



Prescription and Dispense Lists

CDA Implementation Guide

6 August 2019 v1.0

Draft for external use

Document ID: DH-xxxx:2019

Draft Version 001

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Document Information

Key Information

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Product Version History

Product ver- sion	Date	Release comments
1.0	6 Aug 2019	Brand new - TBD

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
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

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Acknowledgements

Council of Australian Governments

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

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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 Prescription and or Dispense List (PDL) model ([Prescription and Dispense Lists FHIR Implementation Guide \[DH2019a\]](#)) to a corresponding CDA attribute or element. The resulting CDA document can be used for the electronic exchange of PDL information, such as a pharmacist shared medicines list (PSML) document, between healthcare providers.

Whilst this implementation guide is defined to support a generic practitioner-author list as a document, at the time of publication of this implementation guide it is expected that in the near term implementations will be of a pharmacist shared medicines list exchanged with the My Health Record.

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 PDL.

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 PDL model to a corresponding CDA attribute or element.

A logical view of the PDL model ([FHIR \[HL7FHIR3\]](#) StructureDefinitions) is presented as a tree structure in a hierarchical table (see [4 Prescription and or Dispense List hierarchy](#)). The PDL model is published as a set of [FHIR \[HL7FHIR3\]](#) profiles in [Prescription and Dispense Lists FHIR Implementation Guide \[DH2019o\]](#).

The starting point for the CDA templates is the clinical document model template defined in [ClinicalDocument \(Prescription and or Dispense List\)](#), 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.

This implementation guide is intended to align 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
This implementation guide	This is just a wip shell at the moment - nothing to see here; move along.

Reference	Description
Terminology publication	<p>The following value sets are not yet available in NCTS:</p> <ul style="list-style-type: none">• Address Type HL7 v3• Healthcare Identifier Geographic Area• Composition Status FHIR to Australian CDA Document Life-cycle Status• Australian CDA Document Lifecycle Status to Composition Status FHIR
Appendix C. Examples	This chapter is a placeholder - examples are yet to be done.
<i>Prescription and Dispense Lists FHIR Implementation Guide [DH2019o]</i>	The Prescription and or Dispense List 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/CL/repos/ci-fhir-stu3/browse (internal).

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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 Prescription List, or a Dispense List, or a Prescription and Dispense List 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. Prescription and or Dispense List. >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="1.2.36.1.2001.1001.1002.226"`) 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	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. Where SHOULD NOT 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. 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. Implementers must support an 'optional' requirement.

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 [Prescription and Dispense Lists FHIR Implementation Guide \[DH2019o\]](#).

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 PDL 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 PDL 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 descrip- tion	Card	Element type	CDA schema element	Constraints and com- ments
CDA conformance level, e.g. CDA Header, CDA Body Level 3 Data Elements					
<p>The logical hierarchical path in the PDL model expressed using names of the elements in the PDL 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 PDL model.</p> <p>(See Conformance conventions)</p>	<p>The cardinality of the element in the PDL model.</p>	<p>The type of the element (hyper-linked to the definition of the [HL7FHIR3] type) in the PDL 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 Identifier.</p>	<p>Context: The root context that is applied as a prefix to the CDA schema element paths in the mapping rows below</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> <pre>{/name{[index]}}n</pre> <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). When applicable, followed by a reference to a footnote that provides a hyperlink to related concept map.</p> <p>e.g. Address Type HL7 v3 (required)¹</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>

¹Note: Mappings between the set of concepts in the terminology bindings on address type[\[DH2019o\]](#) and in the CDA model are defined in [v3 map for AddressType](#) concept map.

3 Conformance

3.1 Conformance requirements

This document describes how the PDL 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* PDL 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 PDL 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 Prescription and or Dispense List hierarchy

A Prescription List, or a Dispense List, or a Prescription and Dispense List document is defined as:

A list of prescriptions, and or, dispense records for a patient. *Prescription and Dispense Lists FHIR Implementation Guide [DH2019o]*

4.1 Hierarchy

The hierarchy below provides a logical view of the Prescription and or Dispense List 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 (Prescription and or Dispense List)		DomainResource
composition-author-role	0..1	Reference(PractitionerRole as PractitionerRole with Practitioner with Mandatory Identifier)
identifier	0..1	Identifier
status	1..1	code
type	1..1	CodeableConcept
subject	1..1	Reference(Patient as Patient with Mandatory Identifier)
date	1..1	dateTime
author	1..1	Reference(Practitioner as Practitioner with Mandatory Identifier Device as Device with Mandatory Identifier Patient as Patient with Mandatory Identifier RelatedPerson as RelatedPerson with Mandatory Identifier)
title	1..1	string
attester (Legal Attester)	0..1	BackboneElement
mode	1..1	code
time	1..1	dateTime
party	1..1	Reference(Practitioner as Practitioner with Mandatory Identifier)
custodian	1..1	Reference(Organization as Organization with Mandatory Identifier)
section (Dispense List)	0..1	BackboneElement
title	1..1	string
code	1..1	CodeableConcept
text	1..1	Narrative
entry	0..2	Reference(List as List of Prescription and or Dispense Records Provenance as Provenance for the Generation of a List)
emptyReason	0..1	CodeableConcept
section (Prescription List)	0..1	BackboneElement
title	1..1	string
code	1..1	CodeableConcept

Name			Cardinality	Type
		text	1..1	Narrative
		entry	0..2	Reference(List as List of Prescription and or Dispense Records Provenance as Provenance for the Generation of a List)
		emptyReason	0..1	CodeableConcept
	section (Prescription and Dispense List)		0..1	BackboneElement
		title	1..1	string
		code	1..1	CodeableConcept
		text	1..1	Narrative
		entry	0..2	Reference(List as List of Prescription and or Dispense Records Provenance as Provenance for the Generation of a List)
		emptyReason	0..1	CodeableConcept

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4.2 Expanded hierarchy

The hierarchy below provides an expanded logical view of the Prescription and or Dispense List 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 (Prescription and or Dispense List)			DomainResource
	composition-author-role	0..1	Reference(PractitionerRole as PractitionerRole with Practitioner with Mandatory Identifier)
	identifier	0..*	Identifier
	active	0..1	boolean
	period	0..1	Period
	practitioner	1..1	Reference(Practitioner as Practitioner with Mandatory Identifier)
	organization	0..1	Reference(Organization as Base Organization)
	code	0..*	CodeableConcept
	specialty	0..*	CodeableConcept
	location	0..*	Reference(Location)
	healthcareService	0..*	Reference(HealthcareService)
	telecom	0..*	ContactPoint
	availableTime	0..*	BackboneElement
	daysOfWeek	0..*	code
	allDay	0..1	boolean
	availableStartTime	0..1	time
	availableEndTime	0..1	time
	notAvailable	0..*	BackboneElement
	description	1..1	string
	during	0..1	Period
	availabilityExceptions	0..1	string
	date	1..1	dateTime
	identifier	0..1	Identifier
	status	1..1	code
	type	1..1	CodeableConcept
	subject	1..1	Reference(Patient as Patient with Mandatory Identifier)
	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			Cardinality	Type
		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
		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 Identifier)
		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

Name			Cardinality	Type	
		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 Identifier)
		identifier	0..*		Identifier
		active	0..1		boolean
		patient	1..1		Reference(Patient) as Base Patient)
		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
	author			0..1	Reference(Practitioner) as Practitioner with Mandatory Identifier)
		identifier	1..*		Identifier
		active	0..1		boolean
		name	0..*		HumanName
		telecom	0..*		ContactPoint
		address	0..*		Address
		gender	0..1		code
		birthDate	0..1		date
		photo	0..0		Attachment
		qualification	0..*		BackboneElement
			identifier	0..*	Identifier
			code	1..1	CodeableConcept
			period	0..1	Period
			issuer	0..1	Reference(Organization) as Base Organization)
			communication	0..*	CodeableConcept

Name			Cardinality	Type
	title		1..1	string
	attester (Legal Attester)		1..1	BackboneElement
	mode		1..1	code
	time		1..1	dateTime
	party		1..1	Reference(Practitioner as Practitioner with Mandatory Identifier)
			1..*	Identifier
			0..1	boolean
			0..*	HumanName
			0..*	ContactPoint
			0..*	Address
			0..1	code
			0..1	date
			0..0	Attachment
			0..*	BackboneElement
			0..*	Identifier
			1..1	CodeableConcept
			0..1	Period
			0..1	Reference(Organization as Base Organization)
			0..*	CodeableConcept
	custodian		1..1	Reference(Organization as Organization with Mandatory Identifier)
			1..*	Identifier
			0..1	boolean
			0..*	CodeableConcept
			0..1	string
			0..*	string
			0..*	ContactPoint
			0..*	Address
			0..1	Reference(Organization as Base Organization)
			0..*	BackboneElement
			0..1	CodeableConcept
			0..1	HumanName
			0..*	ContactPoint
			0..1	Address
	section (Dispense List)		0..1	BackboneElement
			1..1	string
			1..1	CodeableConcept
			1..1	Narrative
			0..1	Reference(List as List of Prescription and or Dispense Records)
			0..1	Reference(PractitionerRole as PractitionerRole with Practitioner with Mandatory Identifier)
			0..1	Reference(RelatedPerson as RelatedPerson with Mandatory Identifier)
			1..1	code
			1..1	CodeableConcept
			1..1	Reference(Patient as Patient with Mandatory Identifier)
			0..1	dateTime

Name				Cardinality	Type
		source		0..1	Reference(Practitioner) as Practitioner with Mandatory Identifier Patient as Patient with Mandatory Identifier Device as Device with Mandatory Identifier)
		note		0..*	Annotation
		entry		1..*	BackboneElement
			item	1..1	Reference(MedicationStatement MedicationRequest MedicationDispense)
		emptyReason		0..1	CodeableConcept
	entry			0..1	Reference(Provenance) as Provenance for the Generation of a List)
		target		1..*	Reference(Any)
		period		0..1	Period
		recorded		1..1	instant
		policy		0..*	uri
		activity		1..*	Coding
		agent (Assembling Device)		0..1	Reference(BackboneElement)
			role	0..1	CodeableConcept
			who[x]	0..1	Reference(Device) as Base Device)
			onBehalfOf[x]	0..1	Reference(Practitioner) as Base Practitioner RelatedPerson as Base RelatedPerson Patient as Base Patient Device as Base Device Organization as Base Organization)
		agent (Authoring Entity)		0..1	Reference(BackboneElement)
			role	0..1	CodeableConcept
			who[x]	0..1	Reference(Practitioner) as Base Practitioner RelatedPerson as Base RelatedPerson Patient as Base Patient Organization as Base Organization)
			onBehalfOf[x]	0..1	Reference(Practitioner) as Base Practitioner RelatedPerson as Base RelatedPerson Patient as Base Patient Organization as Base Organization)
		entity		0..*	Reference(BackboneElement)
			role	0..1	code
			what[x]	0..1	Reference(Any)
			agent	0..1	???
	emptyReason			0..1	CodeableConcept
section (Prescription List)				0..1	BackboneElement
	title			1..1	string
	code			1..1	CodeableConcept
	text			1..1	Narrative
	entry			0..1	Reference(List as List of Prescription and or Dispense Records)
		author-role		0..1	Reference(PractitionerRole) as PractitionerRole with Practitioner with Mandatory Identifier)
		author-related-person		0..1	Reference(RelatedPerson) as RelatedPerson with Mandatory Identifier)
		status		1..1	code
		code		1..1	CodeableConcept
		subject		1..1	Reference(Patient) as Patient with Mandatory Identifier)
		date		0..1	dateTime
		source		0..1	Reference(Practitioner) as Practitioner with Mandatory Identifier Patient as Patient with Mandatory Identifier Device as Device with Mandatory Identifier)
		note		0..*	Annotation

