type [CodeableConcept](#) **SHALL** include an `originalText` or a `displayName` attribute (or both). Where available, the `originalText` **SHOULD** be found in the narrative, otherwise the `displayName` **SHOULD** be found in the narrative.
- The narrative contents **SHALL** completely and accurately represent the clinical information encoded in the section. Content **SHALL NOT** be omitted from the narrative.
- The narrative **SHALL** conform to the content requirements of the CDA specification [\[HL7CDAR2\]](#) and the XML schema.

Clinical judgement is required to determine the appropriate presentation for narrative. We may release additional guidance in this regard. The examples provided in sections of this document offer some guidance for narrative block markup and may be easily adapted as boilerplate markup.

4 Personal Health Notes hierarchy

A Personal Health Notes document is defined as:

A document that contains narrative about the patient's healthcare information recorded by the patient or their authorised representative within the system. This helps the patient or their authorised representative to keep track of patient health information within the system. [Personal Health Records FHIR Implementation Guide \[DH2019d\]](#)

4.1 Hierarchy

The hierarchy below provides a logical view of the Personal Health Notes model as a tree structure in a hierarchical table; it is not intended to represent how the data contents are represented in a CDA document.

Each row contains information about a single element. The top level row contains two occupied cells: Name of the document model, and the Type (hyperlinked to the definition of the type).

Each following row contains three occupied cells: Name of the child element in the model, Cardinality (the lower and upper bounds on how many times this element is allowed to appear in the resource), and the Type (hyperlinked to the definition of the type). Type may be expressed as a type that is further constrained by a referenced model, e.g. Patient as Base Patient.

If present, an element with the Cardinality of 0..0 has the name of the element presented with a strike through.

Name		Cardinality	Type
Composition (Personal Health Notes)			DomainResource
	identifier	0..1	Identifier
	status	1..1	code
	type	1..1	CodeableConcept
	subject	1..1	Reference (Patient as Patient with Mandatory IHI)
	date	1..1	dateTime
	author	1..1	Reference (Patient as Patient with Mandatory IHI RelatedPerson as RelatedPerson with Mandatory IHI)
	title	1..1	string
	custodian	1..1	Reference (Organization as Organization with Mandatory Identifier)
	section (Notes)	1..1	BackboneElement
	title	1..1	string
	code	1..1	CodeableConcept
	text	1..1	Narrative
	emptyReason	0..0	CodeableConcept

4.2 Expanded hierarchy

The hierarchy below provides an expanded logical view of the Personal Health Notes model as a tree structure in a hierarchical table that includes the structure of the first level of referenced models; it is not intended to represent how the data contents are represented in a CDA document.

Each row contains information about a single element. The top level row contains two occupied cells: Name of the document model, and the Type (hyperlinked to the definition of the type).

Each following row contains three occupied cells: Name of the child element in the model, Cardinality (the lower and upper bounds on how many times this element is allowed to appear in the resource), and the Type (hyperlinked to the definition of the type). Type may be expressed as a type that is further constrained by a referenced model, e.g. Patient as Base Patient.

If present, an element with the Cardinality of 0..0 has the name of the element presented with a strike through.

Name		Cardinality	Type
Composition (Personal Health Notes)			DomainResource
	identifier	0..1	Identifier
	status	1..1	code
	type	1..1	CodeableConcept
	subject	1..1	Reference(Patient as Patient with Mandatory IHI)
	birthPlace	0..1	Address
	indigenous-status	0..1	Coding
	closing-the-gap-registration	0..1	boolean
	patient-mothersMaidenName	0..1	string
	identifier	1..*	Identifier
	active	0..1	boolean
	name	0..*	HumanName
	telecom	0..*	ContactPoint
	gender	0..1	code
	birthDate	0..1	date
	date-accuracy-indicator	0..1	Coding
	birthTime	0..1	dateTime
	deceased	0..1	boolean dateTime
	date-accuracy-indicator	0..1	Coding
	address	0..*	Address
	maritalStatus	0..1	CodeableConcept
	multipleBirth	0..1	boolean integer
	photo	0..0	Attachment
	contact	0..*	BackboneElement
	relationship	0..*	CodeableConcept
	name	0..1	HumanName
	telecom	0..*	ContactPoint
	address	0..1	Address
	gender	0..1	code
	organization	0..1	Reference(Organization as Base Organization)
	period	0..1	Period

Name				Cardinality	Type
		communication		0..*	BackboneElement
			communication.language	1..1	CodeableConcept
			communication.preferred	0..1	boolean
		generalPractitioner		0..*	Reference (Practitioner as Base Practitioner Organization as Base Organization)
		managingOrganization		0..1	Reference (Organization as Base Organization)
	date			1..1	dateTime
	author			1..1	Reference (Patient as Patient with Mandatory IHI)
		birthPlace		0..1	Address
		indigenous-status		0..1	Coding
		closing-the-gap-registration		0..1	boolean
		patient-mothersMaidenName		0..1	string
		identifier		1..*	Identifier
		active		0..1	boolean
		name		0..*	HumanName
		telecom		0..*	ContactPoint
		gender		0..1	code
		birthDate		0..1	date
			date-accuracy-indicator	0..1	Coding
			birthTime	0..1	dateTime
		deceased		0..1	boolean dateTime
			date-accuracy-indicator	0..1	Coding
		address		0..*	Address
		maritalStatus		0..1	CodeableConcept
		multipleBirth		0..1	boolean integer
		photo		0..0	Attachment
		contact		0..*	BackboneElement
			relationship	0..*	CodeableConcept
			name	0..1	HumanName
			telecom	0..*	ContactPoint
			address	0..1	Address
			gender	0..1	code
			organization	0..1	Reference (Organization as Base Organization)
			period	0..1	Period
		communication		0..*	BackboneElement
			language	1..1	CodeableConcept
			preferred	0..1	boolean
		generalPractitioner		0..*	Reference (Practitioner as Base Practitioner Organization as Base Organization)
		managingOrganization		0..1	Reference (Organization as Base Organization)
	author			1..1	Reference (RelatedPerson as RelatedPerson with Mandatory IHI)
		identifier	0..*		Identifier
		active	0..1		boolean
		patient	1..1		Reference (Patient as Base Patient)

Name				Cardinality	Type
		relationship	0..1		CodeableConcept
		name	0..*		HumanName
		telecom	0..*		ContactPoint
		gender	0..1		code
		birthDate	0..1		date
		address	0..*		Address
		photo	0..0		Attachment
		period	0..1		Period
	title			1..1	string
	custodian			1..1	Reference (Organization as Organization with Mandatory Identifier)
		identifier	1..*		Identifier
		active	0..1		boolean
		type	0..*		CodeableConcept
		name	0..1		string
		alias	0..*		string
		telecom	0..*		ContactPoint
		address	0..*		Address
		partOf	0..1		Reference (Organization as Base Organization)
		contact	0..*		BackboneElement
			purpose	0..1	CodeableConcept
			name	0..1	HumanName
			telecom	0..*	ContactPoint
			address	0..1	Address
	section (Allergies)			1..1	BackboneElement
		title	1..1		string
		code	1..1		CodeableConcept
		text	1..1		Narrative
		emptyReason	0..0		CodeableConcept

5 CDA Header templates

This chapter contains the CDA Header requirements for this implementation guide; these are infrastructure or control requirements that are not sourced from the Personal Health Notes model.

All the definitions in this chapter are sourced from HL7 Clinical Document Architecture, Release 2 [\[HL7CDAR2\]](#).

5.1 ClinicalDocument

CDA mapping

CDA schema element	Definition	Card	Constraints and comments
CDA Header Data Elements	Context: /		
ClinicalDocument	The ClinicalDocument class is the entry point into the CDA R-MIM, and corresponds to the <ClinicalDocument> XML element that is the root element of a CDA document.	1..1	This template SHALL be a closed template. All attributes of the ClinicalDocument element defined by the Australian Digital Health Agency CDA schema SHALL be allowed. The CDA document SHALL be valid against the Australian Digital Health Agency CDA schema after any additional extensions not in the Australian Digital Health Agency extension namespace have been removed.
ClinicalDocument/realCode	A realCode signals the imposition of realm-specific constraints. The value identifies the realm in question.	0..*	All attributes of the //realCode element defined by the Australian Digital Health Agency CDA schema SHALL be allowed.
ClinicalDocument/typeId	A technology-neutral explicit reference to the CDA Release 2 specification.	1..1	
ClinicalDocument/typeId/@extension="POCD_HD000040"		1..1	The unique identifier for the CDA Release 2 Hierarchical Description.
ClinicalDocument/typeId/@root="2.16.840.1.113883.1.3"		1..1	The OID for HL7 Registered models.

CDA schema element	Definition	Card	Constraints and comments
ClinicalDocument/ templateId	A templateId signals the imposition of a set of template-defined constraints. The value provides a unique identifier for the templates in question.	1..*	<p>All attributes of the //templateId element defined by the Australian Digital Health Agency CDA schema SHALL be allowed.</p> <p>Exactly one template identifier SHALL indicate the constraints defined in this mapping table and have @root="1.2.36.1.2001.1001.102.101.100033" and @extension="1.0".</p> <p>Exactly one template identifier SHALL indicate the constraints defined in the CDA Rendering Specification [NEHT2012s] and have @root="1.2.36.1.2001.1001.100.226" and @extension="1.0".</p> <p>In addition to the template identifiers above, a template identifier is expected for the clinical document model as per ClinicalDocument (Personal Health Notes). Additional template identifiers may be required by other specifications.</p> <p>Systems are not required to recognise any other template identifiers than the clinical document model templateId in order to understand the document as a [type] but these identifiers may influence how the document must be handled.</p>
ClinicalDocument/ id	Represents the unique instance identifier of a clinical document.	1..1	<p>All attributes of the //id element defined by the Australian Digital Health Agency CDA schema SHALL be allowed with the exception that @nullFlavor SHALL NOT be present.</p> <p>See <id> for available attributes.</p>
ClinicalDocument/ code	The code specifying the particular kind of document (e.g. History and Physical, Discharge Summary, Progress Note).	1..1	<p>All attributes of the //code element defined by the Australian Digital Health Agency CDA schema SHALL be allowed with the exception that @nullFlavor SHALL NOT be present.</p> <p>See <code> for available attributes.</p>
ClinicalDocument/ title	Represents the title of the document.	0..1	
ClinicalDocument/ effectiveTime	Signifies the document creation time, when the document first came into being. Where the CDA document is a transform from an original document in some other format, the ClinicalDocument.effectiveTime is the time the original document is created.	1..1	<p>All attributes of the //effectiveTime element defined by the Australian Digital Health Agency CDA schema SHALL be allowed with the exception that @nullFlavor SHALL NOT be present.</p> <p>See <time> for available attributes.</p>
ClinicalDocument/ confidentialityCode/@nullFlavor="NA"	Codes that identify how sensitive a piece of information is and/or that indicate how the information may be made available or disclosed.	1..1	
ClinicalDocument/ languageCode	Specifies the human language of character data (whether they be in contents or attribute values).	0..1	
ClinicalDocument/languageCode/ @code		1..1	<Language Code> – <DIALECT> The <Language Code> SHALL be "en". The <DIALECT> SHOULD be "AU".
ClinicalDocument/ setId	Represents an identifier that is common across all document revisions.	0..1	<p>All attributes of the //setId element defined by the Australian Digital Health Agency CDA schema SHALL be allowed.</p> <p>See <id> for available attributes.</p>
ClinicalDocument/ versionNumber	An integer value used to version successive replacement documents.	0..1	
ClinicalDocument/versionNumber/ @value		1..1	

CDA schema element	Definition	Card	Constraints and comments
ClinicalDocument/ ext:completionCode	The lifecycle status of a document.	1..1	All attributes of the //completionCode element defined by the Australian Digital Health Agency CDA schema SHALL be allowed with the exception that @nullFlavor SHALL NOT be present. See <code> for available attributes. Australian Healthcare Clinical Document Architecture Document Lifecycle Status (required)
ClinicalDocument/ recordTarget	Represents the medical record that this document belongs to.	1..1	All attributes and elements of the //recordTarget element defined by the Australian Digital Health Agency CDA schema SHALL be allowed.
ClinicalDocument/ author	Represents the humans and/or machines that authored the document.	1..1	All attributes and elements of the //author element defined by the Australian Digital Health Agency CDA schema SHALL be allowed.
ClinicalDocument/ dataEnterer	Represents the participant who has transformed a dictated note into text.	0..1	All attributes and elements of the //dataEnterer element defined by the Australian Digital Health Agency CDA schema SHALL be allowed.
ClinicalDocument/ informant	Represents an informant (or source of information) who provides relevant information, such as the parent of a comatose patient who describes the patient's behavior prior to the onset of coma. Unless otherwise stated, the patient is implicitly the informant.	0..*	All attributes and elements of the //informant element defined by the Australian Digital Health Agency CDA schema SHALL be allowed.
ClinicalDocument/ custodian	Represents the organization from which the document originates and that is in charge of maintaining the document. The custodian is the steward that is entrusted with the care of the document. Every CDA document has exactly one custodian.	1..1	All attributes and elements of the //custodian element defined by the Australian Digital Health Agency CDA schema SHALL be allowed.
ClinicalDocument/ informationRecipient	Represents a recipient who should receive a copy of the document.	0..*	All attributes and elements of the //informationRecipient element defined by the Australian Digital Health Agency CDA schema SHALL be allowed.
ClinicalDocument/ legalAuthenticator	Represents a participant who has legally authenticated the document.	0..1	All attributes and elements of the //legalAuthenticator element defined by the Australian Digital Health Agency CDA schema SHALL be allowed.
ClinicalDocument/ authenticator	Represents a participant who has attested to the accuracy of the document, but who does not have privileges to legally authenticate the document. An example would be a resident physician who sees a patient and dictates a note, then later signs it.	0..*	All attributes and elements of the //authenticator element defined by the Australian Digital Health Agency CDA schema SHALL be allowed.
ClinicalDocument/ participant	Represents a participant not explicitly mentioned by other classes that was somehow involved.	0..*	All attributes and elements of the //participant element defined by the Australian Digital Health Agency CDA schema SHALL be allowed.
ClinicalDocument/ inFulfillmentOf	Relates the current document to an order this document fulfills (in whole or in part).	0..*	All attributes and elements of the //inFulfillmentOf element defined by the Australian Digital Health Agency CDA schema SHALL be allowed.
ClinicalDocument/ documentationOf	Relates the current document to the related event that this document is documentation of.	0..*	All attributes and elements of the //documentationOf element defined by the Australian Digital Health Agency CDA schema SHALL be allowed.
ClinicalDocument/ relatedDocument	Relates the current document to a parent document.	0..*	All attributes and elements of the //relatedDocument element defined by the Australian Digital Health Agency CDA schema SHALL be allowed.
ClinicalDocument/ authorization	Relates the current document to consents associated with this document. The consent authorizes or certifies acts specified in the current document.	0..*	All attributes and elements of the //authorization element defined by the Australian Digital Health Agency CDA schema SHALL be allowed.
ClinicalDocument/ componentOf	Relates the current document to the encounter. The current document is a documentation of events that occurred during the encounter.	0..1	All attributes and elements of the //componentOf element defined by the Australian Digital Health Agency CDA schema SHALL be allowed.
ClinicalDocument/ component	Relates the associated document body as a component of the document.	1..1	All attributes and elements of the //component element defined by the Australian Digital Health Agency CDA schema SHALL be allowed.