Name				Cardinality	Type
	entry			1..*	BackboneElement
			item	1..1	Reference(MedicationStatement MedicationRequest MedicationDispense)
	emptyReason			0..1	CodeableConcept
	entry			0..1	Reference(Provenance as Provenance for the Generation of a List)
			target	1..*	Reference(Any)
	period			0..1	Period
	recorded			1..1	instant
	policy			0..*	uri
	activity			1..*	Coding
	agent (Assembling Device)			0..1	Reference(BackboneElement)
			role	0..1	CodeableConcept
			who[x]	0..1	Reference(Device as Base Device)
			onBehalfOf[x]	0..1	Reference(Practitioner as Base Practitioner RelatedPerson as Base RelatedPerson Patient as Base Patient Device as Base Device Organization as Base Organization)
	agent (Authoring Entity)			0..1	Reference(BackboneElement)
			role	0..1	CodeableConcept
			who[x]	0..1	Reference(Practitioner as Base Practitioner RelatedPerson as Base RelatedPerson Patient as Base Patient Organization as Base Organization)
			onBehalfOf[x]	0..1	Reference(Practitioner as Base Practitioner RelatedPerson as Base RelatedPerson Patient as Base Patient Organization as Base Organization)
	entity			0..*	Reference(BackboneElement)
			role	0..1	code
			what[x]	0..1	Reference(Any)
			agent	0..1	???
	emptyReason			0..1	CodeableConcept
section (Prescription and Dispense List)				0..1	BackboneElement
	title			1..1	string
	code			1..1	CodeableConcept
	text			1..1	Narrative
	entry			0..1	Reference(List as List of Prescription and or Dispense Records)
			author-role	0..1	Reference(PractitionerRole as PractitionerRole with Practitioner with Mandatory Identifier)
			author-related-person	0..1	Reference(RelatedPerson as RelatedPerson with Mandatory Identifier)
			status	1..1	code
			code	1..1	CodeableConcept
			subject	1..1	Reference(Patient as Patient with Mandatory Identifier)
			date	0..1	dateTime
			source	0..1	Reference(Practitioner as Practitioner with Mandatory Identifier Patient as Patient with Mandatory Identifier Device as Device with Mandatory Identifier)
			note	0..*	Annotation
	entry			1..*	BackboneElement
			item	1..1	Reference(MedicationStatement MedicationRequest MedicationDispense)
	emptyReason			0..1	CodeableConcept

Name				Cardinality	Type
		entry		0..1	Reference(Provenance as Provenance for the Generation of a List)
			target	1..*	Reference(Any)
			period	0..1	Period
			recorded	1..1	instant
			policy	0..*	uri
			activity	1..*	Coding
			agent (Assembling Device)	0..1	Reference(BackboneElement)
				role	0..1
				who[x]	0..1
				onBehalfOf[x]	0..1
			agent (Authoring Entity)	0..1	Reference(BackboneElement)
				role	0..1
				who[x]	0..1
				onBehalfOf[x]	0..1
			entity	0..*	Reference(BackboneElement)
				role	0..1
				what[x]	0..1
				agent	0..1
	emptyReason				???
					CodeableConcept

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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 Prescription and or Dispense List 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	<p>This template SHALL be a closed template.</p> <p>All attributes of the ClinicalDocument element defined by the Australian Digital Health Agency CDA schema SHALL be allowed.</p> <p>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.</p>
ClinicalDocument/realmCode	A realmCode signals the imposition of realm-specific constraints. The value identifies the realm in question.	0..*	All attributes of the //realmCode 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.
ClinicalDocument/id	Represents the unique instance identifier of a clinical document.	1..1	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. See < id > for available attributes.
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	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. See < time > for available attributes.
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	

CDA schema element	Definition	Card	Constraints and comments
ClinicalDocument/setId	Represents an identifier that is common across all document revisions.	0..1	All attributes of the //setId element defined by the Australian Digital Health Agency CDA schema SHALL be allowed. See < id > for available attributes.
ClinicalDocument/versionNumber	An integer value used to version successive replacement documents.	0..1	
ClinicalDocument/versionNumber/@value		1..1	
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.

CDA schema element	Definition	Card	Constraints and comments
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.

5.3 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 PDL 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	Administrative Observations is a CDA section that is created to hold these elements in preference to creating extensions for them.		1..1
component[admin_obs]/section/templateId	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/templateId/@root="1.2.36.1.2001.1001.102.101.100000"			1..1
component[admin_obs]/section/templateId/@extension="1.0"			1..1
component[admin_obs]/section/id			0..1
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 (Prescription and or Dispense List) 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 Prescription and or Dispense List Hierarchy.

6.1 ClinicalDocument (Prescription and or Dispense List)

The following are the overarching usage scenarios this template is intended to support:

- A clinical information system (CIS) sends or receives a prescription and or a dispense record list document with the My Health Record system
- A contracted service provider (CSP) sends or receives a prescription and or a dispense record list document with the My Health Record system
- A CIS sends or receives a prescription and or a dispense record list document with another CIS or CSP
- A CSP sends or receives a prescription and or a dispense record list document with a CIS or another CSP
- A registered portal or registered repository receives a prescription and or a dispense record list document

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
CDA Header Data Elements				Context: /	
Composition	A list of prescriptions, and or, dispense records for a patient.	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="1.2.36.1.2001.1001.102.101.100065"	
				ClinicalDocument/templateId/@extension="1.0"	

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Composition > composition-author-role	A practitioner role that authored this composition. This is not to be confused with who typed in the information.	0..1	Reference(PractitionerRole) as PractitionerRole with Practitioner with Mandatory Identifier	ClinicalDocument/author	author SHALL conform to the template defined in author (PractitionerRole with Practitioner with Mandatory Identifier) .
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)¹
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	See <code> for available attributes. Prescription and Dispense List Type (required)
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 Identifier	ClinicalDocument/recordTarget	recordTarget SHALL conform to the template defined in recordTarget (Patient with Mandatory Identifier) .
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 Identifier Practitioner as Practitioner with Mandatory Identifier RelatedPerson as RelatedPerson with Mandatory Identifier	ClinicalDocument/author	In CDA an author (Practitioner) is part of composition-author-role (PractitionerRole); therefore if the author is a practitioner then composition-author-role SHALL be instantiated. author SHALL conform to a template defined in author (Patient with Mandatory Identifier) or author (RelatedPerson with Mandatory Identifier) or author (PractitionerRole with Practitioner with Mandatory Identifier) .
Composition > title	Official human-readable label for the composition.	1..1	string	ClinicalDocument/title	
Composition > attester (Legal Attester) > attester-related-party	A related person that attested this composition.	0..1	Reference(RelatedPerson) as RelatedPerson with Mandatory Identifier	n/a	Not mapped separately, implicit in legalAuthenticator/as-signedEntity.
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 (Dispense List)	A list of dispense records for a patient.	1..1	BackboneElement	ClinicalDocument/component/structuredBody/component[dl] ClinicalDocument/component/structuredBody/component[dl]/section	section SHALL conform to the template defined in section (Dispense List) .

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Composition > section (Prescription List)	A list of prescriptions for a patient.	0..1	BackboneElement	ClinicalDocument/component/structuredBody/component[pl]	
				ClinicalDocument/component/structuredBody/component[pl]/section	section SHALL conform to the template defined in section (Prescription List) .
Composition > section (Prescription and Dispense List)	A list of prescriptions and dispense records for a patient.	0..1	BackboneElement	ClinicalDocument/component/structuredBody/component[pdl]	
				ClinicalDocument/component/structuredBody/component[pdl]/section	section SHALL conform to the template defined in section (Prescription and Dispense List) .

¹Note: Mappings between the set of concepts in the terminology binding on status in Prescription and or Dispense List [DH2019o] and in the CDA model are defined in [Composition Status FHIR to Australian CDA Document Lifecycle Status](#) and [Australian CDA Document Lifecycle Status to Composition Status FHIR](#) concept maps.

7 Participation CDA templates

This chapter contains mapping from the Individual (e.g. Patient with Mandatory Identifier) 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 Prescription and or Dispense List Hierarchy.

7.1 recordTarget (Patient with Mandatory Identifier)

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="1.2.36.1.2001.1001.102.101.100004"	
				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 system 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					
Patient > closing-the-gap-registration	Closing the Gap registration indicator for an Australian patient.	0..1	boolean	entry[close_gap] entry[close_gap]/observation entry[close_gap]/observation/@classCode="OBS" entry[close_gap]/observation/@moodCode="EVN" entry[close_gap]/observation/id 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 entry[close_gap]/observation/code/@displayName entry[close_gap]/observation/value	Optional CDA element. See <id> for available attributes. codeSystemName SHOULD be "NCTIS Data Components". displayName SHOULD be "Closing the Gap Copayment Eligibility Indicator". The value is 'true' if eligible for Closing the Gap co-payment. //value/@xsi:type SHALL be "BL".
Patient > patient-mothersMaidenName	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/@classCode="OBS" entry[mothers_name]/observation/@moodCode="EVN" entry[mothers_name]/observation/id 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 entry[mothers_name]/observation/code/@displayName entry[mothers_name]/observation/value	Optional CDA element. See <id> for available attributes. codeSystemName SHOULD be "NCTIS Data Components". displayName SHOULD be "Mother's Original Family Name". //value/@xsi:type SHALL be "ST".

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
CDA Header Data Elements		Context: /ClinicalDocument/			
Patient > identifier	An identifier for this patient.	1..*	Identifier	recordTarget[pat]/patientRole/patient/ext:asEntityIdentifier	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	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.

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Patient > deceased	Indicates if the individual is deceased or not. Deceased date accuracy indicator is optional.	0..1	boolean dateTime	recordTarget[pat]/patientRole/patient/ext:deceasedInd	Only one of patientRole/patient/ext:deceasedInd or patientRole/patient/ext:deceasedTime SHOULD be instantiated.
				recordTarget[pat]/patientRole/patient/ext:deceasedTime	
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 > 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	

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
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)
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/preferenceInd	
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(Organization as Base Organization)	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					
Patient > contact	A contact party (e.g. guardian, partner, friend) for the patient.	Cardinality comes from linking elements	BackboneElement	Context: /ClinicalDocument/	
				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"	
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.
Patient > contact > period	The period during which this contact person or organization is valid to be contacted relating to this patient.	0..1	Period	participant[pat_contact]/associatedEntity/scopingOrganization/typeCode="ORG"	
				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]/asOrganizationPartOf participant[gen_prac_org]/asOrganizationPartOf/wholeOrganization	The organization SHALL have at least a name (/wholeOrganization/name) or an identifier (/wholeOrganization/ext:asEntityIdentifier). Organization > partOf template is not currently defined.
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.
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): HumanName .

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 > qualification	Qualifications obtained by training and certification.	0..*	BackboneElement	See: instantiation choices	<p>It is possible that the qualification may be able to be captured as a complex structure or as a text list.</p> <p>instantiation choices:</p> <p>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.</p> <p>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).</p>
Practitioner > communication	A language the practitioner is able to use in patient communication.	0..*	CodeableConcept	n/a	<p>This logical element is not currently mapped into CDA.</p> <p>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.</p>

7.5 author (Patient 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				
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/@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. 0..1 A system may use the address.text if they don't store the birthPlace address in discrete elements.	Address	n/a	Not mapped directly for this participant; this is implicit in //recordTarget/patientRole/patient/ethnicGroupCode.
Patient > indigenous-status	National Health Data Dictionary (NHDD) based indigenous status for a patient.	0..1	Coding	n/a				
Patient > closing-the-gap-registration	Closing the Gap registration indicator for an Australian patient.	0..1	boolean	n/a				
Patient > patient-mothers-MaidenName	Mother's maiden (unmarried) name, commonly collected to help verify patient identity.	0..1	string	n/a				

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	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 .
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/maritalStatusCode.
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 > 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/languageCommunication.
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(Organiza- tion as Base Or- ganization)	n/a	This logical element has no mapping to CDA.

7.6 author (RelatedPerson 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	
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/@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..*

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
					<p>See "><Entity Identifier> for available attributes.</p> <p>Recommended mappings for the complex data type to CDA (R2): Identifier.</p>
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.
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 > 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 author (PractitionerRole with Practitioner 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	
PractitionerRole	A specific set of Roles/Locations/specialties/services that a practitioner may perform at an organization for a period of time.	Cardinality comes from linking elements	DomainResource	author[prac_rol]	
				author[prac_rol]/templateId	The use of templateId signals the imposition of a set of template-defined constraints.
				author[prac_rol]/templateId/@root="1.2.36.1.2001.1001.102.101.100006"	
				author[prac_rol]/templateId/@extension="1.0"	
				author[prac_rol]/assignedAuthor	The use of templateId signals the imposition of a set of template-defined constraints.
				author[prac_rol]/assignedAuthor/id	See < id > for available attributes.
PractitionerRole > identifier	Business identifiers for practitioner in a role.	0..*	Identifier	author[prac_rol]/assignedAuthor/assignedPerson/ext:asEntityIdentifier	In CDA the identifier for both PractitionerRole and Practitioner for an author participation are expected to be included in //assignedPerson/ext:asEntityIdentifier. Cardinality of this element SHALL be interpreted as 1..*. See < Entity Identifier > for available attributes. Recommended mappings for the complex data type to CDA (R2): Identifier .
PractitionerRole > active	Whether this practitioner's record is in active use.	0..1	boolean	n/a	This logical element has no mapping to CDA.
Practitioner > period	The period during which the person is authorized to act as a practitioner in these role(s) for the organization.	0..1	Period	n/a	This logical element has no mapping to CDA.
PractitionerRole > Practitioner	Practitioner that is able to provide the defined services for the organization.	1..1	DomainResource	author[prac_rol]/assignedAuthor/assignedPerson	assignedPerson SHALL conform to the template defined in assignedPerson (Practitioner with mandatory identifier) .
PractitionerRole > organization	The organization where the Practitioner performs the roles associated.	0..1	Reference(Organization as Base Organization)	author[prac_rol]/assignedAuthor/representedOrganization	representedOrganization SHALL conform to the template defined in representedOrganization (Base Organization) .
PractitionerRole > code	Roles which this practitioner is authorized to perform for the organization.	0..*	code	author[prac_rol]/assignedAuthor/code	See < code > for available attributes. Australian and New Zealand Standard Classification of Occupations (preferred) or Practitioner Role (preferred) ¹
PractitionerRole > specialty	Specific specialty of the practitioner.	0..*	code	n/a	specialty is not currently mapped.
PractitionerRole > location	The location(s) at which this practitioner provides care.	0..*	Reference(Location)	n/a	location is not currently mapped.
PractitionerRole > healthcareService	The list of healthcare services that this worker provides for this role's Organization/Location(s).	0..*	Reference(HealthcareService)	n/a	healthcareService is not currently mapped.

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
PractitionerRole > telecom	Contact details that are specific to the role/location/service.	0..*	ContactPoint	author[prac_rol]/assignedAuthor/telecom	In CDA the telecom for both PractitionerRole and Practitioner for an author participation are expected to be included in //assignedAuthor/telecom. Recommended mappings for the complex data type to CDA (R2): ContactPoint .
PractitionerRole > availableTime	A collection of times that the Service Site is available.	0..*	BackboneElement	n/a	availableTime is not currently mapped.
PractitionerRole > notAvailable	The HealthcareService is not available during this period of time due to the provided reason.	0..*	string	n/a	notAvailable is not currently mapped.
PractitionerRole > availabilityExceptions	A description of site availability exceptions, e.g. public holiday availability. Succinctly describing all possible exceptions to normal site availability as details in the available Times and not available Times.	0..1	CodeableConcept	n/a	availabilityExceptions is not currently mapped.

¹Note: The source representation of this terminology binding on code in PractitionerRole with Practitioner with Mandatory Identifier [DH2019o] is as an optional slice on the [coding](#) part of the code element. In the representation of the model presented in this specification it is normalised as a set of preferred bindings.

7.8 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 //represented-CustodianOrganization/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 representedCustodianOrganization/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 Identifier) 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 Prescription and or Dispense List 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.

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
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.
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 providerOrganization[manag_org]/asOrganizationPartOf/wholeOrganization	The organization SHALL have at least a name (//wholeOrganization/name) or an identifier (//wholeOrganization/ext:asEntityIdentifier). Organization > partOf template is not currently defined.
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 .

8.3 representedOrganization (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	representedOrganization	The organization SHALL have at least name (//representedOrganization/name) or an identifier (//representedOrganization/ext:asEntityIdentifier) instantiated.
				representedOrganization/templateId	The use of templateId signals the imposition of a set of template-defined constraints.
				representedOrganization/templateId/@root="1.2.36.1.2001.1001.102.101.100039"	
				representedOrganization/templateId/@extension="1.0"	
				representedOrganization/id	See < id > for available attributes.
Organization > identifier	Identifier for the organization that is used to identify the organization across multiple disparate systems.	0..*	Identifier	representedOrganization/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	representedOrganization/code	See < code > for available attributes. OrganizationType (example)
Organization > name	A name associated with the organization.	0..1	string	representedOrganization/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	representedOrganization/name	In CDA name and alias are represented by //representedOrganization/name.
Organization > telecom	A contact detail for the organization.	0..*	ContactPoint	representedOrganization/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	representedOrganization/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 Organization Base)	representedOrganization/asOrganizationPartOf	The organization SHALL have at least a name (//wholeOrganization/name) or an identifier (//wholeOrganization/ext:asEntityIdentifier).
				representedOrganization/asOrganizationPartOf/wholeOrganization	
Organization > partOf template is not currently defined.					

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.	0..*	BackboneElement	participant[org_contact]	participant[org_contact] SHALL conform to the template defined in participant (Organization contact) .

8.4 assignedPerson (Practitioner 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
Practitioner	A person who is directly or indirectly involved in the provisioning of healthcare.	Cardinality comes from linking elements	DomainResource	assignedPerson[prac]	
				assignedPerson[prac]/templateId	The use of templateId signals the imposition of a set of template-defined constraints.
				assignedPerson[prac]/templateId/@root="1.2.36.1.2001.1001.102.101.100040"	
				assignedPerson[prac]/templateId/@extension="1.0"	
				assignedPerson[prac]/id	See < id > for available attributes.
Practitioner > identifier	An identifier that applies to this person in this role.	1..*	Identifier	assignedPerson[prac]/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	assignedPerson[prac]/name	Recommended mappings for the complex data type to CDA (R2): HumanName .
Practitioner > telecom	A contact detail for the practitioner, e.g. a telephone number or an email address.	0..*	ContactPoint	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	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	assignedPerson[prac]/ext:administrativeGenderCode	See < code > for available attributes. AdministrativeGender (required)
Practitioner > birthDate	The date of birth for the practitioner.	0..1	date	assignedPerson[prac]/ext:birthTime	See < time > for available attributes.

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Practitioner > qualification	Qualifications obtained by training and certification.	0..*	BackboneElement	See: instantiation choices	<p>It is possible that the qualification may be able to be captured as a complex structure or as a text list.</p> <p>instantiation choices:</p> <p>If the qualification or list of qualifications is the result of capturing a text field then this element is expected to be as //assignedPerson[prac]/ext:Qualifications/@classCode="QUAL". See <Qualification> for available attributes.</p> <p>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).</p>
Practitioner > communication	A language the practitioner is able to use in patient communication.	0..*	CodeableConcept	n/a	<p>This logical element is not currently mapped into CDA.</p> <p>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.</p>

9 Section CDA templates

This chapter contains mapping from the section (e.g. Dispense List) 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 Prescription and or Dispense List Hierarchy.

9.1 section (Dispense List)

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
CDA Body Level 3 Data Elements					
section (Dispense List)	A list of dispense records for a patient.	1..1	BackboneElement	section	This section SHALL contain at least one entry (section/entry[pdl]) or an emptyReason (section/@nullFlavor) but SHALL NOT contain both.
				section/templateId	
				section/templateId/@root="1.2.36.1.2001.1001.102.101.100074"	
				section/templateId/@extension="1.0"	
section (Dispense List) > 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 (Dispense List) > 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="100.32014"	
				section/code/@codeSystem="1.2.36.1.2001.1001.101"	
				section/code/@codeSystemName	Optional CDA element. codeSystemName SHOULD be "NCTIS Data Components".
				section/code/@displayName	Optional CDA element. displayName SHOULD be "Dispense List".