5.2 LegalAuthenticator

CDA mapping

CDA schema element	Definition	Card	Constraints and comments
CDA Header Data Elements			Context: /ClinicalDocument/
legalAuthenticator	Represents a participant who has legally authenticated the document.	Cardinality comes from linking elements	
legalAuthenticator/templateId	The use of templateId signals the imposition of a set of template-defined constraints.	1..1	
legalAuthenticator/templateId/@root="1.2.36.1.2001.1001.102.101.100012"		1..1	
legalAuthenticator/templateId/@extension="1.0"		1..1	
legalAuthenticator/time/@value	Indicates the time of authentication.	1..1	
legalAuthenticator/signatureCode/@code="S"	Indicates that the signature has been affixed and is on file.	1..1	
legalAuthenticator/assignedEntity	A legalAuthenticator is a person in the role of an assigned entity (AssignedEntity class). An assigned entity is a person assigned to the role by the scoping organization. The entity playing the role is a person (Person class). The entity scoping the role is an organization (Organization class).	1..1	
legalAuthenticator/assignedEntity/code	The specific kind of role.	0..1	See <code> for available attributes.
legalAuthenticator/assignedEntity/id	A unique identifier for the player entity in this role.	1..1	See <id> for available attributes.
legalAuthenticator/assignedEntity/assignedPerson	The entity playing the role (assignedEntity) is a person.	1..1	
legalAuthenticator/assignedEntity/assignedPerson/ext:asEntityIdentifier	The entity identifier of the person.	0..*	See <Entity Identifier> for available attributes. Recommended mappings for the complex data type to CDA (R2): Identifier .
legalAuthenticator/assignedEntity/addr	A postal address for the entity (assignedPerson) while in the role (assignedEntity).	0..*	Recommended mappings for the complex data type to CDA (R2): Address .
legalAuthenticator/assignedEntity/telecom	A telecommunication address for the entity (assignedPerson) while in the role (assignedEntity).	0..*	Recommended mappings for the complex data type to CDA (R2): ContactPoint .
legalAuthenticator/assignedEntity/assignedPerson/name	A non-unique textual identifier or moniker for the entity (assignedPerson).	0..*	Recommended mappings for the complex data type to CDA (R2): HumanName .
legalAuthenticator/assignedEntity/representedOrganization	The entity scoping the role (assignedEntity).	0..1	
legalAuthenticator/assignedEntity/representedOrganization/ext:asEntityIdentifier	A unique identifier for the scoping entity (represented organization) in this role (assignedEntity).	0..*	See <Entity Identifier> for available attributes. Recommended mappings for the complex data type to CDA (R2): Identifier .

CDA schema element	Definition	Card	Constraints and comments
legalAuthenticator/assignedEntity/representedOrganization/ name	A non-unique textual identifier or moniker for the entity (representedOrganization).	0..*	

5.3 Administrative Observations

CDA mapping

CDA schema element	Definition	Card	Constraints and comments
Conformance level comes from linking elements		Context: /ClinicalDocument/component/structuredBody/	
component[admin_obs]	The PHN document model contains a number of elements for which there are no equivalent elements at that point in the hierarchical structure of the model mapped into CDA. These elements are considered to be "Administrative Observations" about the encounter, the patient or some other participant.	Cardinality comes from linking elements	ClinicalDocument SHALL contain at most one Administrative Observation section. The Administrative Observations section SHALL NOT be populated if there are no entries or text to go in it.
component[admin_obs]/section		1..1	
component[admin_obs]/section/templated	Administrative Observations is a CDA section that is created to hold these elements in preference to creating extensions for them.	1..1	The use of templated signals the imposition of a set of template-defined constraints.
component[admin_obs]/section/templated/@root="1.2.36.1.2001.1001.102.101.100000"		1..1	
component[admin_obs]/section/templated/@extension="1.0"	An observation included in this section is an observation relating to the patient (i.e. recordTarget) unless a reference to a different entity is instantiated as part of that observation (e.g. //observation/participant/participantRole).	1..1	
component[admin_obs]/section/id		0..1	See <id> for available attributes.
component[admin_obs]/section/code		1..1	
component[admin_obs]/section/code/@code="102.16080"		1..1	
component[admin_obs]/section/code/@codeSystem="1.2.36.1.2001.1001.101"		1..1	
component[admin_obs]/section/code/@codeSystemName		0..1	Optional CDA element. The value SHOULD be "NCTIS Data Components".
component[admin_obs]/section/code/@displayName		0..1	Optional CDA element. The value SHOULD be "Administrative Observations".
component[admin_obs]/section/title="Administrative Observations"		0..1	
component[admin_obs]/section/text		0..1	See CDA narratives .

6 Document CDA templates

This chapter contains mapping from the Composition (Personal Health Notes) model to a CDA clinical document class, expressed as a series of CDA templates that describe how the CDA document is composed.

CDA templates are expected to be reused from one document type (or Composition model) to another. Each CDA template is presented under a heading in the format of "CDA schema element" ("model name") where "CDA schema element" is the root element for a CDA template and "model name" is the name of a model that constrains an element in the Personal Health Notes Hierarchy.

6.1 ClinicalDocument (Personal Health Notes)

The following are the usage scenarios expected:

- An individual or their authorised representative authors a personal health notes document to be exchanged with the My Health Record system

For the usage scenarios for this template it is required that the composition include only the specified top-level section; additional sections to handle local content not covered by the primary design can be included as a child section of that top level section if necessary.

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
CDA Header Data Elements				Context: /	
Composition	A document that contains narrative about the patient's healthcare information recorded by the patient or their authorised representative within the system. This helps the patient or their authorised representative to keep track of patient health information within the system.	1..1	DomainResource	ClinicalDocument	In addition to the template defined in this mapping table, ClinicalDocument SHALL conform to the template defined in ClinicalDocument .
				ClinicalDocument/templateId	The use of templateId signals the imposition of a set of template-defined constraints.
				ClinicalDocument/templateId/@root="1.2.36.1.2001.1001.102.101.100017"	
				ClinicalDocument/templateId/@extension="1.0"	
Composition > identifier	Logical identifier for the composition, assigned when created. This identifier stays constant as the composition is changed over time.	0..1	Identifier	ClinicalDocument/setId	
Composition > status	The workflow/clinical status of this composition. The status is a marker for the clinical standing of the document.	1..1	code	ClinicalDocument/ext:completionCode	See <code> for available attributes. Australian Healthcare Clinical Document Architecture Document Lifecycle Status (required)

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Composition > type	Specifies the particular kind of composition (e.g. History and Physical, Discharge Summary, Progress Note). This usually equates to the purpose of making the composition.	1..1	CodeableConcept	ClinicalDocument/ code	
				ClinicalDocument/code/@code="100.16681"	
				ClinicalDocument/code/@codeSystem="1.2.36.1.2001.1001.101"	
				ClinicalDocument/code/@codeSystemName	Optional CDA element. codeSystemName SHOULD be "NCTIS Data Components".
				ClinicalDocument/code/@displayName	displayName SHOULD be "Personal Health Notes".
Composition > subject	Who or what the composition is about. The composition can be about a person, (patient or healthcare practitioner), a device (e.g. a machine) or even a group of subjects (such as a document about a herd of livestock, or a set of patients that share a common exposure).	1..1	Reference(Patient as Patient with Mandatory IHI)	ClinicalDocument/ recordTarget	recordTarget SHALL conform to the template defined in recordTarget (Patient with Mandatory IHI) .
Composition > date	The composition editing time, when the composition was last logically changed by the author.	1..1	dateTime	ClinicalDocument/ author/time	See <time> for available attributes.
Composition > author	Identifies who is responsible for the information in the composition, not necessarily who typed it in.	1..1	Reference(Patient as Patient with Mandatory IHI RelatedPerson as RelatedPerson with Mandatory IHI)	ClinicalDocument/ author	author SHALL conform to the template defined in author (Patient with Mandatory IHI) or author (RelatedPerson with Mandatory IHI) .
Composition > title	Official human-readable label for the composition.	1..1	string	ClinicalDocument/ title ="Personal Health Notes"	
Composition > custodian	Identifies the organization or group who is responsible for ongoing maintenance of and access to the composition/document information.	1..1	Reference(Organization as Organization with Mandatory Identifier)	ClinicalDocument/ custodian	custodian SHALL conform to the template defined in custodian (Organization with Mandatory Identifier) .
Composition > section (Notes)	Healthcare narratives about an individual's health and related matters.	1..1	BackboneElement	ClinicalDocument/component/structuredBody/ component[note]	
				ClinicalDocument/component/structuredBody/component[note]/ section	section SHALL conform to the template defined in section (Notes) .

7 Participation CDA templates

This chapter contains mapping from the Individual (e.g. Patient with Mandatory IHI) and Entity (e.g. Organization with Mandatory Identifier) models to CDA participation classes, expressed as a series of CDA templates that describe how each CDA participation is composed.

CDA templates are expected to be reused from one document type (or Composition model) to another. Each CDA template is presented under a heading in the format of "CDA schema element" ("model name") where "CDA schema element" is the root element for a CDA template and "model name" is the name of a model that constrains an element in the Personal Health Notes Hierarchy.

7.1 recordTarget (Patient with Mandatory IHI)

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
CDA Header Data Elements				Context: /ClinicalDocument/	
Patient	Demographics and other administrative information about an individual receiving care or other health-related services.	Cardinality comes from linking elements	DomainResource	recordTarget[pat]	
				recordTarget[pat]/ templateId	The use of templateId signals the imposition of a set of template-defined constraints.
				recordTarget[pat]/templateId/@root="1.2.36.1.2001.1001.102.101.100031"	
				recordTarget[pat]/templateId/@extension="1.0"	
				recordTarget[pat]/patientRole/ id	See <id> for available attributes.
				recordTarget[pat]/patientRole/ patient	
Patient > birthPlace	The registered place of birth of the patient. A sytem may use the address.text if they don't store the birthPlace address in discrete elements.	0..1	Address	recordTarget[pat]/patientRole/patient/ birthplace	
				recordTarget[pat]/patientRole/patient/birthplace/ place	
				recordTarget[pat]/patientRole/patient/birthplace/place/ addr	Recommended mappings for the complex data type to CDA (R2): Address .
Patient > indigenous-status	National Health Data Dictionary (NHDD) based indigenous status for a patient.	0..1	Coding	recordTarget[pat]/patientRole/patient/ ethnicGroupCode	See <code> for available attributes. Australian Indigenous Status (required)

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
CDA Header Data Elements				Context: /ClinicalDocument/component/structuredBody/component[admin_obs]/section/ See Administrative Observations .	
Patient > closing-the-gap-regis- tration	Closing the Gap registration indicator for an Australian pa- tient.	0..1	boolean	entry[close_gap]	
				entry[close_gap]/observation	
				entry[close_gap]/observation/id	Optional CDA element. See <id> for available attributes.
				entry[close_gap]/observation/code	
				entry[close_gap]/observation/code/@code="103.32011"	
				entry[close_gap]/observation/code/@codeSystem="1.2.36.1.2001.1001.101"	
				entry[close_gap]/observation/code/@codeSystemName	Optional CDA element. codeSystemName SHOULD be "NCTIS Data Components".
				entry[close_gap]/observation/code/@displayName	Optional CDA element. displayName SHOULD be "Closing the Gap Copayment Eli- gibility Indicator".
				entry[close_gap]/observation/value	The value is 'true' if eligible for Closing the Gap co-payment. //value/@xsi:type SHALL be "BL".
Patient > patient-mothersMaid- enName	Mother's maiden (unmarried) name, commonly collected to help verify patient identity.	0..1	string	entry[mothers_name]	
				entry[mothers_name]/observation	
				entry[mothers_name]/observation/id	Optional CDA element. See <id> for available attributes.
				entry[mothers_name]/observation/code	
				entry[mothers_name]/observation/code/@code="103.10245"	
				entry[mothers_name]/observation/code/@codeSystem="1.2.36.1.2001.1001.101"	
				entry[mothers_name]/observation/code/@codeSystemName	Optional CDA element. codeSystemName SHOULD be "NCTIS Data Components".
				entry[mothers_name]/observation/code/@displayName	Optional CDA element. displayName SHOULD be "Mother's Original Family Name".
				entry[mothers_name]/observation/value	//value/@xsi:type SHALL be "ST".
CDA Header Data Elements				Context: /ClinicalDocument/	
Patient > identifier	An identifier for this patient.	1..*	Identifier	recordTarget[pat]/patientRole/patient/ext:asEntityIdentifier	The value of one identifier SHALL be an Australian IHI. See <Entity Identifier> for available attributes. Recommended mappings for the complex data type to CDA (R2): Identifier .

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Patient > active	Whether this patient record is in active use.	0..1	boolean	n/a	This logical element has no mapping to CDA.
Patient > name	A name associated with the individual.	0..*	HumanName	recordTarget[pat]/patientRole/patient/ name	Recommended mappings for the complex data type to CDA (R2): HumanName .
Patient > telecom	A contact detail (e.g. a telephone number or an email address) by which the individual may be contacted.	0..*	ContactPoint	recordTarget[pat]/patientRole/ telecom	Recommended mappings for the complex data type to CDA (R2): ContactPoint .
Patient > gender	Administrative Gender - the gender that the patient is considered to have for administration and record keeping purposes.	0..1	code	recordTarget[pat]/patientRole/patient/ administrativeGenderCode	See <code> for available attributes. AdministrativeGender (required)
Patient > birthDate	The date of birth for the individual.	0..1	date	recordTarget[pat]/patientRole/patient/ birthTime	See <time> for available attributes.
CDA Header Data Elements				Context: /ClinicalDocument/component/structuredBody/component[admin_obs]/section/ See Administrative Observations .	
Patient > birthDate > date-accuracy-indicator	General date accuracy indicator coding.	0..1	Coding	entry[dob_acc]	
				entry[dob_acc]/ observation	
				entry[dob_acc]/observation/@classCode="OBS"	
				entry[dob_acc]/observation/@moodCode="EVN"	
				entry[dob_acc]/observation/ id	Optional CDA element. See <id> for available attributes.
				entry[dob_acc]/observation/ code	
				entry[dob_acc]/observation/code/@code="102.16234"	
				entry[dob_acc]/observation/code/@codeSystem="1.2.36.1.2001.1001.101"	
				entry[dob_acc]/observation/code/@codeSystemName	Optional CDA element. codeSystemName SHOULD be "NCTIS Data Components".
				entry[dob_acc]/observation/code/@displayName	Optional CDA element. displayName SHOULD be "Date of Birth Accuracy Indicator".
				entry[dob_acc]/observation/ value	//value/@xsi:type SHALL be "CS". Date Accuracy Indicator (required)
CDA Header Data Elements				Context: /ClinicalDocument/	
Patient > birthDate > patient-birthTime	The time of day that the Patient was born. This includes the date to ensure that the timezone information can be communicated effectively.	0..1	dateTime	n/a	Not mapped separately, encompassed in patientRole/patient/birthTime.
Patient > deceased	Indicates if the individual is deceased or not. Deceased date accuracy indicator is optional.	0..1	boolean	recordTarget[pat]/patientRole/patient/ ext:deceasedInd	Only one of patientRole/patient/ext:deceasedInd or patientRole/patient/ext:deceasedTime SHOULD be instantiated.
			dateTime	recordTarget[pat]/patientRole/patient/ ext:deceasedTime	

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
CDA Header Data Elements				Context: /ClinicalDocument/component/structuredBody/component[admin_obs]/section/ See Administrative Observations	
Patient > deceased > date-accuracy-indicator	General date accuracy indicator coding.	0..1	Coding	entry[dod_acc]	
				entry[dod_acc]/ observation	
				entry[dod_acc]/observation/@classCode="OBS"	
				entry[dod_acc]/observation/@moodCode="EVN"	
				entry[dod_acc]/observation/id	Optional CDA element. See <id> for available attributes.
				entry[dod_acc]/observation/code	
				entry[dod_acc]/observation/code/@code="102.16252"	
				entry[dod_acc]/observation/code/@codeSystem="1.2.36.1.2001.1001.101"	
				entry[dod_acc]/observation/code/@codeSystemName	Optional CDA element. codeSystemName SHOULD be "NCTIS Data Components".
				entry[dod_acc]/observation/code/@displayName	Optional CDA element. displayName SHOULD be "Date of Death Accuracy Indicator".
				entry[dod_acc]/observation/value	//value/@xsi:type SHALL be "CS". Date Accuracy Indicator (required)
CDA Header Data Elements				Context: /ClinicalDocument/	
Patient > address	Addresses for the individual.	0..*	Address	recordTarget[pat]/patientRole/ addr	Recommended mappings for the complex data type to CDA (R2): Address .
Patient > maritalStatus	This field contains a patient's most recent marital (civil) status.	0..1	CodeableConcept	recordTarget[pat]/patientRole/patient/ maritalStatusCode	See <code> for available attributes. Marital Status Codes (extensible)
Patient > multipleBirth	Indicates whether the patient is part of a multiple (bool) or indicates the actual birth order (integer).	0..1	boolean integer	recordTarget[pat]/patientRole/patient/ ext:multipleBirthInd	Only one of patientRole/patient/ext:multipleBirthInd or patientRole/patient/ext:multipleBirthOrderNumber SHOULD be instantiated.
				recordTarget[pat]/patientRole/patient/ ext:multipleBirthOrderNumber	
Patient > photo	Image of the patient.	0..0	Attachment	n/a	This logical element has no mapping to CDA.
Patient > contact	A contact party (e.g. guardian, partner, friend) for the patient.	0..*	BackboneElement	participant[pat_contact]	participant[pat_contact] SHALL conform to the template defined in participant (Patient contact) .
Patient > communication	Languages which may be used to communicate with the patient about his or her health.	0..*	BackboneElement	recordTarget[pat]/patientRole/patient/ languageCommunication	
Patient > communication > language	The ISO-639-1 alpha 2 code in lower case for the language, optionally followed by a hyphen and the ISO-3166-1 alpha 2 code for the region in upper case; e.g. 'en' for English, or 'en-US' for American English versus 'en-EN' for England English.	1..1	CodeableConcept	recordTarget[pat]/patientRole/patient/languageCommunication/ languageCode	See <code> for available attributes. Common Languages in Australia (extensible)

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Patient > communication > preferred	Indicates whether or not the patient prefers this language (over other languages he masters up a certain level).	0..1	boolean	recordTarget[pat]/patientRole/patient/languageCommunication/ preferredInd	
Patient > generalPractitioner	Patient's nominated care provider.	0..*	Reference (Organization as Base Organization Practitioner as Base Practitioner)	participant	providerOrganization SHALL conform to the template defined in participant (generalPractitioner Base Organization) or participant (generalPractitioner Base Practitioner) .
Patient > managingOrganization	Organization that is the custodian of the patient record.	0..1	Reference (Organiza-tion as Base Organiza-tion)	recordTarget[pat]/patientRole/ providerOrganization[manag_org]	providerOrganization SHALL conform to the template defined in providerOrganization (Base Organization) .

7.2 participant (Patient contact)

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
CDA Header Data Elements				Context: /ClinicalDocument/	
Patient > contact	A contact party (e.g. guardian, partner, friend) for the patient.	Cardinality comes from linking elements	BackboneElement	participant[pat_contact]	contact SHALL have at least name, or telecom, or address, or organization instantiated.
				participant[pat_contact]/@typeCode="IND"	
				participant[pat_contact]/templateId	The use of templateId signals the imposition of a set of template-defined constraints.
				participant[pat_contact]/templateId/@root="1.2.36.1.2001.1001.102.101.100056"	
				participant[pat_contact]/templateId/@extension="1.0"	
				participant[pat_contact]/associatedEntity	
				participant[pat_contact]/associatedEntity/@typeCode="CON"	
				participant[pat_contact]/associatedEntity/id	Patient > contact is represented in CDA by a participant.
Patient > contact > relationship	The nature of the relationship between the patient and the contact person.	0..*	CodeableConcept	participant[pat_contact]/associatedEntity/associatedPerson/ext:personalRelationship	ContactEntityType (extensible) See < Personal Relationship > for available attributes.
Patient > contact > name	A name associated with the contact person.	0..1	HumanName	participant[pat_contact]/associatedEntity/associatedPerson/name	Recommended mappings for the complex data type to CDA (R2): HumanName .
Patient > contact > telecom	A contact detail for the person, e.g. a telephone number or an email address.	0..*	ContactPoint	participant[pat_contact]/associatedEntity/telecom	Recommended mappings for the complex data type to CDA (R2): ContactPoint .
Patient > contact > address	Address for the contact person.	0..1	Address	participant[pat_contact]/associatedEntity/addr	Recommended mappings for the complex data type to CDA (R2): Address .
Patient > contact > gender	Administrative Gender - the gender that the contact person is considered to have for administration and record keeping purposes.	0..1	code	participant[pat_contact]/associatedEntity/associatedPerson/ext:administrativeGenderCode	See < code > for available attributes. AdministrativeGender (required)
Patient > contact > organization	Organization on behalf of which the contact is acting or for which the contact is working.	0..1	Reference(Organization as Base Organization)	participant[pat_contact]/associatedEntity/scopingOrganization	contact > organization template is not currently defined.
				participant[pat_contact]/associatedEntity/scopingOrganization/typeCode="ORG"	
Patient > contact > period	The period during which this contact person or organization is valid to be contacted relating to this patient.	0..1	Period	n/a	This logical element has no mapping to CDA.

7.3 participant (generalPractitioner Base Organization)

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
CDA Header Data Elements				Context: /ClinicalDocument/	
Organization	A formally or informally recognized grouping of people or organizations formed for the purpose of achieving some form of collective action. Includes companies, institutions, corporations, departments, community groups, healthcare practice groups, etc.	Cardinality comes from linking elements	DomainResource	participant[gen_prac_org]	The organization SHALL at least have an identifier (participant[gen_prac_org]/associatedEntity/scopingOrganization/ext:asEntityIdentifier) or a name (participant[gen_prac_org]/associatedEntity/scopingOrganization/name).
				participant[gen_prac_org]/@typeCode="PART"	
				participant[gen_prac_org]/templateId	The use of templateId signals the imposition of a set of template-defined constraints.
				participant[gen_prac_org]/templateId/@root="1.2.36.1.2001.1001.102.101.100036"	
				participant[gen_prac_org]/templateId/@extension="1.0"	
				participant[gen_prac_org]/functionCode/@code="PCP"	
				participant[gen_prac_org]/associatedEntity	
				participant[gen_prac_org]/associatedEntity/@classCode="PROV"	
				participant[gen_prac_org]/associatedEntity/id	Optional CDA element. See <id> for available attributes.
Organization > identifier	Identifier for the organization that is used to identify the organization across multiple disparate systems.	0..*	Identifier	participant[gen_prac_org]/associatedEntity/scopingOrganization/ext:asEntityIdentifier	See <Entity Identifier> for available attributes. Recommended mappings for the complex data type to CDA (R2): Identifier .
Organization > active	Whether the organization's record is still in active use.	0..1	boolean	n/a	This logical element has no mapping to CDA.
Organization > type	The kind(s) of organization that this is.	0..1	CodeableConcept	participant[gen_prac_org]/associatedEntity/code	See <code> for available attributes. OrganizationType (example)
Organization > name	A name associated with the organization.	0..1	string	participant[gen_prac_org]/associatedEntity/scopingOrganization/name	In CDA name and alias are represented by //scopingOrganization/name.
Organization > alias	A list of alternate names that the organization is known as, or was known as in the past.	0..*	string	participant[gen_prac_org]/associatedEntity/scopingOrganization/name	In CDA name and alias are represented by //scopingOrganization/name.
Organization > telecom	A contact detail for the organization.	0..*	ContactPoint	participant[gen_prac_org]/associatedEntity/telecom	telecom/@use is Organization Telecom Use HL7 V3 (required) . Recommended mappings for the complex data type to CDA (R2): ContactPoint .

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Organization > address	An address for the organization.	0..*	Address	participant[gen_prac_org]/associatedEntity/ addr	addr/@use is Organization Address Use HL7 V3 (required) . Recommended mappings for the complex data type to CDA (R2): Address .
Organization > partOf	The organization of which this organization forms a part.	0..1	Reference(Organization as Base Organization)	participant[gen_prac_org]/as OrganizationPartOf	The organization SHALL have at least a name (//wholeOrganization/name) or an identifier (//wholeOrganization/ext:asEntityIdentifier). Organization > partOf template is not currently defined.
				participant[gen_prac_org]/asOrganizationPartOf/ wholeOrganization	
CDA Header Data Elements				Context: /ClinicalDocument/	
Organization > contact	Contact for the organization for a certain purpose.	0..*	BackboneElement	participant[org_contact]	participant[org_contact] SHALL conform to the template defined in participant (Organization contact) .

7.4 participant (generalPractitioner Base Practitioner)

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
CDA Header Data Elements				Context: /ClinicalDocument/	
Practitioner	A person who is directly or indirectly involved in the provisioning of healthcare.	Cardinality comes from linking elements	DomainResource	participant[gen_prac_prac]	The practitioner SHALL at least have an identifier (participant[gen_prac_prac]/associatedEntity/associatedPerson/ext:asEntityIdentifier) or a name (participant[gen_prac_prac]/associatedEntity/associatedPerson/name).
				participant[gen_prac_prac]/@typeCode="PART"	
				participant[gen_prac_prac]/templateId	The use of templateId signals the imposition of a set of template-defined constraints.
				participant[gen_prac_prac]/templateId/@root="1.2.36.1.2001.1001.102.101.100037"	
				participant[gen_prac_prac]/templateId/@extension="1.0"	
				participant[gen_prac_prac]/functionCode/@code="PCP"	
				participant[gen_prac_prac]/associatedEntity	
				participant[gen_prac_org]/associatedEntity/@classCode="PROV"	
				participant[gen_prac_prac]/associatedEntity/id	Optional CDA element. See <id> for available attributes.
				participant[gen_prac_prac]/associatedEntity/code	Optional CDA element. Australian and New Zealand Standard Classification of Occupations (preferred)
Practitioner > identifier	An identifier that applies to this person in this role.	0..*	Identifier	participant[gen_prac_prac]/associatedEntity/associatedPerson/ext:asEntityIdentifier	See <Entity Identifier> for available attributes. Recommended mappings for the complex data type to CDA (R2): Identifier .
Practitioner > active	Whether this practitioner's record is in active use.	0..1	boolean	n/a	This logical element has no mapping to CDA.
Practitioner > name	The name(s) associated with the practitioner.	0..*	HumanName	participant[gen_prac_prac]/associatedEntity/associatedPerson/name	Recommended mappings for the complex data type to CDA (R2): Human-Name .

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Practitioner > telecom	A contact detail for the practitioner, e.g. a telephone number or an email address.	0..*	ContactPoint	participant[gen_prac_prac]/associatedEntity/ telecom	Recommended mappings for the complex data type to CDA (R2): ContactPoint .
Practitioner > address	Address(es) of the practitioner that are not role specific (typically home address). Work addresses are not typically entered in this property as they are usually role dependent.	0..*	Address	participant[gen_prac_prac]/associatedEntity/ addr	Recommended mappings for the complex data type to CDA (R2): Address .
Practitioner > gender	Administrative Gender - the gender that the person is considered to have for administration and record keeping purposes.	0..1	code	participant[gen_prac_prac]/associatedEntity/associatedPerson/ ext:administrativeGenderCode	See <code> for available attributes. AdministrativeGender (required)
Practitioner > birthDate	The date of birth for the practitioner.	0..1	date	participant[gen_prac_prac]/associatedEntity/associatedPerson/ ext:birthTime	
Practitioner > photo	Image of the person.	0..0	Attachment	n/a	This logical element has no mapping to CDA.
Practitioner > qualification	Qualifications obtained by training and certification.	0..*	BackboneElement	See: instantiation choices	It is possible that the qualification may be able to be captured as a complex structure or as a text list. instantiation choices: If the qualification or list of qualifications is the result of capturing a text field then this element is expected to be as //ext:Qualifications/@classCode="QUAL". See <Qualification> for available attributes. If more information can be captured than a narrative list then this logical element is expected to be instantiated as ext:coverage2[prac_qual] and SHALL conform to the template defined in ext:coverage (Practitioner qualification) .
Practitioner > communication	A language the practitioner is able to use in patient communication.	0..*	CodeableConcept	n/a	This logical element is not currently mapped into CDA. This may be supported in future by an entry in Administrative Observations or by the addition of an extension to add the languageCommunication element to the Person class.

7.5 author (Patient with Mandatory IHI)

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Conformance level comes from linking elements				Context: Comes from linking elements	
Patient	Demographics and other administrative information about an individual receiving care or other health-related services.	Cardinality comes from linking elements	DomainResource	author[pat]	
				author[pat]/ templateId	The use of templateId signals the imposition of a set of template-defined constraints.
				author[pat]/templateId/@root="1.2.36.1.2001.1001.102.101.100029"	
				author[pat]/templateId/@extension="1.0"	
				author[pat]/assignedAuthor/id	
				author[pat]/assignedAuthor/code	
				author[pat]/assignedAuthor/code/@code="ONESELF"	
				author[pat]/assignedAuthor/code/@codeSystem="2.16.840.1.113883.5.111"	
				author[pat]/assignedAuthor/assignedPerson	
Patient > birthPlace	The registered place of birth of the patient. A system may use the address.text if they don't store the birthPlace address in discrete elements.	0..1	Address	n/a	Not mapped directly for this participant; this is implicit in //recordTarget/patientRole/patient/birthPlace/place/addr.
Patient > indigenous-status	National Health Data Dictionary (NHDD) based indigenous status for a patient.	0..1	Coding	n/a	Not mapped directly for this participant; this is implicit in //recordTarget/patientRole/patient/ethnicGroupCode.
Patient > closing-the-gap-registration	Closing the Gap registration indicator for an Australian patient.	0..1	boolean	n/a	Not mapped directly for this participant; this is implicit in //entry[close_gap]/observation/value.
Patient > patient-mothersMaiden-Name	Mother's maiden (unmarried) name, commonly collected to help verify patient identity.	0..1	string	n/a	Not mapped directly for this participant; this is implicit in //entry[mothers_name]/observation/value.
Patient > identifier	An identifier for this patient.	1..*	Identifier	author[pat]/assignedAuthor/assignedPerson/ext:asEntityIdentifier	The value of one identifier SHALL be an Australian IHI. See <Entity Identifier> for available attributes. Recommended mappings for the complex data type to CDA (R2): Identifier .
Patient > active	Whether this patient record is in active use.	0..1	boolean	n/a	This logical element has no mapping to CDA.
Patient > name	A name associated with the individual.	0..*	HumanName	author[pat]/assignedAuthor/assignedPerson/name	Recommended mappings for the complex data type to CDA (R2): HumanName .
Patient > telecom	A contact detail (e.g. a telephone number or an email address) by which the individual may be contacted.	0..*	ContactPoint	author[pat]/assignedAuthor/telecom	Recommended mappings for the complex data type to CDA (R2): ContactPoint .