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
section (Dispense List) > 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/text	See CDA narratives .
section (Dispense List) > entry	A reference to the actual resource from which the narrative in the section is derived.	0..2	Reference(List as List of Prescription and or Dispense Records Provenance as Provenance for the Generation of a List)	section/entry[dl] See: instantiation choices	instantiation choices: If entry is a List then it is expected to be instantiated as //section/entry[dl]/act. act SHALL conform to the template defined in act (List of Prescription and or Dispense Records) ; that act SHALL have the same code as this section (//entry[dl]/act/code/@code="100.32014"). If entry is an Provenance then it is expected to be instantiated as //section/entry[dl]/observation. observation SHALL conform to the template defined in act (Provenance for the Generation of a List) .
section (Dispense List) > emptyReason	If the section is empty, why the list is empty. An empty section typically has some text explaining the empty reason.	0..1	CodeableConcept	section/@nullFlavor	Empty Reason HL7 v3 NullFlavor (required) The nullFlavor attribute is used to represent the reason a section is empty of clinical content.

9.2 section (Prescription List)

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
CDA Body Level 3 Data Elements				Comes from linking elements	
section (Prescription List)	A list of prescriptions for a patient.	1..1	BackboneElement	section	This section SHALL contain at least one entry (section/entry[pdl]) or an emptyReason (section/@nullFlavor) but SHALL NOT contain both.
				section/templateId	The use of templateId signals the imposition of a set of template-defined constraints.
				section/templateId/@root="1.2.36.1.2001.1001.102.101.100073"	
				section/templateId/@extension="1.0"	
section (Prescription List) > 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 (Prescription List) > 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="57828-6"	
				section/code/@codeSystem="2.16.840.1.113883.6.1"	
				section/code/@codeSystemName	Optional CDA element. codeSystemName SHOULD be "LOINC;".
				section/code/@displayName	Optional CDA element. displayName SHOULD be "Prescription list".
section (Prescription List) > 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/text	See CDA narratives .

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
section (Prescription List) > entry	A reference to the actual resource from which the narrative in the section is derived.	0..2	Reference (List as List of Prescription and or Dispense Records Provenance as Provenance for the Generation of a List)	section/entry[pl]	<p>instantiation choices:</p> <p>If entry is a List then it is expected to be instantiated as //section/entry[pl]/act. act SHALL conform to the template defined in act (List of Prescription and or Dispense Records); that act SHALL have the same code as this section (//entry[pl]/act/code/@code="57828-6").</p> <p>If entry is an Provenance then it is expected to be instantiated as //section/entry[pl]/observation. observation SHALL conform to the template defined in act (Provenance for the Generation of a List).</p>
section (Prescription List) > emptyReason	If the section is empty, why the list is empty. An empty section typically has some text explaining the empty reason.	0..1	CodeableConcept	section/@nullFlavor	<p>Empty Reason HL7 v3 NullFlavor (required)</p> <p>The nullFlavor attribute is used to represent the reason a section is empty of clinical content.</p>

9.3 section (Prescription and Dispense List)

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
CDA Body Level 3 Data Elements				Comes from linking elements	
section (Prescription and Dispense List)	A list of prescriptions and dispense records for a patient.	1..1	BackboneElement	section	This section SHALL contain at least one entry (section/entry[pdl]) or an emptyReason (section/@nullFlavor) but SHALL NOT contain both.
				section/templateId	The use of templateId signals the imposition of a set of template-defined constraints.
				section/templateId/@root="1.2.36.1.2001.1001.102.101.100072"	
				section/templateId/@extension="1.0"	
section (Prescription and Dispense List) > 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 (Prescription and Dispense List) > 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="100.32015"	
				section/code/@codeSystem="1.2.36.1.2001.1001.101"	
				section/code/@codeSystemName	Optional CDA element. codeSystemName SHOULD be "NCTIS Data Components".
				section/code/@displayName	Optional CDA element. displayName SHOULD be "Prescription and Dispense List".
section (Prescription and Dispense List) > 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/text	See CDA narratives .

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
section (Prescription and Dispense List) > entry	A reference to the actual resource from which the narrative in the section is derived.	0..2	Reference (List as List of Prescription and or Dispense Records Provenance as Provenance for the Generation of a List)	section/entry[pdl] See: instantiation choices	instantiation choices: If entry is a List then it is expected to be instantiated as //section/entry[pdl]/act. act SHALL conform to the template defined in act (List of Prescription and or Dispense Records) ; that act SHALL have the same code as this section (//entry[pdl]/act/code/@code="100.32015"). If entry is an Provenance then it is expected to be instantiated as //section/entry[pdl]/observation. observation SHALL conform to the template defined in act (Provenance for the Generation of a List) .
section (Prescription and Dispense List) > emptyReason	If the section is empty, why the list is empty. An empty section typically has some text explaining the empty reason.	0..1	CodeableConcept	section/@nullFlavor	Empty Reason HL7 v3 NullFlavor (required) The nullFlavor attribute is used to represent the reason a section is empty of clinical content.

10 Act CDA templates

This chapter contains mapping from the Composition (Prescription and or Dispense List) model and entry (e.g. Provenance for the Generation of a List) models 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 Prescription and or Dispense List Hierarchy.

10.1 act (List of Prescription and or Dispense Records)

For each List of Prescription and or Dispense Records included:

- ???

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			
List	A set of information summarized from a list of other resources.	1..1	DomainResource	act	If this list is a Dipsense List (<code>//entry[dl]/act/code/@code="100.32014"</code>) then only entries of type MedicationDispense (<code>//entryRelationship[item]/supply</code>) SHALL be allowed. If this list is a Prescription List (<code>//entry[dl]/act/code/@code="57828-6"</code>) then only entries of type MedicationRequest (<code>//entryRelationship[item]/substanceAdministration</code>) SHALL be allowed.
				act/@classCode="ACT"	
				act/@moodCode="EVN"	
				act/templateId	The use of templateId signals the imposition of a set of template-defined constraints.
				act/templateId/@root="1.2.36.1.2001.1001.102.101.100076"	
				act/templateId/@extension="1.0"	

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
List > author-role	Identifies the practitioner role responsible for the information in the resource (aka author), not necessarily who typed it in.	0..1	Reference(PractitionerRole) as PractitionerRole with Practitioner with Mandatory Identifier)	n/a	Not mapped directly for this model; this is implicit in //ClinicalDocument/author.
List > author-related-person	The entity (related person) responsible for deciding what the contents of the list were. Where the list was created by a human, this is the same as the author of the list.	0..1	Reference(RelatedPerson) as RelatedPerson with Mandatory Identifier)	n/a	Not mapped directly for this model; this is implicit in //ClinicalDocument/author.
List > status	Indicates the current state of this list.	1..1	code	act/statusCode act/statusCode/@code="active"	This CDA schema element is of type CodedSimpleValue (CS). ¹
List > title	A label for the list assigned by the author.	0..1	string	n/a	This logical element has no mapping to CDA. In CDA this is supported in either the narrative or the title of the applicable section.
List > code	This code defines the purpose of the list - why it was created.	1..1	CodeableConcept	act/code	See <code> for available attributes. Prescription and Dispense List Type (required)
List > subject	The common subject (or patient) of the resources that are in the list, if there is one.	1..1	Reference(Patient) as Patient with Mandatory Identifier)	n/a	Not mapped directly for this model; this is implicit in //ClinicalDocument/recordTarget/patientRole.
List > date	The date that the list was prepared.	1..1	dateTime	act/effectiveTime	See <time> for available attributes.
List > source	The entity responsible for deciding what the contents of the list were. Where the list was created by a human, this is the same as the author of the list.	1..1	Reference(Practitioner) as Practitioner with Mandatory Identifier Patient as Patient with Mandatory Identifier Device as Device with Mandatory Identifier)	n/a	Not mapped directly for this model; this is implicit in //ClinicalDocument/author.

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
List > note	Comments that apply to the overall list.	0..*	Annotation	act/entryRelationship[note]	
				act/entryRelationship[note]/act	
				act/entryRelationship[note]/act/@classCode="INFRM"	
				act/entryRelationship[note]/act/@moodCode="EVN"	
				act/entryRelationship[note]/act/code	
				act/entryRelationship[note]/act/code/@code="103.16044"	
				act/entryRelationship[note]/act/code/@codeSystem="1.2.36.1.2001.1001.101"	
				act/entryRelationship[note]/act/code/@displayName	Optional CDA element. displayName SHOULD be "Additional Comments".
				act/entryRelationship[note]/act/code/@codeSystemName	Optional CDA element. codeSystemName SHOULD be "NCTIS Data Components".
				act/entryRelationship[note]/act/author	Optional CDA element. If this element is not instantiated the data is considered to be included via induction in //ClinicalDocument/author.
				act/entryRelationship[note]/act/effectiveTime	Optional CDA element. See <time> for available attributes. If this element is not instantiated the data is considered to be included via induction in //ClinicalDocument/author/time.
				act/entryRelationship[note]/act/text	//text/@xsi:type SHALL be "ST".
List > entry	List of medicine type entries	1..*	BackboneElement	act/entryRelationship[item]	
				act/entryRelationship[item]/typeCode="COMP"	
List > entry > item	A reference to the actual resource from which data was derived.	1..1	Reference(MedicationStatement MedicationRequest MedicationDispense)	act/entryRelationship[item] See: instantiation choices	instantiation choices: If entry is a MedicationStatement then it is expected to be instantiated as //act/entryRelationship[item]/substanceAdministration. If entry is a MedicationRequest then it is expected to be instantiated as //act/entryRelationship[item]/substanceAdministration. If entry is a MedicationDispense then it is expected to be instantiated as //act/entryRelationship[item]/supply.

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
List > emptyReason	If the list is empty, why the list is empty.	0..1	CodeableConcept	act/@nullFlavor	<p>Empty Reason HL7 v3 NullFlavor (required)</p> <p>The nullFlavor attribute is used to represent the reason a list is empty of clinical content.</p>

¹Note: Mappings between the set of concepts in the terminology binding on status in List of Prescription and or Dispense Records [\[DH2019o\]](#) and in the CDA model are defined in [Document Act Status v3 to List Status FHIR](#) and [List Status FHIR to Document Act Status v3](#) concept maps.

10.2 act (Provenance for the Generation of a List)

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		
Provenance	A set of information summarized from a list of other resources.	1..1	DomainResource	???	
				???/@classCode="ACT"	
				???/@moodCode="EVN"	
				???/templateId	The use of templateId signals the imposition of a set of template-defined constraints.
				???/templateId/@root="TBD"	
				???/templateId/@extension="1.0"	
Provenance > target	The Reference(s) that were generated or updated by the activity described in this resource. A provenance can point to more than one target if multiple resources were created/updated by the same activity.	1..*	Reference(Any)	act/id	See < id > for available attributes.
Provenance > period	The period during which the activity occurred.	0..1	Identifier	act/id	Not mapped directly for this model; this is implicit in //ClinicalDocument/section/id. See < id > for available attributes.
Provenance > recorded	The instant of time at which the activity was recorded.	1..1	instant	act/id	See < id > for available attributes.
Provenance > policy	Policy or plan the activity was defined by. Typically, a single activity may have multiple applicable policy documents, such as patient consent, guarantor funding, etc.	0..*	uri	act/id	See < id > for available attributes.
Provenance > activity	An activity is something that occurs over a period of time and acts upon or with entities; it may include consuming, processing, transforming, modifying, relocating, using, or generating entities.	0..1	Coding	act/id	See < id > for available attributes.
Provenance > agent	An actor taking a role in an activity for which it can be assigned some degree of responsibility for the activity taking place.	1..*	BackboneElement	act/id	Not mapped directly for this model; this is implicit in //ClinicalDocument/section/id.
Provenance > agent > role	The function of the agent with respect to the activity. The security role enabling the agent with respect to the activity.	0..*	CodeableConcept	act/id	Not mapped directly for this model; this is implicit in //ClinicalDocument/section/id.