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Patient > gender	Administrative Gender - the gender that the patient is considered to have for administration and record keeping purposes.	0..1	code	author[pat]/assignedAuthor/assignedPerson/ ext:administrativeGenderCode	See <code> for available attributes. AdministrativeGender (required)
Patient > birthDate	The date of birth for the individual.	0..1	date	n/a	Not mapped directly for this participant; this is implicit in //recordTarget/patientRole/patient/birthTime.
Patient > deceased	Indicates if the individual is deceased or not. Deceased date accuracy indicator is optional.	0..1	boolean dateTime	n/a	Not mapped directly for this participant; this is implicit in //recordTarget/patientRole/patient/ext:deceasedTime or //recordTarget/patientRole/patient/ext:deceasedInd.
Patient > address	Addresses for the individual.	0..*	Address	author[pat]/assignedAuthor/ addr	Recommended mappings for the complex data type to CDA (R2): Address .
Patient > maritalStatus	This field contains a patient's most recent marital (civil) status.	0..1	CodeableConcept	n/a	Not mapped directly for this participant; this is implicit in //recordTarget/patientRole/patient/marital-StatusCode.
Patient > multipleBirth	Indicates whether the patient is part of a multiple (bool) or indicates the actual birth order (integer).	0..1	boolean integer	n/a	Not mapped directly for this participant; this is implicit in //recordTarget/patientRole/patient/ext:multipleBirthInd or //recordTarget/patientRole/patient/multipleBirthOrderNumber.
Patient > photo	Image of the patient.	0..0	Attachment	n/a	This logical element has no mapping to CDA.
Patient > contact	A contact party (e.g. guardian, partner, friend) for the patient.	0..*	BackboneElement	n/a	This logical element has no mapping to CDA.
Patient > communication	Languages which may be used to communicate with the patient about his or her health.	0..*	BackboneElement	n/a	Not mapped directly for this participant; this is implicit in //recordTarget/patientRole/patient/language-Communication.
Patient > generalPractitioner	Patient's nominated care provider.	0..*	Reference (Organization as Base Organization Practitioner as Base Practitioner)	n/a	This logical element has no mapping to CDA.
Patient > managingOrganization	Organization that is the custodian of the patient record.	0..1	Reference (Organization as Base Organization)	n/a	This logical element has no mapping to CDA.

7.6 author (RelatedPerson with Mandatory IHI)

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Conformance level comes from linking elements				Context: Comes from linking elements	
RelatedPerson	Information about a person that is involved in the care for a patient, but who is not the target of healthcare, nor has a formal responsibility in the care process.	Cardinality comes from linking elements	DomainResource	author[relper]	
				author[relper]/templateId	The use of templateId signals the imposition of a set of template-defined constraints.
				author[relper]/templateId/@root="1.2.36.1.2001.1001.102.101.100030"	
				author[relper]/templateId/@extension="1.0"	
				author[relper]/assignedAuthor	
				author[relper]/assignedAuthor/id	Optional CDA element. See <id> for available attributes.
				author[relper]/assignedAuthor/code	
				author[relper]/assignedAuthor/code/@code="AGNT"	
				author[relper]/assignedAuthor/code/@codeSystem="2.16.840.1.113883.5.110"	
				author[relper]/assignedAuthor/assignedPerson	
RelatedPerson > identifier	Identifier for a person within a particular scope.	1..*	Identifier	author[relper]/assignedAuthor/assignedPerson/ext:asEntityIdentifier	See <Entity Identifier> for available attributes. Recommended mappings for the complex data type to CDA (R2): Identifier .
RelatedPerson > active	Whether this related person record is in active use.	0..1	boolean	n/a	This logical element has no mapping to CDA.
RelatedPerson > patient	The patient this person is related to.	1..1	Reference(Patient as Base Patient)	n/a	Not mapped directly for this participant; this is implicit in //recordTarget/patientRole/patient.
RelatedPerson > relationship	The nature of the relationship between a patient and the related person.	0..1	CodeableConcept	author[relper]/assignedAuthor/assignedPerson/ext:personalRelationship	Related Person Relationship Type (extensible) See <Personal Relationship> for available attributes.
RelatedPerson > name	A name associated with the person.	0..*	HumanName	author[relper]/assignedAuthor/assignedPerson/name	Recommended mappings for the complex data type to CDA (R2): HumanName .
RelatedPerson > telecom	A contact detail for the person, e.g. a telephone number or an email address.	0..*	ContactPoint	author[relper]/assignedAuthor/telecom	Recommended mappings for the complex data type to CDA (R2): ContactPoint .
RelatedPerson > gender	Administrative Gender - the gender that the person is considered to have for administration and record keeping purposes.	0..1	code	author[relper]/assignedAuthor/assignedPerson/ext:administrativeGenderCode	See <code> for available attributes. AdministrativeGender (required)
RelatedPerson > birthDate	The date on which the related person was born.	0..1	date	author[relper]/assignedAuthor/assignedPerson/ext:birthTime	See <time> for available attributes.

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
RelatedPerson > address	Address where the related person can be contacted or visited.	0..*	Address	author[relper]/assignedAuthor/ addr	Recommended mappings for the complex data type to CDA (R2): Address .
RelatedPerson > photo	Image of the person.	0..0	Attachment	n/a	This logical element has no mapping to CDA.
RelatedPerson > period	The period of time that this relationship is considered to be valid. If there are no dates defined, then the interval is unknown.	0..1	Period	author[relper]/assignedAuthor/assignedPerson/ ext:personalRelationship[related]/ ext:effectiveTime	See < time > for available attributes.

7.7 custodian (Organization with Mandatory Identifier)

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Conformance level comes from linking elements				Context: Comes from linking elements	
Organization	A formally or informally recognized grouping of people or organizations formed for the purpose of achieving some form of collective action. Includes companies, institutions, corporations, departments, community groups, healthcare practice groups, etc.	Cardinality comes from linking elements	DomainResource	custodian[org]	
				custodian[org]/ templateId	The use of templateId signals the imposition of a set of template-defined constraints.
				custodian[org]/templateId/@root="1.2.36.1.2001.1001.102.101.100002"	
				custodian[org]/templateId/@extension="1.0"	
				custodian[org]/ assignedCustodian	
				custodian[org]/assignedCustodian/ representedCustodianOrganization	
				custodian[org]/assignedCustodian/representedCustodianOrganization/ id	Optional CDA element. See <id> for available attributes.
Organization > identifier	Identifier for the organization that is used to identify the organization across multiple disparate systems.	1..*	Identifier	custodian[org]/assignedCustodian/representedCustodianOrganization/ ext:asEntityIdentifier	See <Entity Identifier> for available attributes. Recommended mappings for the complex data type to CDA (R2): Identifier .
Organization > active	Whether the organization's record is still in active use.	0..1	boolean	n/a	This logical element has no mapping to CDA.
Organization > type	The kind(s) of organization that this is.	0..1	CodeableConcept	n/a	This logical element has no mapping to CDA.
Organization > name	A name associated with the organization.	0..1	string	custodian[org]/assignedCustodian/representedCustodianOrganization/ name	In CDA name and alias are represented by //representedCustodianOrganization/name.
Organization > alias	A list of alternate names that the organization is known as, or was known as in the past.	0..*	string	n/a	This logical element has no mapping to CDA.
Organization > telecom	A contact detail for the organization.	0..*	ContactPoint	custodian[org]/assignedCustodian/representedCustodianOrganization/ telecom	In CDA the maximum occurrences of representedCustodianOrganization/telecom is 1. Although the model indicates that telecom is 0..*, in a CDA implementation this is limited to 0..1. telecom/@use is Organization Telecom Use HL7 V3 (required) . Recommended mappings for the complex data type to CDA (R2): ContactPoint .

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Organization > address	An address for the organization.	0..*	Address	custodian[org]/assignedCustodian/representedCustodianOrganization/ addr	addr/@use is Organization Address Use HL7 V3 (required) . In CDA the maximum occurrences of representedCustodian-Organization/addr is 1. Although the model indicates that address is 0..*, in a CDA implementation this is limited to 0..1. Recommended mappings for the complex data type to CDA (R2): Address .
Organization > partOf	The organization of which this organization forms a part.	0..1	Reference(Organization as Base Organization)	n/a	This logical element has no mapping to CDA.
CDA Header Data Elements				Context: /ClinicalDocument/	
Organization > contact	Contact for the organization for a certain purpose.	0..*	BackboneElement	participant[org_contact]	participant[org_contact] SHALL conform to the template defined in participant (Organization contact) .

8 Entity CDA templates

This chapter contains mapping from the Individual (e.g. Patient with Mandatory IHI) and Entity (e.g. Organization with Mandatory Identifier) models to CDA entity classes, expressed as a series of CDA templates that describe how each CDA entity is composed.

CDA templates are expected to be reused from one document type (or Composition model) to another. Each CDA template is presented under a heading in the format of "CDA schema element" ("model name") where "CDA schema element" is the root element for a CDA template and "model name" is the name of a model that constrains an element in the Personal Health Notes Hierarchy.

8.1 providerOrganization (Base Organization)

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Conformance level comes from linking elements				Context: Comes from linking elements	
Organization	A formally or informally recognized grouping of people or organizations formed for the purpose of achieving some form of collective action. Includes companies, institutions, corporations, departments, community groups, healthcare practice groups, etc.	Cardinality comes from linking elements	DomainResource	providerOrganization[manag_org]	The organization SHALL at least have an identifier (providerOrganization[manag_org]/ext:asEntityIdentifier) or a name (providerOrganization[manag_org]/name).
				providerOrganization[manag_org]/ templateId	The use of templateId signals the imposition of a set of template-defined constraints.
				providerOrganization[manag_org]/templateId/@root="1.2.36.1.2001.1001.102.101.100034"	
				providerOrganization[manag_org]/templateId/@extension="1.0"	
				providerOrganization[manag_org]/ id	Optional CDA element. See <id> for available attributes.
Organization > identifier	Identifier for the organization that is used to identify the organization across multiple disparate systems.	0..*	Identifier	providerOrganization[manag_org]/ ext:asEntityIdentifier	See <Entity Identifier> for available attributes. Recommended mappings for the complex data type to CDA (R2): Identifier .
Organization > active	Whether the organization's record is still in active use.	0..1	boolean	n/a	This logical element has no mapping to CDA.
Organization > type	The kind(s) of organization that this is.	0..1	CodeableConcept	providerOrganization[manag_org]/ standardIndustryClassCode	See <code> for available attributes. OrganizationType (example)
Organization > name	A name associated with the organization.	0..1	string	providerOrganization[manag_org]/ name	In CDA name and alias are represented by //representedOrganization/name.
Organization > alias	A list of alternate names that the organization is known as, or was known as in the past.	0..*	string	providerOrganization[manag_org]/ name	In CDA name and alias are represented by //representedOrganization/name.

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Organization > telecom	A contact detail for the organization.	0..*	ContactPoint	providerOrganization[manag_org]/ telecom	telecom/@use is Organization Telecom Use HL7 V3 (required) . Recommended mappings for the complex data type to CDA (R2): ContactPoint .
Organization > address	An address for the organization.	0..*	Address	providerOrganization[manag_org]/ addr	addr/@use is Organization Address Use HL7 V3 (required) . Recommended mappings for the complex data type to CDA (R2): Address .
Organization > partOf	The organization of which this organization forms a part.	0..1	Reference(Organization as Base Organization)	providerOrganization[manag_org]/ asOrganizationPartOf	The organization SHALL have at least a name (//wholeOrganization/name) or an identifier (//wholeOrganization/ext:asEntityIdentifier). Organization > partOf template is not currently defined.
				providerOrganization[manag_org]/asOrganizationPartOf/ wholeOrganization	
CDA Header Data Elements				Context: /ClinicalDocument/	
Organization > contact	Contact for the organization for a certain purpose.	0..*	BackboneElement	participant[org_contact]	participant[org_contact] SHALL conform to the template defined in participant (Organization contact) .

8.2 participant (Organization contact)

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
CDA Header Data Elements				Context: /ClinicalDocument/	
Organization > contact	Contact for the organization for a certain purpose.	Cardinality comes from linking elements	BackboneElement	participant[org_contact]	
				participant[org_contact]/@typeCode="IND"	
				participant[org_contact]/templateId	The use of templateId signals the imposition of a set of template-defined constraints.
				participant[org_contact]/templateId/@root="1.2.36.1.2001.1001.102.101.100035"	
				participant[org_contact]/templateId/@extension="1.0"	
				participant[org_contact]/associatedEntity	
				participant[org_contact]/associatedEntity/@classCode="CON"	
				participant[org_contact]/associatedEntity/scopingOrganization	
				participant[org_contact]/associatedEntity/scopingOrganization/@classCode="ORG"	Optional CDA element.
				participant[org_contact]/associatedEntity/scopingOrganization/id	Organization > contact is represented in CDA by a participant that is scoped by the Organization for which they are a contact. This SHALL hold the same value as the organization this is a contact for (the value in this id element SHALL be present in a separate participation).
Organization > contact > purpose	Indicates a purpose for which the contact can be reached.	0..1	CodeableConcept	participant[org_contact]/associatedEntity/code	See <code> for available attributes. ContactEntityType (extensible)
Organization > contact > name	A name associated with the contact.	0..1	HumanName	participant[org_contact]/associatedEntity/associatedPerson	
				participant[org_contact]/associatedEntity/associatedPerson/name	Recommended mappings for the complex data type to CDA (R2): HumanName .
Organization > contact > telecom	A contact detail (e.g. a telephone number or an email address) by which the party may be contacted.	0..*	ContactPoint	participant[org_contact]/associatedEntity/telecom	telecom/@use is Organization Telecom Use HL7 V3 (required) . Recommended mappings for the complex data type to CDA (R2): ContactPoint .
Organization > contact > address	Visiting or postal addresses for the contact.	0..1	Address	participant[org_contact]/associatedEntity/addr	Recommended mappings for the complex data type to CDA (R2): Address .

9 Section CDA templates

This chapter contains mapping from the section (e.g. Notes) models to CDA section classes, expressed as a series of CDA templates that describe how each CDA section is composed.

CDA templates are expected to be reused from one document type (or Composition model) to another. Each CDA template is presented under a heading in the format of "CDA schema element" ("model name") where "CDA schema element" is the root element for a CDA template and "model name" is the name of a model that constrains an element in the Personal Health Notes Hierarchy.

9.1 section (Notes)

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
CDA Body Level 3 Data Elements				Context: Comes from linking elements	
section (Notes)	A section that captures healthcare narratives about a patient's health and related matters.	1..1	BackboneElement	section	The use of templateId signals the imposition of a set of template-defined constraints.
				section/templateId	
				section/templateId/@root="1.2.36.1.2001.1001.102.101.100010"	
				section/templateId/@extension="1.0"	
section (Notes) > title	The label for this particular section. This will be part of the rendered content for the document, and is often used to build a table of contents.	1..1	string	section/title	
section (Notes) > code	A code identifying the kind of content contained within the section. This must be consistent with the section title.	1..1	CodeableConcept	section/code	
				section/code/@code="102.15513"	
				section/code/@codeSystem="1.2.36.1.2001.1001.101"	
				section/code/@codeSystemName	Optional CDA element. codeSystemName SHOULD be "NCTIS Data Components".
section (Notes) > text	A human-readable narrative that contains the attested content of the section, used to represent the content of the resource to a human. The narrative need not encode all the structured data, but is required to contain sufficient detail to make it 'clinically safe' for a human to just read the narrative.	1..1	narrative	section/code/@displayName	Optional CDA element. displayName SHOULD be "Clinical Synopses".
				section/text	See CDA narratives .

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
section (Notes) > emptyReason	If the section is empty, why the list is empty. An empty section typically has some text explaining the empty reason.	0..0	CodeableConcept	section/@nullFlavor	

10 Act CDA templates

This chapter contains mapping from the Composition (Personal Health Notes) model to CDA act classes, expressed as a series of CDA templates that describe how each CDA act is composed.

CDA templates are expected to be reused from one document type (or Composition model) to another. Each CDA template is presented under a heading in the format of "CDA schema element" ("model name") where "CDA schema element" is the root element for a CDA template and "model name" is the name of a model that constrains an element in the Personal Health Notes Hierarchy.

10.1 ext:coverage (Practitioner qualification)

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
CDA Header Data Elements				Context: /ClinicalDocument/component/structuredBody/component[admin_obs]/section/ See Administrative Observations .	
Practitioner > qualification	Qualifications obtained by training and certification.	Cardinality comes from linking elements	BackboneElement	ext:coverage2[prac_qual] ext:coverage2[prac_qual]/@typeCode="COVBY" ext:coverage2[prac_qual]/templateId ext:coverage2[prac_qual]/templateId/@root="1.2.36.1.2001.1001.102.101.100038" ext:coverage2[prac_qual]/templateId/@extension="1.0" ext:coverage2[prac_qual]/ext:entitlement ext:coverage2[prac_qual]/ext:entitlement/@classCode="COV" ext:coverage2[prac_qual]/ext:entitlement/@moodCode="EVN" ext:coverage2[prac_qual]/ext:entitlement/ext:participant[prac] ext:coverage2[prac_qual]/ext:entitlement/ext:participant[prac]/@typeCode="HLD" ext:coverage2[prac_qual]/ext:entitlement/ext:participant[prac]/ext:participantRole ext:coverage2[prac_qual]/ext:entitlement/ext:participant[prac]/ext:participantRole/@classCode="ASSIGNED" ext:coverage2[prac_qual]/ext:entitlement/ext:participant[prac]/ext:participantRole/ext:id	The use of templateId signals the imposition of a set of template-defined constraints. Practitioner > qualification is represented in CDA by an entitlement (qualification) held by a participant (practitioner). This SHALL hold the same value as practitioner that this qualification is associated with (the value in this id element SHALL be present in separate participation).
Practitioner > qualification > identifier	An identifier that applies to this person's qualification in this role.	0..*	Identifier	ext:coverage2[prac_qual]/ext:entitlement/ext:id	
Practitioner > qualification > code	Coded representation of the qualification.	1..1	CodeableConcept	ext:coverage2[prac_qual]/ext:entitlement/ext:code	See <code> for available attributes. v2 table 0360, Version 2.7 (example)
Practitioner > qualification > period	Period during which the qualification is valid.	0..1	Period	ext:coverage2[prac_qual]/ext:entitlement/ext:effectiveTime	

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Practitioner > qualification > issuer	Organization that regulates and issues the qualification.	0..1	Reference(Organization as Base Organization)	ext:coverage2[prac_qual]/ext:entitlement/ ext:participant[issuer]	ext:participant[issuer]/@typeCode SHALL be "AUT". ext:participant[issuer]/ext:participantRole SHALL be "COMPAR".

11 Common patterns

11.1 code

The <code> element pattern refines the kind of act being recorded. It is of data type CD CWE (Concept Descriptor, Coded With Extensibility). It may have:

- a null attribute (*nullFlavor*)
- *originalText*
- *code* and *codeSystem*
- *qualifier* (CD)
- *translation* (CD)
- any combination of the above.

A *displayName* is highly recommended.

Where used, the *code* attribute **SHALL** contain a code from the relevant vocabulary.

Where used, the *codeSystem* attribute **SHALL** contain the OID for the relevant vocabulary. Values for coding systems can be obtained from the HL7 OID registry accessible from the HL7 home web page at www.hl7.org.

Where used, the *displayName* attribute **SHALL** contain a human-readable description of the code value that is provided by the code system; *displayName* is a case insensitive value except where explicitly stated otherwise by the code system. A preferred interface term for display that is not a member of the description set supplied by the code system **SHALL NOT** be used to populate the *displayName* attribute.

The *codeSystemName* **MAY** be present and, where used, **SHALL** contain a human-readable name for the coding system.

Where used, the *originalText* element **SHALL** be used to carry the full text associated with this code as selected by, typed by or displayed to the author of this statement including the contents of the *qualifier* if present.

Where used, the *qualifier* element **SHALL** carry a code from the same code system as the code; for example if the main concept code is from SNOMED CT the *qualifier* also has to be taken from SNOMED CT as the use of a different code system for a *qualifier* is not allowed. The use of the *qualifier* element is governed by the code system used and cannot be used with code systems that do not provide for qualifiers (e.g. pre-coordinated systems).

Codes can be obtained from a variety of sources. Additional vocabularies are also available from the HL7 Version 3 Vocabulary tables, available to HL7 members through the HL7 web site. In some cases, the vocabularies have been specified; in others, a particular code has been fixed or there is no vocabulary specified. For guidance on coding common clinical concepts in CDA documents see [Representing Coding in CDA Documents Implementation Guidance \[NEHT2011bv\]](#).

Where a code is used from a different code system to that specified, or where the code lies outside the reference set specified, or where a code system or reference set is not specified, the code value **SHALL** be consistent with the meaning of the associated element of the Personal Health Notes model.

If a vocabulary is specified in this implementation guide and no suitable code can be found, the *originalText* element **SHALL** be used to carry the full text as selected by, typed by or displayed to the author of this statement.

If a vocabulary is specified in this implementation guide and it is not possible to use this vocabulary, but an alternate vocabulary is in use, the *originalText* element **SHALL** be used to carry the full text as selected by, typed by or displayed to the author of this statement. The *code* element **SHALL** be used to carry the relevant information from the alternate vocabulary and the alternate vocabulary **SHALL** be registered with HL7 and allocated an appropriate OID.

If an alternate vocabulary is in use and a translation into the specified code system is available, the *originalText* element **SHALL** be used to carry the full text as selected by, typed by or displayed to the author of this statement. The *code* element **SHALL** be used to carry the relevant information from the alternate vocabulary and the alternate vocabulary **SHALL** be registered with HL7 and allocated an appropriate OID. The *translation* element **SHALL** be used to indicate the translation code from the specified vocabulary.

Example 11.1. code

```
<!-- Specified code system in use -->
<code
  code="271807003"
  codeSystem="2.16.840.1.113883.6.96"
  codeSystemName="SNOMED CT"
  codeSystemVersion="20101130"
  displayName="Skin rash" />

<!-- Specified code system in use with a qualifier -->
<code
  code="23986001"
  codeSystem="2.16.840.1.113883.6.96"
  codeSystemName="SNOMED CT"
  displayName="Glaucoma" >
  <originalText>Glaucoma, left</originalText>
  <qualifier>
    <name
      code="272741003"
      codeSystem="2.16.840.1.113883.6.96"
      codeSystemName="SNOMED CT"
      displayName="Laterality" />
    <value
      code="7771000"
      codeSystem="2.16.840.1.113883.6.96"
      codeSystemName="SNOMED CT"
      displayName="Left"
      xsi:type="CD" />
    </qualifier>
  </code>
```



```
<!-- Alternate code system in use and a translation into the specified code system is available -->
<code
  code="J45.9"
  codeSystem="2.16.840.1.113883.6.135"
  codeSystemName="icd10am"
  displayName="Asthma, unspecified">
  <originalText>Asthma</originalText>
  <translation
    code="195967001"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"
    displayName="Asthma"/>
</code>

<!-- Alternate code system in use and no translation into the specified code system is available -->
<code
  code="J45.9"
  codeSystem="2.16.840.1.113883.6.135"
  codeSystemName="icd10am"
  displayName="Asthma, unspecified">
  <originalText>Asthma</originalText>
</code>

<!-- No suitable code can be found or there is no code system in use -->
<code
  <originalText>Asthma</originalText>
</code>
```

11.2 id

The <id> element pattern is of data type II (Instance Identifier). The II data type may have:

- a null attribute (*nullFlavor*)
- a *root*
- a *root* and an *extension*
- a *root* and an *extension* and an *assigningAuthorityName*
- a *root* and an *assigningAuthorityName*
- a *root* and an *assigningAuthorityName* and a *displayable*
- a *root* and an *extension* and a *displayable*
- a *root* and an *extension* and an *assigningAuthorityName* and a *displayable*
- a *root* and a *displayable*

The root attribute is **REQUIRED** and is a unique identifier that guarantees the global uniqueness of the instance identifier. The root alone **MAY** be the entire instance identifier. The root attribute **SHALL** be a UUID or OID.

The extension attribute **MAY** be present, and is a character string as a unique identifier within the scope of the identifier root.

In the case of business or technical identifier an *assigningAuthorityName* is **RECOMMENDED**.

Identifiers appear in this implementation guide for two different reasons. The first is that the identifier has been identified as relevant to the business process or clinical workflow. These identifiers are documented in mapping tables in the Element column, e.g. Composition > identifier or Medication Statement (Prescription) > identifier, which make clear the meaning of this identifier.

In addition, the implementation makes clear that identifiers may also be found on many other parts of the CDA structure. These identifiers, often referred to as technical identifiers, are allowed to facilitate record matching across multiple versions of related documents, so that the same record can consistently be identified, in spite of variations in the information as the record passes through time or between systems. These identifiers have no meaning in the business specification. If senders provide one of these identifiers, it **SHALL** always be the same identifier in all versions of the record, and it **SHALL** be globally unique per the rules of the II data type.

Example 11.2. id

```
<id root="2.16.840.1.113883.19" extension="123A45" />
<ext:id assigningAuthorityName="HPI-O" root="1.2.36.1.2001.1003.0.8003621566684455" />
```

11.3 time

When a time value is supplied it **SHALL** include hours and minutes.

When a time value is supplied it **MAY** include seconds and fractions of seconds.

When a time value is supplied it **SHALL** include a time zone.

The <time> element pattern is of data type TS (Point in Time) and can also be an interval between two times (IVL_TS), representing a period of time. Both forms can either have a nullFlavor attribute or child components following allowed patterns.

A simple timestamp (point in time) will only contain a value attribute containing the time value, expressed as a series of digits as long as required or as available.

Example 11.3. Simple timestamp

```
<time value="20091030" />
```

This represents "October 30, 2009" to calendar day precision. In cases where the containing element is defined in the CDA schema as "ANY" data type, it is useful to provide an xsi:type attribute, set to the value "TS".

The period of time pattern is defined in terms of one or both of its lowest and highest values. The low and high elements are instances of the timestamp pattern described above. More complex time period concepts can be expressed by combining a high, low, or centre element with a width element.

Example 11.4. Low time

```
<period>  
  <low value="20091030" />  
</period>
```

This represents "a period after October 30, 2009". In cases where the containing element is defined in the CDA schema as "ANY" data type, it is useful to provide an xsi:type attribute, set to the value "IVL_TS", as in the next example.

Example 11.5. Interval timestamp 1

```
<period xsi:type="IVL_TS">  
  <high value="200910301030+1000" />  
</period>
```

This represents "a period before 10:30 a.m. UTC+10, October 30, 2009". A discretionary xsi:type attribute has been provided to explicitly cast the pattern to "IVL_TS".

Example 11.6. Interval timestamp 2

```
<period xsi:type="IVL_TS">  
  <low value="2007" />  
  <high value="2009" />  
</period>
```

This represents "the calendar years between 2007 and 2009". The low element **SHALL** precede the high element. As per the previous example, a discretionary xsi:type attribute has been provided to explicitly cast the pattern to "IVL_TS".

Example 11.7. Width time

```
<period>  
  <high value="20091017" />  
  <width value="2" unit="wk" />  
</period>
```

This expresses "two weeks before October 17th, 2009". A low value can be derived from this.

11.4 Entity Identifier

CDA mapping

Element	Definition	Card	CDA schema element	Constraints and comments
CDA Data Elements				
Entity Identifier	A number or code issued for the purpose of identifying a participant within a health-care context.	The cardinality of the element comes from the linking parent.	<code>//ext:asEntityIdentifier</code>	
		1..1	<code>//ext:asEntityIdentifier/@classCode="IDENT"</code>	
		1..1	<code>//ext:asEntityIdentifier/ext:id</code>	
		1..1	<code>//ext:asEntityIdentifier/ext:id/@root</code>	@root SHALL be an OID and SHALL NOT be a UUID. @root SHALL be a globally unique object identifier (i.e. OID) that identifies the combination of geographic area, issuer and type. If no such OID exists, it SHALL be defined before any identifiers can be created.
		0..1	<code>//ext:asEntityIdentifier/ext:id/@extension</code>	If present, @extension SHALL be a unique identifier within the scope of the root that is populated directly from the designation.
		0..1	<code>//ext:asEntityIdentifier/ext:id/@assigningAuthorityName</code>	@assigningAuthorityName SHOULD be used and, if it is used, SHALL be a human-readable name for the namespace represented in the root that is populated with the issuer, or identifier type, or a concatenation of both as appropriate. This SHOULD NOT be used for machine readability purposes.
		0..1	<code>//ext:asEntityIdentifier/ext:code</code>	See <code> for available attributes.
		0..1	<code>//ext:asEntityIdentifier/ext:assigningGeographicArea</code>	
		1..1	<code>//ext:asEntityIdentifier/ext:assigningGeographicArea/@classCode="PLC"</code>	
		0..1	<code>//ext:asEntityIdentifier/ext:assigningGeographicArea/ext:name</code>	If present, ext:name SHALL be the range and extent that the identifier applies to the object with which it is associated that is populated directly from the geographic area. This SHOULD NOT be used for machine readability purposes.