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Provenance > agent > who[x]	The individual, device or organization that participated in the event.	1..1	Reference(Practitioner as Base Practitioner RelatedPerson as Base RelatedPerson Patient as Base Patient Device as Base Device Organization as Base Organization)	act/id	Not mapped directly for this model; this is implicit in //ClinicalDocument/section/id.
Provenance > agent > onBehalfOf[x]	The individual, device, or organization for whom the change was made.	0..1	Reference(Practitioner as Base Practitioner RelatedPerson as Base RelatedPerson Patient as Base Patient Device as Base Device Organization as Base Organization)	act/id	Not mapped directly for this model; this is implicit in //ClinicalDocument/section/id.
Provenance > entity	An entity used in this activity.	0..*	BackboneElement	act/id	Not mapped directly for this model; this is implicit in //ClinicalDocument/section/id.
Provenance > entity > role	How the entity was used during the activity.	1..1	code	act/id	Not mapped directly for this model; this is implicit in //ClinicalDocument/section/id.
Provenance > entity > what[x]	Identity of the Entity used. May be a logical or physical uri and maybe absolute or relative.	1..1	Reference(Any)	act/id	Not mapped directly for this model; this is implicit in //ClinicalDocument/section/id.
Provenance > entity > agent	The entity is attributed to an agent to express the agent's responsibility for that entity, possibly along with other agents. This description can be understood as shorthand for saying that the agent was responsible for the activity which generated the entity.	0..*	see An actor taking a role in an activity for which it can be assigned some degree of responsibility for the activity taking place.	act/id	Not mapped directly for this model; this is implicit in //ClinicalDocument/section/id.

10.3 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	The use of templateId signals the imposition of a set of template-defined constraints.
				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"	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).
				ext:coverage2[prac_qual]/ext:entitlement/ext:participant[prac]/ext:participantRole/ext:id	
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]	<p>ext:participant[issuer]/@typeCode SHALL be "AUT".</p> <p>ext:participant[issuer]/ext:participantRole SHALL be "COMPAR".</p>

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 Prescription and or Dispense List 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="2.16.840.1.3883.6.96"
      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.	//ext:asEntityIdentifier	
		1..1	//ext:asEntityIdentifier/@classCode="IDENT"	
		1..1	//ext:asEntityIdentifier/ext:id	
		1..1	//ext:asEntityIdentifier/ext:id/@root	@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	//ext:asEntityIdentifier/ext:id/@extension	If present, @extension SHALL be a unique identifier within the scope of the root that is populated directly from the designation.
		0..1	//ext:asEntityIdentifier/ext:id/@assigningAuthorityName	@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	//ext:asEntityIdentifier/ext:code	See < code > for available attributes.
		0..1	//ext:asEntityIdentifier/ext:assigningGeographicArea	
		1..1	//ext:asEntityIdentifier/ext:assigningGeographicArea/@classCode="PLC"	
		0..1	//ext:asEntityIdentifier/ext:assigningGeographicArea/ext:name	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. Healthcare Identifier Geographic Area (preferred) This element is expected to be populated with the display, e.g. "National Identifier".

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 -->  
<x:asEntityIdentifier classCode="IDENT">  
  <x:id root="1.2.36.1.2001.1003.0.8003608833357361" assigningAuthorityName="IHI" />  
  <x:assigningGeographicArea classCode="PLC">  
    <x:name>National Identifier</x:name>  
  </x:assigningGeographicArea>  
</x:asEntityIdentifier>  
  
<x:asEntityIdentifier classCode="IDENT">  
  <x:id root="1.2.36.1.2001.1005.29.8003621566684455" extension="542181" assigningAuthorityName="Croydon GP Centre" />  
  <x:code code="MP" codeSystem="2.16.840.1.113883.12.203" codeSystemName="Identifier Type (HL7)" />  
</x: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.

11.7 Ingredient

CDA mapping

Element	Definition	Card	CDA schema element	Constraints and comments
CDA Data Elements				
Ingredient	An ingredient of the medicine item.	0..*	//ext:asIngredient	
		1..1	//ext:asIngredient/@classCode="INGR"	
		0..*	//ext:asIngredient/ext:id	
		0..1	//ext:asIngredient/ext:ingredientManufacturedMaterial	The substance that is the ingredient. This may be another medication.
		1..1	//ext:asIngredient/ext:ingredientManufacturedMaterial/@classCode="MMAT"	
		1..1	//ext:asIngredient/ext:ingredientManufacturedMaterial/@determinerCode="KIND"	
		0..*	//ext:asIngredient/ext:ingredientManufacturedMaterial/ext:id	
		0..1	//ext:asIngredient/ext:ingredientManufacturedMaterial/ext:code	Code for the substance.
		0..1	//ext:asIngredient/ext:ingredientManufacturedMaterial/ext:desc	Name and/or description of the substance.
		0..1	//ext:asIngredient/ext:ingredientManufacturedMaterial/ext:expirationTime	This element is discouraged from use.
		0..1	//ext:asIngredient/ext:ingredientManufacturedMaterial/ext:quantity	This element is discouraged from use as the determinerCode is fixed to "KIND".
		0..1	//ext:asIngredient/ext:quantity	This CDA schema element is of type Ratio Physical Quantity / Physical Quantity (RTO_PQ_PQ). Strength (amount) of the substance as an ingredient in the medicine item, e.g. 2% of the ingredient or 5mg of the ingredient or 10mg of the ingredient per ml or 250 mg per tablet.

Example 11.10. 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. -->
```

```
<!--Medication-->  
<consumable>  
<manufacturedProduct>  
<manufacturedMaterial nullFlavor="NA">  
<!--Medication.code-->  
<code code="22048011000036105"  
codeSystem="2.16.840.1.113883.6.96"  
codeSystemName="SNOMED CT"  
displayName="amoxicillin 250 mg chewable tablet">  
</code>  
<!--Medication.ingredient-->  
<ext:asIngredient classCode="INGR">  
<ext:ingredientManufacturedMaterial classCode="MMAT" determinerCode="KIND">  
<!--Medication.ingredient.item[x]-->  
<ext:code code="1799011000036105"  
codeSystem="2.16.840.1.113883.6.96"  
codeSystemName="SNOMED CT"  
displayName="amoxicillin"/>  
</ext:ingredientManufacturedMaterial>  
<!--Medication.ingredient.amount-->  
<ext:quantity>  
<numerator unit="mg" value="250"/>  
<denominator value="1"/>  
</ext:quantity>  
<ext:asIngredient>  
</manufacturedMaterial>  
</manufacturedProduct>  
</consumable>
```

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	<p>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.</p> <p>instantiation choices:</p> <p>If the identifier element is for a Patient, Practitioner, PractitionerRole, Organization, RelatedPerson or Device it is expected to be instantiated as //ext:asEntityIdentifier/@classCode="IDENT". See <Entity Identifier> for available attributes.</p> <p>The identifier element may be instantiated as //id.</p>
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	//ext:asEntityIdentifier/ext:code	<p>Identifier Type Codes (extensible)</p> <p>This element is only available if the identifier is instantiated as //ext:asEntityIdentifier/@classCode="IDENT".</p>
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	<p>instantiation choices:</p> <p>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/@root.</p> <p>The identifier system may be instantiated as //id/@root.</p>
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	<p>instantiation choices:</p> <p>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/@extension.</p> <p>The identifier value may be instantiated as //id/@extension.</p>
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/ih/1.0 -->  
          <ext:id assigningAuthorityName="IHI" root="1.2.36.1.2001.0.8003600200002222" />  
          <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=Croydon GP Centre,  
          identifier.value=542181,  
          identifier.system=urn:oid:1.2.36.1.2001.1005.29.8003621566684455 -->  
          <ext:id root="1.2.36.1.2001.29.8003621566684455" 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="MO" 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>
</assignedPerson>
<!-- 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="I">  
  <!-- 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@mail.com.au, use=work -->  
<telecom use="WP" value="mailto:sfranklin@mail.com.au" />
```

A.6 Dosage

This informative appendix provides some guidance on how the complex data type [Dosage](#), 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
Dosage	Indicates how the medication is/was taken or should be taken by the patient.	Cardinality comes from linking parent.	Element	See: instantiation choices	instantiation choices: When a single instance of dosage is recorded the logical element has no direct mapping; it is implicit in the mapping of the child elements. When more than one instance of dosage is recorded, each instance of dosage is recorded as a child substanceAdministration, e.g. //substanceAdministration/entryRelationship[dosage]/substanceAdministration[@typeCode="SBADM", @moodCode="INT"].
Dosage > sequence	Indicates the order in which the dosage instructions should be applied or interpreted.	0..1	integer	//entryRelationship[dosage]	This element SHALL NOT be instantiated for a single instance of dosage. The value of sequenceNumber SHALL be an ordinal number starting at "1" and increasing by "1" for each subsequent instance of dosage.
				//entryRelationship[dosage]/@typeCode="COMP"	
				//entryRelationship[dosage]/sequenceNumber	
Dosage > text	Free text dosage instructions e.g. SIG.	0..1	string	//text	
Dosage > additionalInstruction	Supplemental instruction - e.g. 'with meals'.	0..*	CodeableConcept	n/a	Not mapped directly for this model; included implicitly in text, or patientInstruction, or timing, asNeeded.
Dosage > patientInstruction	Instructions in terms that are understood by the patient or consumer.	0..1	string	//text	
Dosage > timing	When medication should be administered.	0..1	Timing	//effectiveTime	See time for available attributes. Recommended mappings for the complex data type to CDA (R2): Timing .