Example 11.8. Entity Identifier

```
<!-- These example fragments are illustrative only. They cannot be treated as clinically valid.
While every effort has been taken to ensure that the examples are consistent with the message specification, where
there are conflicts with the written message specification or schema, the specification or schema will take precedence. -->

<!-- person -->
<xs:asEntityIdentifier classCode="IDENT">
  <xs:id root="1.2.36.1.2001.1003.0.8003608833357361" assigningAuthorityName="IHI" />
  <xs:assigningGeographicArea classCode="PLC">
    <xs:name>National Identifier</xs:name>
  </xs:assigningGeographicArea>
</xs:asEntityIdentifier>

<xs:asEntityIdentifier classCode="IDENT">
  <xs:id root="1.2.36.1.2001.1005.29.8003621566684455" extension="542181" assigningAuthorityName="Croydon GP Centre" />
  <xs:code code="MR" codeSystem="2.16.840.1.113883.12.203" codeSystemName="Identifier Type (HL7)" />
</xs:asEntityIdentifier>

<!-- organisation -->
<ext:asEntityIdentifier classCode="IDENT">
  <ext:id assigningAuthorityName="HPI-O" root="1.2.36.1.2001.1003.0.8003621566684455" />
  <ext:assigningGeographicArea classCode="PLC">
    <ext:name>National Identifier</ext:name>
  </ext:assigningGeographicArea>
</ext:asEntityIdentifier>
```

11.5 Personal Relationship

CDA mapping

Element	Definition	Card	CDA schema element	Constraints and comments
CDA Data Elements				
Personal Relationship	The relationship of a participant to a subject of care (patient).	The cardinality of the element comes from the linking parent.	//ext:personalRelationship	This logical data component SHALL NOT be instantiated if the participant is a healthcare provider. If ext:personalRelationship is instantiated the value of Entity Identifier SHALL NOT be a HPI-I.
		0..1	//ext:personalRelationship/@classCode="PRS"	
		0..1	//ext:personalRelationship/ext:id	
		1..1	//ext:personalRelationship/ext:code	Related Person Relationship Type (extensible) See <code> for available attributes.
		0..1	//ext:personalRelationship/ext:statusCode	v3 Code System RoleStatus (required) See <code> for available attributes.
		0..1	//ext:personalRelationship/ext:effectiveTime	See <time> for available attributes.
		1..1	//ext:personalRelationship/ext:asPersonalRelationship	
		0..1	//ext:personalRelationship/ext:asPersonalRelationship/@classCode="PSN"	
		0..1	//ext:personalRelationship/ext:asPersonalRelationship/@determinerCode="INSTANCE"	
		1..1	//ext:personalRelationship/ext:asPersonalRelationship/id	This SHALL hold the same value as /ClinicalDocument/recordTarget/patientRole/id.
		1..1	//ext:personalRelationship/ext:asPersonalRelationship/administrativeGenderCode/@nullFlavor="NA"	Included for CDA conformance only.

Example 11.9. Personal Relationship

```
<!-- These example fragments are illustrative only. They cannot be treated as clinically valid.
While every effort has been taken to ensure that the examples are consistent with the message specification, where
there are conflicts with the written message specification or schema, the specification or schema will take precedence. -->

<!-- patient -->
<recordTarget>
  <patientRole>
    <!-- patient identifier-->
    <id extension="100543" root="2.16.840.1.113883.19.1.2.3.4"/>
  </patientRole>
</recordTarget>

<!-- author with personal relationship -->
<author>
  <time value="200911031647+1000"/>
  <assignedAuthor>
    <!-- author identifier-->
    <id root="86d729b8-72d2-460a-a64c-489a51607450"/>
    <assignedPerson>
      <!-- personal relationship -->
      <ext:personalRelationship>
        <!--relationship-->
        <ext:code code="SIGOTHR" codeSystem="2.16.840.1.113883.5.111" codeSystemName="v3 Code System RoleCode" displayName="significant other" />
        <!--patient-->
        <ext:asPersonalRelationship>
          <!-- patient identifier-->
          <id extension="100543" root="2.16.840.1.113883.19.1.2.3.4"/>
          <administrativeGenderCode nullFlavor="NA" />
        </ext:asPersonalRelationship>
      </ext:personalRelationship>
    </assignedPerson>
  </assignedAuthor>
</author>

<!-- participant performer with personal relationship -->
<participant typeCode="PRF">
  <associatedEntity classCode="ASSIGNED">
    <!--participant performer identifier-->
    <id root="f3351b5c-8a6c-437c-a55c-a6c121873456"/>
    <!-- personal relationship -->
    <associatedPerson>
      <ext:personalRelationship>
        <!--relationship-->
        <ext:code code="FAMMEMB" codeSystem="2.16.840.1.113883.5.111" codeSystemName="v3 Code System RoleCode" displayName="Family Member" />
        <!--patient-->
        <ext:asPersonalRelationship>
          <!-- patient identifier-->
          <id extension="100543" root="2.16.840.1.113883.19.1.2.3.4"/>
          <administrativeGenderCode nullFlavor="NA" />
        </ext:asPersonalRelationship>
      </ext:personalRelationship>
    </associatedPerson>
  </associatedEntity>
</participant>
```

11.6 Qualification

CDA mapping

Element	Definition	Card	CDA schema element	Constraints and comments
CDA Data Elements				
Qualification	A list of professional certifications, and certificates recognising having passed a course.	0..1	//ext:asQualifications	
		1..1	//ext:asQualifications/@classCode="QUAL"	
		1..1	//ext:asQualifications/ext:code	Qualifications is a text field, so the text list is entered in the originalText of this element.

Appendix A. Complex data type mappings to CDA (R2)

This informative appendix provides some guidance on how complex data types referred to in the body of this specification can map to CDA (R2). The mappings provided are a set of preferred mappings and do not represent conformance requirements.

A.1 Identifier

This informative appendix provides some guidance on how the complex data type [Identifier](#), referenced in the body of this specification can map to CDA (R2). The mappings provided are a set of preferred mappings and do not represent conformance requirements.

In addition to examples provided in this implementation guide some guidance on representation of common identifiers in CDA is provided by [Representation of Common Australian Identifiers in v2 and CDA \[HI2011\]](#) and [Common - Clinical Document \[DH2019a\]](#).

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Identifier	A technical identifier - identifies some entity uniquely and unambiguously.	Cardinality comes from linking parent.	Element	See: instantiation choices	In CDA it is possible that the identifier is formed such that the system and value are both part of the value of the root attribute. In this circumstance the extension attribute should not be instantiated. instantiation choices: If the identifier element is for a Patient, Practitioner, PractitionerRole, Organization, RelatedPerson or Device it is expected to be instantiated as <code>//ext:asEntityIdentifier/@classCode="IDENT"</code> . See Identifier for available attributes. The identifier element may be instantiated as <code>//id</code> .
Identifier > use	The purpose of this identifier.	0..1	code	n/a	This logical element has no mapping to CDA.
Identifier > type	A coded type for the identifier that can be used to determine which identifier to use for a specific purpose.	0..1	code	<code>//ext:asEntityIdentifier/ext:code</code>	Identifier Type Codes (extensible) This element is only available if the identifier is instantiated as <code>//ext:asEntityIdentifier/@classCode="IDENT"</code> .
Identifier > system	Establishes the namespace for the value - that is, a URL that describes a set values that are unique.	0..1	uri	See: instantiation choices	instantiation choices: If the identifier element is for a Patient, Practitioner, PractitionerRole, Organization, RelatedPerson or Device this is expected to be instantiated as <code>//ext:asEntityIdentifier/ext:id/@root</code> . The identifier system may be instantiated as <code>//id/@root</code> .
Identifier > value	The portion of the identifier typically relevant to the user and which is unique within the context of the system.	0..1	string	See: instantiation choices	instantiation choices: If the identifier element is for a Patient, Practitioner, PractitionerRole, Organization, RelatedPerson or Device this is expected to be instantiated as <code>//ext:asEntityIdentifier/ext:id/@extension</code> . The identifier value may be instantiated as <code>//id/@extension</code> .
Identifier > period	Time period during which identifier is/was valid for use.	0..1	Period	n/a	This logical element has no mapping to CDA.

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Identifier > assigner	Organization that issued/manages the identifier.	0..1	Reference (Organization)	See: instantiation choices	instantiation choices: If the identifier element is for a Patient, Practitioner, PractitionerRole, Organization, RelatedPerson or Device this is expected to be instantiated as //ext:asEntityIdentifier/ext:id/@assigningAuthorityName. The identifier value may be instantiated as //id/@assigningAuthorityName.

Example A.1. Identifier

```

<!-- These example fragments are illustrative only. They cannot be treated as clinically valid.
While every effort has been taken to ensure that the examples are consistent with the message specification, where
there are conflicts with the written message specification or schema, the specification or schema will take precedence. -->

<!-- subject -->
<recordTarget>
  <!-- subject (Patient) -->
  <patientRole>
    <patient>
      <administrativeGenderCode></administrativeGenderCode>

      <!-- Patient.identifier as an Australian IHI -->
      <ext:asEntityIdentifier classCode="IDENT">
        <!-- identifier.type.text=IHI,
        identifier.value=8003600200002222,
        identifier.system=http://ns.electronichealth.net.au/id/hi/ihi/1.0 -->
        <ext:id assigningAuthorityName="IHI" root="1.2.36.1.2001.1003.0.8003600200002222" />
        <ext:assigningGeographicArea classCode="PLC">
          <ext:name>National Identifier</ext:name>
        </ext:assigningGeographicArea>
      </ext:asEntityIdentifier>

      <!-- Patient.identifier as an Institution Medical Record-->
      <ext:asEntityIdentifier classCode="IDENT">
        <!-- identifier.assigner=Croyden GP Centre,
        identifier.value=542181,
        identifier.system=urn:oid:1.2.36.1.2001.1005.29.8003621566684455 -->
        <ext:id root="1.2.36.1.2001.1005.29.8003621566684455" extension="542181" assigningAuthorityName="Croydon GP Centre" />
        <!-- Patient.identifier.type -->
        <ext:code code="MR" codeSystem="2.16.840.1.113883.12.203" codeSystemName="Identifier Type (HL7)" />
      </ext:asEntityIdentifier>

      <!-- Patient.identifier as a Medicare Number -->
      <ext:asEntityIdentifier classCode="IDENT">
        <!-- identifier.system=urn:oid:1.2.36.1.5001.1.0.7,
        identifier.value=123456789,
        identifier.assigner=Medicare Card Number -->
        <ext:id assigningAuthorityName="Medicare Card Number"
        root="1.2.36.1.5001.1.0.7" extension="1234567892"/>
        <ext:code code="MC" codeSystem="2.16.840.1.113883.12.203"
        codeSystemName="Identifier Type (HL7)" displayName="Patient's Medicare number"/>
        <!-- Identifier.period is not available in an asEntityIdentifier class -->
      </ext:asEntityIdentifier>

      <!-- Patient.identifier as a DVA Number -->
      <ext:asEntityIdentifier classCode="IDENT">
        <!-- identifier.system=urn:oid:2.16.840.1.113883.3.879.270091,
        identifier.value=NBUR9080,
        identifier.assigner=Department of Veterans' Affairs -->
        <ext:id assigningAuthorityName="Department of Veterans' Affairs"
        root="2.16.840.1.113883.3.879.270091" extension="NBUR9080"/>
        <ext:code code="DVG" codeSystem="2.16.840.1.113883.2.3.4.1.1.203"
        codeSystemName="HL7V2Table0203IdentifierTypeAUExtended" displayName="DVA Gold Card Number"/>
        <!-- Identifier.period is not available in an asEntityIdentifier class -->
      </ext:asEntityIdentifier>

      <!-- Patient.identifier as a Healthcare card number -->
      <ext:asEntityIdentifier classCode="IDENT">
        <!-- identifier.system=urn:oid:2.16.840.1.113883.3.879.270098,

```

```
        identifier.value=307111942H,  
        identifier.assigner=Centrelink customer reference number -->  
        <ext:id assigningAuthorityName="Centrelink customer reference number"  
        root="2.16.840.1.113883.3.879.270098" extension="307111942H"/>  
        <ext:code code="HC" codeSystem="2.16.840.1.113883.12.203"  
        codeSystemName="Identifier Type (HL7)" displayName="Health Card Number"/>  
    </ext:asEntityIdentifier>  
  
    </patient>  
    </patientRole>  
    </recordTarget>  
  
    <author>  
        <time value="200911031647+1000"/>  
        <!-- author (PractitionerRole) -->  
        <assignedAuthor>  
            <!-- PractitionerRole.id -->  
            <id root="86d729b8-72d2-460a-a64c-489a51607450"/>  
            <!-- PractitionerRole.practitioner(Practitioner) -->  
            <assignedPerson>  
                <!-- Practitioner.identifier as an Australian HPI-I -->  
                <ext:asEntityIdentifier classCode="IDENT">  
                    <!-- identifier.value=8003610537409456,  
                    identifier.system=urn:oid:1.2.36.1.2001.1003.0,  
                    identifier.assigner=HPI-I -->  
                    <ext:id assigningAuthorityName="HPI-I"  
                    root="1.2.36.1.2001.1003.0.8003610537409456"/>  
                    <ext:assigningGeographicArea classCode="PLC">  
                        <ext:name>National Identifier</ext:name>  
                    </ext:assigningGeographicArea>  
                </ext:asEntityIdentifier>  
  
                <!-- PractitionerRole.identifier as an ABN scoped provider identifier -->  
                <ext:asEntityIdentifier classCode="IDENT">  
                    <!-- identifier.value=8003610537409456,  
                    identifier.system=urn:oid:1.2.36.1.2001.1003.0,  
                    identifier.assigner=HPI-I -->  
                    <ext:id assigningAuthorityName="Albion Hospital",  
                    root="1.2.36.1.2001.1005.70.51824753556"  
                    extension="peterwinslow44"/>  
                    <!-- identifier.type -->  
                    <ext:code code="EI"  
                    codeSystem="2.16.840.1.113883.18.108"  
                    codeSystemName="v2 Identifier Type"  
                    displayName="Employee number"/>  
                </ext:asEntityIdentifier>  
            </assignedPerson>  
        </assignedAuthor>  
        <!--PractitionerRole.organization (Organization)-->  
        <representedOrganization>  
            <!-- Organization.name -->  
            <name>Albion Hospital</name>  
            <!--Organization.identifier as an ABN-->  
            <ext:asEntityIdentifier classCode="IDENT">  
                <!-- identifier.value=51824754455,  
                identifier.system=urn:oid:1.2.36,  
                identifier.assigner=ABN -->  
                <ext:id root="1.2.36.51824754455" assigningAuthorityName="ABN"/>  
                <!-- identifier.type -->  
                <ext:code code="XX"  
                codeSystem="2.16.840.1.113883.12.203" />  
            </ext:asEntityIdentifier>  
        </representedOrganization>
```

```
</author>

<custodian>
  <!-- custodian (Organization)-->
  <assignedCustodian>
    <representedCustodianOrganization>
      <!-- Organization.id-->
      <id root="d0455def-ff37-4ebe-97fb-52db7224b148"/>
      <!-- Organization.identifier as a Laboratory NATA Identifier -->
      <ext:asEntityIdentifier classCode="IDENT">
        <!-- identifier.system.value=urn:oid:1.2.36.1.2001.1005.12,
        identifier.value=2184,
        identifier.assigner=NATA -->
        <ext:id assigningAuthorityName="NATA"
          root="1.2.36.1.2001.1005.12" extension="2184"/>
        <!-- identifier.type -->
        <ext:code code="XX" codeSystem="2.16.840.1.113883.12.203"/>
      </ext:asEntityIdentifier>
    </representedCustodianOrganization>
  </assignedCustodian>
</custodian>

<!--DiagnosticReport.basedOn-->
<inFulfillmentOf typeCode="FLFS">
  <!--ProcedureRequest-->
  <order classCode="ACT" moodCode="RQO">
    <!-- ProcedureRequest.identifier
    identifier.system=urn:oid:1.2.36.1.2001.1005.52.8003621566684455, identifier.value=123451 -->
    <id extension="123451" root="1.2.36.1.2001.1005.52.8003621566684455" />
  </order>
</inFulfillmentOf>
```


A.2 HumanName

This informative appendix provides some guidance on how the complex data type [HumanName](#), referenced in the body of this specification can map to CDA (R2). The mappings provided are a set of preferred mappings and do not represent conformance requirements.

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
HumanName	A human's name with the ability to identify parts and usage.	Cardinality comes from linking parent.	Element	//name	Name SHALL have at least text or family or given instantiated. In CDA a full text representation of a name is not to be included in the same instance as a structured representation with the same name parts. Either the free text representation or a name with structure (e.g. name/family or name/given) should be provided but not both.
HumanName > use	Identifies the purpose for this name.	0..1	code	//name/@use	Common Person Name Use (required)
HumanName > text	A full text representation of the name.	0..1	string	//name	
HumanName > family	The part of a name that links to the genealogy. In some cultures (e.g. Eritrea) the family name of a son is the first name of his father.	0..1	string	//name/family	
HumanName > given	Given name.	0..*	string	//name/given	
HumanName > prefix	Part of the name that is acquired as a title due to academic, legal, employment or nobility status, etc. and that appears at the start of the name.	0..*	string	//name/prefix	Prefix values can be populated as described in AS 4846 (2014) – Person and provider identification in healthcare [SA2014a] , 4.4.2 Name Title.
HumanName > suffix	Part of the name that is acquired as a title due to academic, legal, employment or nobility status, etc. and that appears at the end of the name.	0..*	string	//name/suffix	Suffix values can be populated as described in AS 4846 (2014) – Person and provider identification in healthcare [SA2014a] , 4.5.3.2 Name Suffix.
HumanName > period	Indicates the period of time when this name was valid for the named person.	0..1	Period	//name/validTime	See <time> for available attributes.

Example A.2. HumanName

```
<!-- These example fragments are illustrative only. They cannot be treated as clinically valid.
While every effort has been taken to ensure that the examples are consistent with the message specification, where
there are conflicts with the written message specification or schema, the specification or schema will take precedence. -->

<!-- HumanName where use=official -->
<name use="C">
  <!-- HumanName.given -->
  <given>Adam</given>
  <!-- HumanName.given -->
  <given>A.</given>
  <!-- HumanName.family -->
  <family>Everyman</family>
</name>

<!-- HumanName where use=official -->
<name use="C">
  <!-- HumanName.text -->
  Adam A. Everyman
</name>

<!-- HumanName where use=usual -->
<name use="L">
  <!-- HumanName.given -->
  <given>Damo</given>
</name>

<!-- HumanName where use=old -->
<name use="DN">
  <!-- HumanName.given -->
  <given>Adam</given>
  <!-- HumanName.given -->
  <given>A.</given>
  <!-- HumanName.family -->
  <family>Adamson</family>
  <!-- HumanName.period -->
  <validTime xsi:type="IVL_TS">
    <low value="01012001" />
    <high value="01012012" />
  </validTime>
</name>
```

A.3 Address

This informative appendix provides some guidance on how the complex data type [Address](#), referenced in the body of this specification can map to CDA (R2). The mappings provided are a set of preferred mappings and do not represent conformance requirements.

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Address	An address expressed using postal conventions (as opposed to GPS or other location definition formats). This data type may be used to convey addresses for use in delivering mail as well as for visiting locations which might not be valid for mail delivery. There are a variety of postal address formats defined around the world.	Cardinality comes from linking parent.	Element	//addr	
Address > use	The purpose of this address.	0..1	code	//addr/@use	Address Use HL7 v3 (required) addr/@use may be used to carry more than one value by a space separated list of codes.
Address > type	Distinguishes between physical addresses (those you can visit) and mailing addresses (e.g. PO Boxes and care-of addresses). Most addresses are both.	0..1	code	//addr/@use	Address Type HL7 v3 (required) addr/@use may be used to carry more than one value by a space separated list of codes.
Address > text	A full text representation of the address.	0..1	string	//addr	The expectation is that this is free text.
Address > line	This component contains the house number, apartment number, street name, street direction, P.O. Box number, delivery hints, and similar address information.	0..*	string	//addr/streetAddressLine	
Address > city	The name of the city, town, village or other community or delivery center.	0..1	string	//addr/city	
Address > district	The name of the administrative area (county).	0..1	string	//addr/county	
Address > state	Sub-unit of a country with limited sovereignty in a federally organized country. A code may be used if codes are in common use (i.e. US 2 letter state codes).	0..1	string	//addr/state	
Address > postalCode	A postal code designating a region defined by the postal service.	0..1	string	//addr/postalCode	
Address > country	Country - a nation as commonly understood or generally accepted.	0..1	string	//addr/country	Iso 3166 Part 1: 2 Letter Codes (preferred)
Address > period	Time period when address was/is in use.	0..1	Period	//addr/useablePeriod	

Example A.3. Address

<!-- These example fragments are illustrative only. They cannot be treated as clinically valid.
While every effort has been taken to ensure that the examples are consistent with the message specification, where
there are conflicts with the written message specification or schema, the specification or schema will take precedence. -->

```
<!-- Address where use=work and type=postal -->
<addr use="PST WP">
  <!--Address.text-->
  1050 W Wishard Blvd
  RG
  5th floor
  Indianapolis, IN 46240
  <!--Address.line-->
  <streetAddressLine>1050 W Wishard Blvd</streetAddressLine>
  <!--Address.line-->
  <streetAddressLine>RG 5th floor</streetAddressLine>
  <!--Address.city-->
  <city>Indianapolis</city>
  <!--Address.state-->
  <state>IN</state>
  <!--Address.postalCode-->
  <postalCode>46240</postalCode>
</addr>

<!-- Address where use=home and type=physical -->
<addr use="PHYS H">
  <!--Address.text-->
  1 Back Lane&#13;&#10;Holmfirth&#13;&#10;HUDDERSFIELD&#13;&#10;HD7 1HQ
  <!--Address.line-->
  <streetAddressLine>1 Back Lane</streetAddressLine>
  <!--Address.city-->
  <city>Holmfirth</city>
  <!--Address.district-->
  <county>HUDDERSFIELD</county>
  <!--Address.postalCode-->
  <postalCode>HD7 1HQ</postalCode>
</addr>

<!-- Address where use=old -->
<addr use="TMP">
  <!--Address.line-->
  <streetAddressLine>Rue Lougoraïa 12, app. 10</streetAddressLine>
  <!--Address.city-->
  <city>Korolevo</city>
  <!--Address.state-->
  <state>Minsk</state>
  <!--Address.country-->
  <country>BELARUS</country>
  <!--Address.period-->
  <useablePeriod xsi:type="IVL_TS">
    <low value="01012001" />
    <high value="01012012" />
  </useablePeriod>
</addr>
```

A.4 Address as Australian Address

This informative appendix provides some guidance on the constrained form of complex data type [Address](#) as [Australian Address](#) published by HL7 Australia. The mappings provided are a set of preferred mappings and do not represent conformance requirements.

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Address	An Australian address expressed using postal conventions (as opposed to GPS or other location definition formats).	Cardinality comes from linking parent.	Element	//addr	addr SHALL have text or one or more line (addr/streetAddressLine).
Address > use	The purpose of this address.	0..1	code	//addr/@use	Address Use HL7 v3 (required) //addr/@use may be used to carry more than one value by a space separated list of codes.
Address > type	Distinguishes between physical addresses (those you can visit) and mailing addresses (e.g. PO Boxes and care-of addresses). Most addresses are both.	0..1	code	//addr/@use	Address Type HL7 v3 (required) //addr/@use may be used to carry more than one value by a space separated list of codes.
Address > text	A full text representation of the address.	0..1	string	//addr	The expectation is that this is free text.
Address > line	This component contains the house number, apartment number, street name, street direction, P.O. Box number, delivery hints, and similar address information.	0..*	string	//addr/streetAddressLine	
Address > city	The name of the city, town, village or other community or delivery center.	0..1	string	//addr/city	
Address > district	The name of the administrative area (county).	0..1	string	//addr/county	
Address > state	Sub-unit of a country with limited sovereignty in a federally organized country. A code may be used if codes are in common use (i.e. US 2 letter state codes).	0..1	string	//addr/state	Australian States and Territories (required) This element SHALL be populated with the code e.g. "NT".
Address > postalCode	A postal code designating a region defined by the postal service.	0..1	string	//addr/postalCode	The maximum length of postalCode SHALL be 4.
Address > country	Fixed value if present otherwise assumed to be Australia in this context.	0..1	string	//addr/country	This element SHALL be populated with "AU".
Address > period	Time period when address was/is in use.	0..1	Period	//addr/useablePeriod	
Address > nofixedaddress	No fixed address indicator.	0..1	boolean	n/a	Not mapped directly, if true, addr SHOULD be equal to "NO FIXED ADDRESS" and addr/@use SHOULD be "PHYS".

Example A.4. Address

```
<!-- These example fragments are illustrative only. They cannot be treated as clinically valid.
While every effort has been taken to ensure that the examples are consistent with the message specification, where
there are conflicts with the written message specification or schema, the specification or schema will take precedence. -->

<!-- Australian Address with no fixed address in Melbourne, VIC-->
<addr use="PHYS">
  <!--Address.text-->
  NO FIXED ADDRESS
  <!--Address.city-->
  <city>Melbourne</city>
  <!--Address.state-->
  <state>VIC</state>
</addr>

<!-- Australian Address with only text-->
<addr use="PHYS">
  <!--Address.text-->
  Level 1, 300 George St, Brisbane, QLD 4000
</addr>

<!-- Australian Address where use=work and type=postal -->
<addr use="PST WP">
  <!--Address.line-->
  <streetAddressLine>Northern Territory Office, Department of Addresses, GPO Box 19132110</streetAddressLine>
  <!--Address.city-->
  <city>Darwin</city>
  <!--Address.state-->
  <state>NT</state>
  <!--Address.postalCode-->
  <postalCode>0801</postalCode>
  <!--Address.country-->
  <country>AU</country>
  <!--Address.period-->
  <useablePeriod xsi:type="IVL_TS">
    <low value="200311031647+1000" />
  </useablePeriod>
</addr>

<!-- Australian Address where use=work and type=physical -->
<addr use="PHYS WP">
  <!--Address.line-->
  <streetAddressLine>5th Floor, Northern Territory House, 223 Mitchell Street</streetAddressLine>
  <!--Address.city-->
  <city>Darwin</city>
  <!--Address.state-->
  <state>NT</state>
  <!--Address.postalCode-->
  <postalCode>0800</postalCode>
  <!--Address.country-->
  <country>AU</country>
</addr>
```

A.5 ContactPoint

This informative appendix provides some guidance on how the complex data type [ContactPoint](#), referenced in the body of this specification can map to CDA (R2). The mappings provided are a set of preferred mappings and do not represent conformance requirements.

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
ContactPoint	A human's name with the ability to identify parts and usage.	Cardinality comes from linking parent.	Element	//telecom	If value is present, system SHALL be present.
ContactPoint > system	Telecommunications form for contact point - what communications system is required to make use of the contact.	0..1	code	//telecom/@value	HL7 URLScheme (required) Makes up part of the attribute: 'system:value', e.g. 'tel:phone number', 'mailto:email address', 'http:URL', etc.
ContactPoint > value	The actual contact point details, in a form that is meaningful to the designated communication system (i.e. phone number or email address).	0..1	string	//telecom/@value	Makes up the part of the attribute: 'system:value', e.g. 'tel:phone number', 'mailto:email address', 'http:URL', etc.
ContactPoint > use	Identifies the purpose for the contact point.	0..1	code	//telecom/@use	HL7 TelecommunicationAddressUse (required)
ContactPoint > rank	Specifies a preferred order in which to use a set of contacts. Contacts are ranked with lower values coming before higher values.	0..1	positiveInt	n/a	This logical element has no mapping to CDA.
ContactPoint > period	Time period when the contact point was/is in use.	0..1	Period	//telecom/usablePeriod	See <time> for available attributes.

Example A.5. ContactPoint

```
<!-- These example fragments are illustrative only. They cannot be treated as clinically valid.
While every effort has been taken to ensure that the examples are consistent with the message specification, where
there are conflicts with the written message specification or schema, the specification or schema will take precedence. -->

<!-- ContactPoint where system=phone, value=+1-(555)555-1212, use=home -->
<telecom value="tel:+1-(555)555-1212" use="H">
  <!-- ContactPoint.period -->
  <useablePeriod xsi:type="IVL_TS">
    <low value="01012001" />
    <high value="01012012" />
  </useablePeriod>
</telecom>

<!-- ContactPoint where system=phone, value=0712341234, use=home -->
<telecom use="H" value="tel:0712341234" />

<!-- ContactPoint where system=email, value=sfranklin@amail.com.au, use=work -->
<telecom use="WP" value="mailto:sfranklin@amail.com.au" />
```


Appendix B. Examples

This informative appendix provides some examples that conform to the conformance requirements specified within this implementation guide.

DRAFT

B.1 Personal Health Notes - example 1

This informative appendix provides an example CDA instance that conforms to the requirements of this implementation guide.