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Dosage > asNeeded	Indicates whether the Medication is only taken when needed within a specific dosing schedule (Boolean option), or it indicates the precondition for taking the Medication (CodeableConcept).	0..1	boolean CodeableConcept	//precondition	
				//precondition/typeCode="PRCN"	
				//precondition/criterion	
				//precondition/criterion/code	
				//precondition/criterion/code/@code="ASSERTION"	
				//precondition/criterion/code/@codeSystem="2.16.840.1.113883.5.4"	
				//precondition/criterion/value	Clinical Finding (preferred)
Dosage > site	Body site to administer to.	0..1	CodeableConcept	//approachSiteCode	See code for available attributes. Body Site (required)
Dosage > route	How drug should enter body.	0..1	CodeableConcept	//routeCode	See code for available attributes. Route of Administration (preferred)
Dosage > method	Technique for administering medication.	0..1	CodeableConcept	//ext:methodCode	See code for available attributes. SNOMED CT Administration Method Codes (preferred)
Dosage > dose	Amount of medication per dose.	0..1	Range SimpleQuantity	//doseQuantity	
Dosage > maxDosePerPeriod	Upper limit on medication per unit of time.	0..1	Ratio	//maxDoseQuantity	
Dosage > maxDosePerAdministration	Upper limit on medication per administration.	0..1	SimpleQuantity	n/a	Not directly supported in CDA however this may be represented by an administration schedule with a maxDosePerAdministration in that administration schedule represented as maxDoseQuantity with a period of a single administration.
Dosage > maxDosePerLifetime	Upper limit on medication per lifetime of the patient.	0..1	SimpleQuantity	n/a	Not directly supported in CDA. One possible way to represent this concept is to represent an observation with a code equivalent to 'max does per lifetime'. One possibly way to represent this concept is to represent an instance of dosage with maxDoseQuantity and effectiveTime/high/@value="PINF" thus indicating that the end of the period of administration is positive infinity.
Dosage > rate	Amount of medication per unit of time.	0..1	Ratio Range SimpleQuantity	//rateQuantity	

Example A.6. Dosage

<!-- 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. -->

```
<entry>
  <!-- MedicationStatement - more than one instance of Dosage -->
  <substanceAdministration classCode="SBADM" moodCode="EVN">
    <!-- identifier -->
    <id root="4255b903-6f90-41b8-a71c-8ac0eelebdc3"/>
    <!-- medication.as(medicationCodeableConcept) -->
    <consumable>
      <manufacturedProduct>
        <manufacturedMaterial>
          <code code="6006011000036102"
            codeSystem="1.2.36.1.2001.1004.100"
            displayName="Lasix (frusemide 40 mg) tablet: uncoated, 1 tablet">
            <originalText>Lasix (frusemide 40 mg)
              tablet</originalText>
          </code>
        </manufacturedMaterial>
      </manufacturedProduct>
    </consumable>

    <!-- Dosage to indicate asNeeded with a condition-->
    <entryRelationship typeCode="COMP" >
      <!-- sequence -->
      <sequenceNumber value="1"/>
      <substanceAdministration classCode="SBADM" moodCode="INT" >
        <consumable>
          <manufacturedProduct>
            <manufacturedMaterial nullFlavor="NA" />
          </manufacturedProduct>
        </consumable>
        <!-- asNeededCodeableConcept - instantiated as prn with specified condition -->
        <precondition typeCode="PRCN" >
          <criterion>
            <code code="ASSERTION"
              codeSystem="2.16.840.1.113883.5.4"/>
            <!-- joint pain -->
            <value xsi:type="CD" code="57676002"
              codeSystem="2.16.840.1.113883.6.96"
              displayName="Joint pain"/>
          </criterion>
        </precondition>
      </substanceAdministration>
    </entryRelationship>
    <!-- Dosage to indicate timing -->
    <entryRelationship typeCode="COMP" >
      <!-- sequence -->
      <sequenceNumber value="2"/>
      <substanceAdministration classCode="SBADM" moodCode="INT" >
        <!-- additionalInstruction / patientInstruction -->
        <text>Every day at 8 in the morning for 10 minutes</text>
        <!-- timing -->
        <effectiveTime xsi:type="PIVL_TS" operator="A">
          <phase>
            <low value="198701010800" inclusive="true"/>
            <width value="10" unit="min"/>
          </phase>
        </effectiveTime>
      </substanceAdministration>
    </entryRelationship>
  </substanceAdministration>
</entry>
```

```
<period value="1" unit="d"/>
</effectiveTime>
<!-- route -->
<routeCode code="C38288" codeSystem="2.16.840.1.113883.3.26.1.1" codeSystemName="NCI Thesaurus" displayName="Oral"/>
<!-- dose -->
<doseQuantity value="1" />
<consumable>
  <manufacturedProduct>
    <manufacturedMaterial nullFlavor="NA" />
  </manufacturedProduct>
</consumable>
</substanceAdministration>
</entryRelationship>
</substanceAdministration>
</entry>

<entry>
  <!-- MedicationStatement - single instance of Dosage -->
  <substanceAdministration classCode="SBADM" moodCode="EVN" >
    <!-- identifier -->
    <id root="ab6d45ff-fd58-4f38-8009-aelaa84a4f43"/>
    <!-- method -->
    <ext:methodCode code="421134003" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" displayName="Inhale" />
    <!-- route -->
    <routeCode code="ORNEB" codeSystem="2.16.840.1.113883.5.112" codeSystemName="Route Code" displayName="Inhalation, nebulization, oral"/>
    <!-- dose -->
    <doseQuantity value="1" />
    <!-- maxDosePerPeriod -->
    <maxDoseQuantity>
      <numerator value="1" />
      <denominator value="1" unit="h" />
    </maxDoseQuantity>
    <administrationUnitCode code="415215001" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT" displayName="Puff" />
    <!-- medication.as(medicationCodeableConcept) -->
    <consumable>
      <manufacturedProduct>
        <manufacturedMaterial>
          <code code="7113011000036100" codeSystem="1.2.36.1.2001.1004.100"
            displayName="Spiriva (tiotropium (as bromide monohydrate) 18 microgram) inhalation: powder for, 1 capsule">
            <originalText>Spiriva (tiotropium bromide 18mg per inhalant)</originalText>
          </code>
        </manufacturedMaterial>
      </manufacturedProduct>
    </consumable>
    <!-- asNeededBoolean=true - instantiated as prn with no specified condition -->
    <precondition typeCode="PRCN" >
      <criterion>
        <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
        <value xsi:type="CD" nullFlavor="NI" />
      </criterion>
    </precondition>
  </substanceAdministration>
</entry>
```

A.7 Timing

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

CDA mapping

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Timing	Specifies an event that may occur multiple times. Timing schedules are used to record when things are planned, expected or requested to occur. The most common usage is in dosage instructions for medications. They are also used when planning care of various kinds, and may be used for reporting the schedule to which past regular activities were carried out.	Cardinality comes from linking parent.	Element	//effectiveTime	See <time> for available attributes.
Timing > event	Identifies specific times when the event occurs.	0..1	dateTime	//effectiveTime/@value	
Timing > repeat	A set of rules that describe when the event is scheduled.	0..1	Element	//effectiveTime/@xsi:type	<p>Not mapped directly; implicit in the instantiation of the xsi:type, e.g. PIVL_TS or EIVL_TS, and the mapping of the child elements.</p> <p>If duration is present, durationUnit SHALL be present.</p> <p>If timeOfDay is present, when SHALL NOT be present.</p> <p>If period is present, periodUnit SHALL be present.</p> <p>duration SHALL be a non-negative value.</p> <p>period SHALL be a non-negative value.</p> <p>If periodMax is present, period SHALL be present.</p> <p>If offset is present, when SHALL be present.</p>
Timing > repeat > bounds	Either a duration for the length of the timing schedule, a range of possible length, or outer bounds for start and/or end limits of the timing schedule.	0..1	Duration Range Period	See: instantiation choices	<p>effectiveTime/@xsi:type SHALL be "IVL_TS".</p> <p>instantiation choices:</p> <p>If bounds is a Duration then it is expected to be instantiated as //effectiveTime/width.</p> <p>If bounds is a Range then it is expected to be included in Dosage as text, or additionalInstruction, or patientInstruction as appropriate.</p> <p>If bounds is a Period then it is expected to be instantiated as //effectiveTime/period.</p>
Timing > repeat > count	A total count of the desired number of repetitions.	0..1	integer	//repeatNumber/@value	count SHALL only be instantiated in the repeatNumber element of the Dosage substanceAdministration act where the moodCode is "INT" or "PLAN".

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Timing > repeat > countMax	A maximum value for the count of the desired repetitions (e.g. do something 6-8 times).	0..1	integer	//repeatNumber/high/@value	
Timing > repeat > duration	How long this thing happens for when it happens.	0..1	decimal	//effectiveTime/phase/width/@value	effectiveTime/@xsi:type SHOULD be "PIVL_TS".
Timing > repeat > durationMax	The upper limit of how long this thing happens for when it happens.	0..1	decimal	n/a	This logical element has no mapping to CDA.
Timing > repeat > durationUnit	The units of time for the duration, in UCUM units.	0..1	code	//effectiveTime/phase/width/@unit	effectiveTime/@xsi:type SHOULD be "PIVL_TS".
Timing > repeat > frequency	The number of times to repeat the action within the specified period / period range (i.e. both period and periodMax provided).	0..1	integer	//effectiveTime/frequency	effectiveTime/@xsi:type SHALL be "PIVL_TS".
				//effectiveTime/frequency/numerator	frequency is expressed as the numerator (with an xsi:type of "INT") and period is expressed in CDA as the denominator. frequency is often not included in CDA as a separate element but addressed by adjusting the values of period and periodUnit to take into account frequency.
Timing > repeat > frequencyMax	If present, indicates that the frequency is a range - so to repeat between [frequency] and [frequencyMax] times within the period or period range.	0..1	integer	//effectiveTime/phase	effectiveTime/@xsi:type SHOULD be "PIVL_TS".
Timing > repeat > period	Indicates the duration of time over which repetitions are to occur; e.g. to express '3 times per day', 3 would be the frequency and '1 day' would be the period.	0..1	decimal	See: instantiation choices	effectiveTime/@xsi:type SHOULD be "PIVL_TS". instantiation choices: May be represented by //effectiveTime/phase or //effectiveTime/period.
Timing > repeat > periodMax	If present, indicates that the period is a range from [period] to [periodMax], allowing expressing concepts such as 'do this once every 3-5 days.'	0..1	decimal	See: instantiation choices	effectiveTime/@xsi:type SHOULD be "PIVL_TS". instantiation choices: May be represented by //effectiveTime/phase or //effectiveTime/period/high.
Timing > repeat > periodUnit	The units of time for the period in UCUM units.	0..1	code	See: instantiation choices	effectiveTime/@xsi:type SHOULD be "PIVL_TS". instantiation choices: May be represented by //effectiveTime/phase/@unit or //effectiveTime/period/low/@unit or //effectiveTime/period/high/@unit.
Timing > repeat > dayOfWeek	If one or more days of week is provided, then the action happens only on the specified day(s).	0..*	code	//effectiveTime/@xsi:type="PIVL_TS"	The value between low and high represents the day of the week by selecting a known day. For example a low/@value of 20001202 and a high/@value of 20001203 represents Saturday by setting the period to the whole of the Saturday of the 2nd of December 2000.
				//effectiveTime/@alignment="DW"	
				//effectiveTime/phase	
				//effectiveTime/phase/low/@value	
				//effectiveTime/phase/low/@inclusive="true"	
				//effectiveTime/phase/high/@value	
				//effectiveTime/phase/high/@inclusive="false"	

Element	Element description	Card	Element type	CDA schema element	Constraints and comments
Timing > repeat > timeOfDay	Specified time of day for action to take place.	0..*	time	//effectiveTime/ phase	effectiveTime/@xsi:type SHOULD be "PIVL_TS".
				//effectiveTime/phase/ low	
				//effectiveTime/phase/low/@value	
Timing > repeat > when	Real world events that the occurrence of the event should be tied to.	0..*	code	//effectiveTime/ event	effectiveTime/@xsi:type SHALL be "EIVL_TS". This CDA schema element is of type CodedSimpleValue (CS). EventTiming (required)
Timing > repeat > offset	The number of minutes from the event. If the event code does not indicate whether the minutes is before or after the event, then the offset is assumed to be after the event.	0..1	unsignedInt	//effectiveTime/ offset	effectiveTime/@xsi:type SHALL be "EIVL_TS".
Timing > code	A code for the timing schedule. Some codes such as BID are ubiquitous, but many institutions define their own additional codes. If a code is provided, the code is understood to be a complete statement of whatever is specified in the structured timing data, and either the code or the data may be used to interpret the Timing, with the exception that .repeat.bounds still applies over the code (and is not contained in the code).	0..1	CodeableConcept	n/a	Not directly supported in CDA; implied by frequency.