Example B.1. Personal Health Notes - example 1

```
<!-- This example is illustrative only. This fragment cannot be treated as clinically valid.
While every effort has been taken to ensure that the examples are consistent with the message specification, where
there are conflicts with the written message specification or schema, the specification or schema will take precedence. -->

<ClinicalDocument xmlns:ext="http://ns.electronichealth.net.au/Ci/Cda/Extensions/3.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="urn:hl7-org:v3">
  <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040" />
  <!-- ClinicalDocument templateId -->
  <templateId root="1.2.36.1.2001.1001.102.101.100033" extension="1.0"/>
  <!-- Personal Health Notes document model templateId -->
  <templateId root="1.2.36.1.2001.1001.102.101.100017" extension="1.0"/>
  <!-- CDA Rendering Specification templateId -->
  <templateId root="1.2.36.1.2001.1001.100.149" extension="1.0" />
  <id root="2.25.134045617645909421812767683577428735500" />
  <code code="100.16681" codeSystem="1.2.36.1.2001.1001.101" codeSystemName="NCTIS Data Components" displayName="Personal Health Notes"/>
  <title>Personal Health Notes</title>
  <effectiveTime value="20170621090015+1000" />
  <confidentialityCode nullFlavor="NA" />
  <languageCode code="en-AU" />
  <ext:completionCode code="F" codeSystem="1.2.36.1.2001.1001.101.104.20104" codeSystemName="NCTIS Document Status Values" displayName="Final" />
  <!-- subject (Patient with mandatory IHI) -->
  <recordTarget typeCode="RCT">
    <templateId root="1.2.36.1.2001.1001.102.101.100031" extension="1.0" />
    <patientRole classCode="PAT">
      <id root="ac0cbaae-f63c-4472-a0ee-268ff8f1f661" />
      <!-- Patient.address -->
      <addr nullFlavor="MSK" />
      <patient classCode="PSN" determinerCode="INSTANCE">
        <!-- Patient.gender -->
        <administrativeGenderCode code="male" codeSystem="2.16.840.1.113883.4.642.1.2"
        codeSystemName="AdministrativeGender" displayName="Male" />
        <!-- Patient.identifier -->
        <ext:asEntityIdentifier classCode="IDENT">
          <ext:id root="1.2.36.1.2001.1003.0.8003608666701594" assigningAuthorityName="IHI" />
          <ext:assigningGeographicArea classCode="PLC">
            <ext:name>National Identifier</ext:name>
          </ext:assigningGeographicArea>
        </ext:asEntityIdentifier>
      </patient>
    </patientRole>
  </recordTarget>
  <!-- author (Patient with mandatory IHI) -->
  <author typeCode="AUT">
    <templateId root="1.2.36.1.2001.1001.102.101.100029" extension="1.0" />
    <!-- Composition.date -->
    <time value="20170621090015+1000" />
    <assignedAuthor classCode="ASSIGNED">
      <id root="ac0cbaae-f63c-4472-a0ee-268ff8f1f661" />
      <code code="ONESELF" codeSystem="2.16.840.1.113883.5.111" />
      <assignedPerson classCode="PSN" determinerCode="INSTANCE">
        <!-- Patient.identifier -->
        <ext:asEntityIdentifier classCode="IDENT">
          <ext:id root="1.2.36.1.2001.1003.0.8003608666701594" assigningAuthorityName="IHI" />
          <ext:assigningGeographicArea classCode="PLC">
            <ext:name>National Identifier</ext:name>
          </ext:assigningGeographicArea>
        </ext:asEntityIdentifier>
      </assignedPerson>
    </assignedAuthor>
  </author>
  <!-- custodian (Organization with mandatory identifier) -->
  <custodian typeCode="CST">
    <templateId root="1.2.36.1.2001.1001.102.101.100002" extension="1.0" />
    <assignedCustodian classCode="ASSIGNED">
      <representedCustodianOrganization classCode="ORG" determinerCode="INSTANCE">
        <id root="84408f3d-5ec5-46bb-9619-1984a0736e33" />
        <!-- Organization.identifier -->
        <ext:asEntityIdentifier classCode="IDENT">
          <ext:id root="1.2.36.1.2001.1007.1.8003640001000036" assigningAuthorityName="PAI-O" />
          <ext:assigningGeographicArea classCode="PLC">
            <ext:name>National Identifier</ext:name>
          </ext:assigningGeographicArea>
        </ext:asEntityIdentifier>
      </representedCustodianOrganization>
    </assignedCustodian>
  </custodian>
  <!-- section (Notes) -->
  <component typeCode="COMP">
    <structuredBody classCode="DOCBODY" moodCode="EVN">
      <component typeCode="COMP">
        <section classCode="DOCSCT" moodCode="EVN">
          <templateId root="1.2.36.1.2001.1001.102.101.100010" extension="1.0" />
          <id root="60a9ef00-32b3-40d4-b5f4-1fdee463752a" />
          <!-- section.code -->
          <code code="102.15513" codeSystem="1.2.36.1.2001.1001.101" displayName="Notes"/>
          <!-- section.title -->
```

```
<title>My Health Notes</title>
<!-- section.text -->
<text mediaType="text/x-hl7-text+xml">
  <paragraph>My Diabetes</paragraph>
  <paragraph>I saw my doctor today and he said my last test results were getting better, but he was still not happy with my diet.
  I should go back to that nice dietician Kate again.</paragraph>
</text>
</section>
</component>
</structuredBody>
</component>
</ClinicalDocument>
```

DRAFT

B.2 Personal Health Notes - example 2

This informative appendix provides an example CDA instance that conforms to the requirements of this implementation guide.

Example B.2. Personal Health Notes - example 2

```
<!-- This example is illustrative only. This fragment cannot be treated as clinically valid.
While every effort has been taken to ensure that the examples are consistent with the message specification, where
there are conflicts with the written message specification or schema, the specification or schema will take precedence. -->

<ClinicalDocument xmlns:ext="http://ns.electronichealth.net.au/Ci/Cda/Extensions/3.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3">
  <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
  <!-- ClinicalDocument templateId -->
  <templateId root="1.2.36.1.2001.1001.102.101.100033" extension="1.0"/>
  <!-- Personal Health Notes document model templateId -->
  <templateId root="1.2.36.1.2001.1001.102.101.100017" extension="1.0"/>
  <!-- CDA Rendering Specification templateId -->
  <templateId root="1.2.36.1.2001.1001.100.149" extension="1.0"/>

  <id root="2.25.134045617645909421812767683577428735500"/>
  <code code="100.16681" codeSystem="1.2.36.1.2001.1001.101" codeSystemName="NCTIS Data Components" displayName="Personal Health Notes"/>
  <title>Personal Health Notes</title>
  <effectiveTime value="20180621090015+1000"/>
  <confidentialityCode nullFlavor="NA"/>
  <languageCode code="en-AU"/>
  <ext:completionCode code="F" codeSystem="1.2.36.1.2001.1001.101.104.20104" codeSystemName="NCTIS Document Status Values" displayName="Final"/>
  <!-- subject (Patient with mandatory IHI) -->
  <recordTarget>
    <templateId root="1.2.36.1.2001.1001.102.101.100031" extension="1.0"/>
    <patientRole>
      <id root="ac0cbaae-f63c-4472-a0ee-268ff8f1f661"/>
      <!-- Patient.address -->
      <addr>
        <!--Address.line-->
        <streetAddressLine>55 Sarah Street</streetAddressLine>
        <!--Address.city-->
        <city>Strahan</city>
        <!--Address.state-->
        <state>TAS</state>
        <!--Address.postalCode-->
        <postalCode>7468</postalCode>
        <!--Address.country-->
        <country>AU</country>
      </addr>
      <!-- Patient.telecom -->
      <telecom value="tel:0344556677"/>
      <patient>
        <!-- Patient.gender -->
        <administrativeGenderCode code="female" codeSystem="2.16.840.1.113883.4.642.1.2" codeSystemName="AdministrativeGender"
          displayName="Female"/>
        <!-- Patient.identifier -->
        <ext:asEntityIdentifier classCode="IDENT">
          <ext:id root="1.2.36.1.2001.1003.0.8003608666701594" assigningAuthorityName="IHI"/>
          <ext:assigningGeographicArea classCode="PLC">
            <ext:name>National Identifier</ext:name>
          </ext:assigningGeographicArea>
        </ext:asEntityIdentifier>
      </patient>
    </patientRole>
  </recordTarget>
  <!-- author (RelatedPerson with mandatory IHI) -->
  <author>
    <templateId root="1.2.36.1.2001.1001.102.101.100030" extension="1.0"/>
    <!-- Composition.date -->
    <time value="20180621090015+1000"/>
    <assignedAuthor>
      <id root="5f7349ba-69ef-4c50-8794-3df2bfd3156c"/>
      <code code="AGNT" codeSystem="2.16.840.1.113883.5.110"/>
      <assignedPerson>
        <!-- RelatedPerson.identifier -->
        <ext:asEntityIdentifier classCode="IDENT">
          <ext:id root="1.2.36.1.2001.1003.0.8003608833357361" assigningAuthorityName="IHI"/>
          <ext:assigningGeographicArea classCode="PLC">
            <ext:name>National Identifier</ext:name>
          </ext:assigningGeographicArea>
        </ext:asEntityIdentifier>
        <!-- RelatedPerson.relationship -->
        <ext:personalRelationship classCode="PRS">
          <ext:code code="SIGOTHR" codeSystem="2.16.840.1.113883.5.111"
            codeSystemName="v3 Code System RoleCode" displayName="significant other" />
          <ext:asPersonalRelationship>
            <id root="ac0cbaae-f63c-4472-a0ee-268ff8f1f661"/>
            <administrativeGenderCode nullFlavor="NA" />
          </ext:asPersonalRelationship>
        </ext:personalRelationship>
      </assignedPerson>
    </assignedAuthor>
  </author>
  <!-- custodian (Organization with mandatory identifier) -->
  <custodian>
    <templateId root="1.2.36.1.2001.1001.102.101.100002" extension="1.0"/>
```

```
<assignedCustodian>
  <representedCustodianOrganization>
    <id root="987d6a7e-6264-43b0-8666-a14e1dbff91"/>
    <!-- Organization.identifier -->
    <ext:asEntityIdentifier classCode="IDENT">
      <ext:id root="1.2.36.1.2001.1007.1.8003640001000036" assigningAuthorityName="PAI-O"/>
      <ext:assigningGeographicArea classCode="PLC">
        <ext:name>National Identifier</ext:name>
      </ext:assigningGeographicArea>
    </ext:asEntityIdentifier>
  </representedCustodianOrganization>
</assignedCustodian>
</custodian>
<!-- section (Notes)-->
<component>
  <structuredBody>
    <component>
      <section>
        <templateId root="1.2.36.1.2001.1001.102.101.100010" extension="1.0"/>
        <!-- section.code -->
        <code code="102.15513" codeSystem="1.2.36.1.2001.1001.101" displayName="Notes"/>
        <!-- section.title -->
        <title>My Health Notes</title>
        <!-- section.text -->
        <text mediaType="text/x-hl7-text+xml">
          <paragraph>Exercise note</paragraph>
          <paragraph>Have been for a 20 min run every morning since last Friday.</paragraph>
        </text>
      </section>
    </component>
  </structuredBody>
</component>
</ClinicalDocument>
```

DRAFT

Appendix C. Mapping from requirements

This informative appendix provides mapping from the data items (i.e. requirements) in [Information Requirements - Consumer Entered Notes \[NEHT2011ao\]](#).

The table below matches the data items to the elements of the Personal Health Notes (PHN) model as shown in the Element column of the CDA Mapping table in the relevant template, and their corresponding CDA schema element(s) path from the root CDA schema element ClinicalDocument.

Requirement section	Data item	Element	CDA schema element
Individual	Component	Composition > subject	/ClinicalDocument/recordTarget[pat]/
		Composition > author (Patient)	/ClinicalDocument/author[pat]/assignedAuthor/
	Person Name	Patient > name	/ClinicalDocument/recordTarget[pat]/patientRole/patient/name /ClinicalDocument/author[pat]/assignedAuthor/assignedPerson/name
	Person Identifier	Patient > identifier	/ClinicalDocument/recordTarget[pat]/patientRole/patient/ext:asEntityIdentifier /ClinicalDocument/author[pat]/assignedAuthor/assignedPerson/ext:asEntityIdentifier
Author's Name (Authorised Representative)	Component	Composition > author (RelatedPerson)	/ClinicalDocument/author[relper]/assignedAuthor/
	Author's Name (Authorised Representative)	RelatedPerson > name	/ClinicalDocument/author[relper]/assignedAuthor/assignedPerson/name
Notes	Component	Composition > section (Notes)	/ClinicalDocument/component/structuredBody/component[note]/section/
	Date Information Entered	Composition > date	/ClinicalDocument/author/time
	Issue Title	section (Notes) > title	/ClinicalDocument/component/structuredBody/component[note]/section/title
		section (Notes) > text	/ClinicalDocument/component/structuredBody/component[note]/section/text
	Issue Description	section (Notes) > text	/ClinicalDocument/component/structuredBody/component[note]/section/text
Document Control	Component	n/a	n/a
	DateTime Completed	n/a	/ClinicalDocument/effectiveTime

References

- [DH2017o] Australian Digital Health Agency, 21 December 2017, *Clinical Documents Common Conformance Profile*, Version 1.7.
<https://developer.digitalhealth.gov.au/resources-and-documentation/clinical-documents/ep-2563-2017/-dh-2481-2017>
- [DH2018d] Australian Digital Health Agency, 01 November 2018, *Participant Model Specification*, Version 1.0.
<https://www.digitalhealth.gov.au/implementation-resources/clinical-documents/participant-model-specification>
- [DH2019a] Australian Digital Health Agency, 28 February 2019, *Common - Clinical Document*, Version 1.5.2.
<https://developer.digitalhealth.gov.au/specifications/clinical-documents/ep-2807-2019>
- [DH2019d] Australian Digital Health Agency, Not yet published, *Personal Health Records FHIR Implementation Guide*, Version 1.0.
<https://www.digitalhealth.gov.au/implementation-resources/clinical-documents/common-clinical-document>
- [HI2011] Health Intersections, 2011, *Representation of Common Australian Identifiers in v2 and CDA*, accessed 28 November 2011.
<http://www.healthintersections.com.au/?p=721>
- [HL7AUBIG] HL7 Australia, Continuous Integration Build, *Australian Base Profiles Implementation Guide*, v1.0.0 (Standard for Trial Use), accessed 07 March 2019.
<http://build.fhir.org/ig/hl7au/au-fhir-base/index.html>
- [HL7CDAR2] Health Level Seven, Inc., January 2010, *HL7 Clinical Document Architecture*, Release 2.
http://www.hl7.org/implement/standards/product_brief.cfm?product_id=7
- [HL7FHIR3] Health Level Seven, Inc., 19 April 2017, *FHIR*, Release 3 (STU), accessed 10 Mar 2019.
<http://hl7.org/fhir/STU3/index.html>
- [HL7RIM] Health Level Seven, Inc., January 2010, *HL7 Version 3 Standard – Reference Information Model*.
http://www.hl7.org/implement/standards/product_brief.cfm?product_id=77
- [HL7V3] Health Level Seven, Inc., January 2010, *HL7 Version 3 Standard*.
http://www.hl7.org/implement/standards/product_brief.cfm?product_id=186
- [HL7V3DT] Health Level Seven, Inc., January 2010, *HL7 V3 RIM, Data types and Vocabulary*.
<http://www.hl7.org/memonly/downloads/v3edition.cfm>
- [IHTS2010] International Health Terminology Standards Development Organisation, January 2010, *SNOMED CT*, accessed 15 March 2010.
<http://www.ihtsdo.org/snomed-ct>
- [INFO2009] Canada Health Infoway, *CDA Validation Tools: infoway_release_2_2X_18.zip*.
<http://www.hl7.org/memonly/downloads/v3edition.cfm>
- [NEHT2011ao] National E-Health Transition Authority, 19 December 2011, *Information Requirements - Consumer Entered Notes*, Version 0.07.
<https://developer.digitalhealth.gov.au/specifications/clinical-documents/ep-0934-2012/nehata-0955-2011>
- [NEHT2011ap] National E-Health Transition Authority, 21 December 2011, *Consumer Entered Notes CDA Implementation Guide*, Version 1.0.
<http://www.nehta.gov.au/implementation-resources/clinical-documents/consumer-entered-notes>
- [NEHT2011bn] National E-Health Transition Authority, 19 December 2011, *Consumer Entered Notes - Structured Content Specification*, Version 1.0.
<http://www.nehta.gov.au/implementation-resources/clinical-documents/consumer-entered-notes>
- [NEHT2011bv] National E-Health Transition Authority, 10 October 2011, *Representing Coding in CDA Documents Implementation Guidance*, Version 1.0.

- <https://developer.digitalhealth.gov.au/resources-and-documentation/clinical-documents/ep-1094-2011/-nehta-1097-2011>
- [NEHT2012s] National E-Health Transition Authority, 07 March 2012, *CDA Rendering Specification*, Version 1.0.
<https://developer.digitalhealth.gov.au/resources-and-documentation/clinical-documents/ep-1094-2011/-nehta-1199-2012>
- [RFC2119] Network Working Group, 1997, *Key Words for Use in RFCs to Indicate Requirement Levels*, accessed 05 March 2019.
<https://tools.ietf.org/html/rfc2119>
- [RING2009] Ringholm, 2009, *CDA Examples*, accessed 15 March 2010.
http://www.ringholm.de/download/CDA_R2_examples.zip
- [SA2014a] Standards Australia, 2014, *AS 4846 (2014) – Person and provider identification in healthcare*.
<http://infostore.saiglobal.com/store/details.aspx?ProductID=1753860>
- [UCUM] The Unified Code for Units of Measure, 2009, *The Unified Code for Units of Measure*, accessed 01 November 2012.
<http://unitsofmeasure.org/trac/>