Example A.7. Timing

```
<!-- 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. -->  
  
<!-- Dosage to indicate timing -->  
<entryRelationship typeCode="COMP">  
    <!-- sequence -->  
    <sequenceNumber value="2"/>  
    <substanceAdministration classCode="SBADM" moodCode="INT">  
        <!-- additionalInstruction / patientInstruction -->  
        <text>Every day at 8 in the morning for 10 minutes</text>  
        <!-- timing, 1st administered 2009-09-01 at 1:18am and to be taken every day at 8 in the morning for 10 minutes -->  
        <!-- event -->  
        <effectiveTime value="200509010118"/>  
        <!-- repeat -->  
        <effectiveTime xsi:type="PIVL_TS" operator="A">  
            <phase>  
                <!-- boundsPeriod / timeOfDay -->  
                <low value="200509020800" inclusive="true"/>  
                <!-- duration and durationUnit -->  
                <width value="10" unit="min"/>  
            </phase>  
            <!-- frequency=1, period=1 -->  
            <period value="1" unit="d"/>  
        </effectiveTime>  
        <consumable>  
            <manufacturedProduct>  
                <manufacturedMaterial nullFlavor="NA"/>  
            </manufacturedProduct>  
        </consumable>  
    </substanceAdministration>  
</entryRelationship>  
  
<entry>  
    <!-- MedicationStatement - common timing representations - this is not a meaningful example and is there to show common instantiations  
    and their corresponding code -->  
    <substanceAdministration classCode="SBADM" moodCode="EVN">  
        <!--identifier-->  
        <id root="7e5cc411-c248-4d5d-b333-257f16f9136c"/>  
        <!-- common timing representations taken from https://docs.google.com/document/d/1Y0Z458o_MrR2aPnpx6Eyg06hpI88B195esjRWZ0agtY/edit -->  
        <!-- b.i.d twice a day -->  
        <effectiveTime xsi:type="PIVL_TS" institutionSpecified="true" operator="A">  
            <!-- frequency=2, period=1, periodUnit=d -->  
            <period value="0.5" unit="d"/>  
        </effectiveTime>  
        <!-- q12h Every 12 hours -->  
        <effectiveTime xsi:type="PIVL_TS" institutionSpecified="false"  
            operator="A">  
            <!-- frequency=1, period=12, periodUnit=h -->  
            <period value="12" unit="h"/>  
        </effectiveTime>  
        <!-- t.i.d Three times a day, at times determined by the person administering the medication-->  
        <effectiveTime xsi:type="PIVL_TS" institutionSpecified="true"  
            operator="A">  
            <!-- frequency=3, period=1, periodUnit=d -->  
            <period value="0.3333" unit="d"/>  
        </effectiveTime>  
        <!-- q8h Every 8 hours -->
```

```
<effectiveTime xsi:type="PIVL_TS" institutionSpecified="false"
  operator="A">
  <!-- frequency=1, period=8, periodUnit=h -->
  <period value="8" unit="h"/>
</effectiveTime>
<!!--qid four times daily-->
<effectiveTime xsi:type="PIVL_TS" institutionSpecified="true"
  operator="A">
  <!-- frequency=4, period=1, periodUnit=d -->
  <period value="0.25" unit="d"/>
</effectiveTime>
<!!-- q6h Every 6 hours -->
<effectiveTime xsi:type="PIVL_TS" institutionSpecified="false"
  operator="A">
  <!-- frequency=1, period=6, periodUnit=h -->
  <period value="6" unit="h"/>
</effectiveTime>
<!!-- qd daily -->
<effectiveTime xsi:type="PIVL_TS" institutionSpecified="true"
  operator="A">
  <!-- frequency=1, period=1, periodUnit=d -->
  <period value="1" unit="d"/>
</effectiveTime>
<!!-- q24h Every 24 hours -->
<effectiveTime xsi:type="PIVL_TS" institutionSpecified="false"
  operator="A">
  <!-- frequency=1, period=24, periodUnit=h -->
  <period value="24" unit="h"/>
</effectiveTime>
<!!-- qod Every other day -->
<effectiveTime xsi:type="PIVL_TS" institutionSpecified="false"
  operator="A">
  <!-- frequency=1, period=2, periodUnit=d -->
  <period value="2" unit="d"/>
</effectiveTime>
<!!-- qm Once a month -->
<effectiveTime xsi:type="PIVL_TS" institutionSpecified="false"
  operator="A">
  <!-- frequency=1, period=1, periodUnit=mo -->
  <period value="1" unit="m"/>
</effectiveTime>
<!!-- q4-6h Every 4 to 6 hours (preferred) -->
<effectiveTime xsi:type="PIVL_TS" institutionSpecified="false"
  operator="A">
  <!-- frequency (where frequency=1)-->
  <period xsi:type="IVL_PQ">
    <!-- period and periodUnit -->
    <low value="4" unit="h" />
    <!-- periodMax and periodUnit -->
    <high value="6" unit="h" />
  </period>
</effectiveTime>
<!!-- q4-6h Every 4 to 6 hours (alternate) -->
<effectiveTime xsi:type="PIVL_TS" institutionSpecified="false"
  operator="A">
  <period xsi:type="PPD_PQ" value="5" unit="h">
    <standardDeviation value="1" unit="h"/>
  </period>
</effectiveTime>
<!!-- qam In the morning -->
<effectiveTime xsi:type="EIVL_TS" operator="A">
  <!-- when using code from TimingEvent value set (2.16.840.1.113883.5.139) -->
  <event code="ACM"/>
```

```
</effectiveTime>
<!-- qam Every day at 8 in the morning for 10 minutes -->
<effectiveTime xsi:type="PIVL_TS" operator="A">
  <phase>
    <!-- boundsPeriod / timeOfDay -->
    <low value="198701010800" inclusive="true"/>
    <!-- duration and durationUnit -->
    <width value="10" unit="min"/>
  </phase>
  <period value="1" unit="d"/>
</effectiveTime>
<!-- 1 hour after meal -->
<effectiveTime xsi:type="EIVL_TS" operator="A">
  <!-- when using code from TimingEvent value set (2.16.840.1.113883.5.139) -->
  <event code="PC"/>
  <!-- offset -->
  <offset>
    <low value="1" unit="h" />
  </offset>
</effectiveTime>
<!-- before dinner -->
<effectiveTime xsi:type="EIVL_TS" operator="A">
  <!-- when using code from TimingEvent value set (2.16.840.1.113883.5.139) -->
  <event code="ACV"/>
</effectiveTime>
<!-- before lunch -->
<effectiveTime xsi:type="EIVL_TS" operator="A">
  <!-- when using code from TimingEvent value set (2.16.840.1.113883.5.139) -->
  <event code="ACD"/>
</effectiveTime>
<!-- every evening -->
<effectiveTime xsi:type="EIVL_TS" operator="A">
  <!-- when using code from TimingEvent value set (2.16.840.1.113883.5.139) -->
  <event code="ICV"/>
</effectiveTime>
<effectiveTime xsi:type="PIVL_TS" alignment="DW" operator="A">
  <!-- every Saturday -->
  <phase>
    <low value="20001202" inclusive="true"/>
    <high value="20001203" inclusive="false"/>
  </phase>
  <period value="1" unit="wk"/>
</effectiveTime>
<consumable>
  <manufacturedProduct>
    <manufacturedMaterial>
      <code nullFlavor="NA"/>
    </manufacturedMaterial>
  </manufacturedProduct>
</consumable>
</substanceAdministration>
</entry>
```

Appendix B. Examples

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

DRAFT

B.1 Prescription List example 1

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

Example B.1. Prescription List 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 classCode="DOCCLIN" moodCode="EVN" xmlns="urn:hl7-org:v3"  
xmlns:ex="urn:hl7-org/v3-example"  
xmlns:ext="http://ns.electronichealth.net.au/Ci/Cda/Extensions/3.0"  
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" >  
<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"/>  
  <!-- Shared Medicines List document model templateId-->  
  <templateId root="1.2.36.1.2001.1001.102.101.100065" extension="1.0"/>  
  <!--CDA Rendering Specification templateId-->  
  <templateId root="1.2.36.1.2001.100.226" extension="1.0"/>  
  <id root="cbc73f0e-90a3-11e9-bc42-526af7764f64"/>  
  <code code="56445-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"  
    displayName="Medication summary Document"/>  
  <title>Pharmacist Shared Medicines List</title>  
  <effectiveTime value="201812111230+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 identifier) -->  
  <recordTarget typeCode="RCT">  
    <templateId root="1.2.36.1.2001.1001.102.101.100004" extension="1.0"/>  
    <patientRole classCode="PAT">  
      <id root="ba75907e-90a4-11e9-bc42-526af7764f64"/>  
      <!-- Patient.address -->  
      <addr nullFlavor="MSK"/>  
      <patient>  
        <!-- Patient.name -->  
        <name>  
          <given>Frank</given>  
          <family>Goodpatient</family>  
        </name>  
        <!-- 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>  
      <!-- Patient.managingOrganization -->  
      <providerOrganization classCode="ORG">  
        <asOrganizationPartOf>  
          <wholeOrganization>  
            <id root="add4c63c-90ae-11e9-bc42-526af7764f64"/>  
            <name>GoodDoctor Clinic</name>  
          </wholeOrganization>  
        </asOrganizationPartOf>  
      </providerOrganization>  
    </patientRole>  
  </recordTarget>  
  <!-- composition-author-role : author (PractitionerRole with practitioner with mandatory identifier) -->  
  <author typeCode="AUT">  
    <templateId root="1.2.36.1.2001.1001.102.101.100006" extension="1.0"/>  
    <!-- Composition.date -->  
    <time value="201812111230+1000"/>  
    <assignedAuthor>  
      <id root="6c4b9640-90af-11e9-bc42-526af7764f64"/>  
      <!-- PractitionerRole.code -->  
      <code code="46255001" codeSystem="2.16.840.1.113883.13.62"  
        displayName="General Pharmacist">  
        <originalText>Pharmacist</originalText>  
      </code>  
      <!-- PractitionerRole.practitioner -->  
      <assignedPerson>  
        <!-- assignedPerson (Base Practitioner) -->  
        <templateId root="1.2.36.1.2001.1001.102.101.100040" extension="1.0"/>  
        <!-- Practitioner.name -->  
        <name>  
          <given>Joanne</given>  
          <family>Mosenna </family>  
        </name>  
        <!-- PractitionerRole.identifier or Practitioner.identifier -->  
        <ext:asEntityIdentifier classCode="IDENT">
```

```
<ext:id root="1.2.36.1.2001.1003.0.8003610000000000"  
    assigningAuthorityName="HPI-I"/>  
<ext:assigningGeographicArea classCode="PLC">  
    <ext:name>National Identifier</ext:name>  
</ext:assigningGeographicArea>  
</ext:asEntityIdentifier>  
<ext:asEntityIdentifier classCode="IDENT">  
    <ext:id root="1.2.36.174030967.0.2" extension="5544887B"  
        assigningAuthorityName="Medicare Provider number"/>  
    <ext:code code="PRN" codeSystem="2.16.840.1.113883.12.203"/>  
    <ext:assigningGeographicArea classCode="PLC">  
        <ext:name>National Identifier</ext:name>  
</ext:assigningGeographicArea>  
</ext:asEntityIdentifier>  
</assignedPerson>  
<!-- PractitionerRole.organization -->  
<representedOrganization>  
    <!-- representedOrganization (Base Organization) -->  
    <templateId root="1.2.36.1.2001.1001.102.101.100039" extension="1.0"/>  
    <id root="0d8a68b8-90b2-11e9-bc42-526af7764f64"/>  
    <!-- Organization.name -->  
    <name>Tes Health Service</name>  
    <!-- Organization.telecom -->  
    <telecom use="WP" value="tel:0798046688"/>  
    <!-- Organization.address -->  
    <!--<addr use="PST">  
        <streetAddressLine>LPO Box 235</streetAddressLine>  
        <city>Strahan</city>  
        <state>TAS</state>  
        <postalCode>7468</postalCode>  
</addr>-->  
    <!-- 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>  
</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="0d8a68b8-90b2-11e9-bc42-526af7764f64"/>  
            <!-- representedOrganization (Base Organization) -->  
            <id root="0d8a68b8-90b2-11e9-bc42-526af7764f64"/>  
            <!-- Organization.name -->  
            <name>Tes Health Service</name>  
            <!-- Organization.telecom -->  
            <telecom use="WP" value="tel:0798046688"/>  
            <!-- 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>  
        </representedCustodianOrganization>  
    </assignedCustodian>  
</custodian>  
<legalAuthenticator>  
    <templateId root="1.2.36.1.2001.1001.102.101.100012" extension="1.0"/>  
    <time value="201812111230+1000"/>  
    <signatureCode code="S"/>  
    <assignedEntity>  
        <!-- attester (Legal Attester) indicating same entity as the author via the same id -->  
        <id root="6c4b9640-90af-11e9-bc42-526af7764f64"/>  
    </assignedEntity>  
</legalAuthenticator>  
<!-- Patient.generalPractitioner (Base Practitioner) -->  
<participant typeCode="PART">  
    <functionCode code="PCP"/>  
    <associatedEntity classCode="PROV">  
        <id root="fdb10052-30e9-4425-b771-8b8a81ae7107"/>  
        <associatedPerson classCode="PSN">  
            <!-- Practitioner.name -->  
            <name>  
                <prefix>Dr.</prefix>  
                <given>Good</given>  
                <family>Doctor</family>  
            </name>  
        </associatedPerson>  
    </associatedEntity>  
</participant>  
<componentOf>  
    <encompassingEncounter>  
        <templateId root="1.2.36.1.2001.1001.102.101.100064" extension="1.0"/>  
        <id root="4fe85f68-9151-11e9-b683-526af7764f64"/>  
        <code code="AMB" codeSystem="2.16.840.1.113883.1.11.13955"  
            codeSystemName="ActEncounterCode" displayName="ambulatory"/>  
        <effectiveTime xsi:type="IVL_TS">  
            <low value="2018121101000+1000"/>  
            <high value="201812111230+1000"/>  
    </encompassingEncounter>
```

```
</effectiveTime>
</encompassingEncounter>
</componentOf>
<component>
  <structuredBody>
    <!--      section (Medications) -->
    <component>
      <section>
        <templateId root="1.2.36.1.2001.1001.102.101.100061" extension="1.0"/>
        <id root="leed2cdc-91e9-bc42-526af7764f64"/>
        <code code="10160-0" codeSystem="2.16.840.1.113883.6.1"
              displayName="History of Medication use Narrative"/>

        <text mediaType="text/x-hl7-text+xml">
          <table>
            <caption>Current medicines</caption>
            <thead>
              <tr>
                <th>Medicine</th>
                <th>Brand name</th>
                <th>Direction</th>
                <th>Medicine purpose</th>
                <th>Medicine status</th>
                <th>Expected end date</th>
                <th>Special instructions</th>
                <th>Medicine Image</th>
                <th>Physical Description</th>
              </tr>
            </thead>
            <tbody>
              <tr ID="medicationstatement-ferro-grad-c">
                <td>
                  <td>Ferro-Grad C</td>
                  <td>One tablet daily</td>
                  <td>Iron Supplement</td>
                  <td>Unchanged</td>
                  <td/>
                  <td/>
                  <td/>
                  <td/>
                </td>
              </tr>
              <tr ID="medicationstatement-amoxicillin-875mg">
                <td>Amoxicillin 875 mg + clavunilic acid 125 mg tablet</td>
                <td>Augmentin Duo Forte</td>
                <td>One tablet twice a day until all finished</td>
                <td>Infection</td>
                <td>New</td>
                <td>20/01/2019</td>
                <td/>
                <td/>
                <td/>
              </tr>
              <tr ID="medicationstatement-metformin-500mg">
                <td>Metformin 500mg tablet</td>
                <td>Sandoz</td>
                <td>One tablet twice a day</td>
                <td>Reduce blood sugar</td>
                <td>Dose changed</td>
                <td/>
                <td/>
                <td>insert link...</td>
                <td>White and round with 227 imprinted</td>
              </tr>
              <tr ID="medicationstatement-multi-vitamins">
                <td>Multi-vitamins</td>
                <td/>
                <td>One tablet daily</td>
                <td/>
                <td/>
                <td/>
                <td/>
                <td/>
                <td/>
              </tr>
              <tr ID="medicationstatement-paracetamol-665mg">
                <td>Paracetamol 665 mg caplet</td>
                <td>Panadol Osteo</td>
                <td>Two caplets every 6 to 8 hours when required</td>
                <td>Osteoarthritis, pain relief</td>
                <td/>
                <td/>
                <td>No more than 6 caplets in 24 hours</td>
                <td/>
                <td/>
              </tr>
              <tr ID="medicationstatement-warfarin">
                <td>Warfarin sodium 5 mg tablet</td>
                <td>Coumadin</td>
                <td>Once a day at night</td>
                <td>Blood thinning</td>
                <td>Withheld</td>
                <td/>
                <td/>
                <td>Peach.Round.Imprinted.</td>
              </tr>
            </tbody>
          </table>
        <table>
```

```
<caption>Ceased medicines</caption>
<thead>
  <tr>
    <th>Medicine</th>
    <th>Reason for ceasing medicine</th>
    <th>Ceased date</th>
  </tr>
</thead>
<tbody>
  <tr ID="medicationstatement-paracetamol-500mg">
    <td></td>
    <td>Paracetamol 500mg tablet</td>
    <td>Duplicated medicine</td>
    <td>Dec 2018</td>
  </tr>
  <tr ID="medicationstatement-ibuprofen">
    <td>Ibuprofen</td>
    <td>Allergic Reaction</td>
    <td></td>
  </tr>
</tbody>
</table>
</text>
<entry>
  <!-- Medicines list-->
  <act classCode="ACT" moodCode="EVN">
    <templateId root="1.2.36.1.2001.1001.101.100067" extension="1.0"/>
    <code code="10160-0" codeSystem="2.16.840.1.113883.6.1"
      displayName="History of Medication use Narrative"/>
    <statusCode code="active"/>
    <effectiveTime value="201812111230+1000"/>
    <!-- List.note-->
    <entryRelationship typeCode="COMP">
      <act classCode="INFRM" moodCode="EVN">
        <code code="103.16044" codeSystem="1.2.36.1.2001.1001.101"
          codeSystemName="NCTIS Data Components"
          displayName="Additional Comments"/>
        <text xsi:type="ST">Please review this list with your pharmacist
          on or soon after 02/Apr/2019.</text>
      </act>
    </entryRelationship>
    <!--Medicine review encounter-->
    <entryRelationship typeCode="COMP">
      <encounter classCode="ENC" moodCode="EVN">
        <templateId root="1.2.36.1.2001.1001.102.101.100062"
          extension="1.0"/>
        <id root="4fe85f68-9151-11e9-b683-526af7764f64"/>
        <code code="AMB" codeSystem="2.16.840.1.113883.1.11.13955"
          codeSystemName="ActEncounterCode" displayName="ambulatory"/>
        <statusCode code="finished"/>
        <effectiveTime xsi:type="IVL_TS">
          <low value="2018121101000+1000"/>
          <high value="201812111230+1000"/>
        </effectiveTime>
        <entryRelationship typeCode="COMP">
          <observation classCode="OBS" moodCode="EVN">
            <code code="103.17018"
              codeSystem="1.2.36.1.2001.1001.101"
              codeSystemName="NCTIS Data Components"
              displayName="Category"/>
            <value xsi:type="CD">
              <originalText>Community pharmacy medicine
                review</originalText>
            </value>
          </observation>
        </entryRelationship>
      </encounter>
    </entryRelationship>
  <!-- List.entry.item: Ferro-Grad C-->
  <entryRelationship typeCode="COMP">
    <!-- MedicationStatement; taken=y -->
    <substanceAdministration classCode="SBADM" moodCode="EVN">
      <templateId root="1.2.36.1.2001.1001.102.101.100066"
        extension="1.0"/>
      <id root="31fbff4-9170-11e9-bc42-526af7764f64"/>
      <!-- MedicationStatement.dosage-->
      <text>
        <reference value="#medicationstatement-ferro-grad-c"/>
      </text>
      <!-- MedicationStatement.status-->
      <statusCode code="active"/>
      <!-- MedicationStatement.medication-->
      <consumable>
        <manufacturedProduct>
          <templateId root="1.2.36.1.2001.1001.102.101.100068"
            extension="1.0"/>
          <manufacturedMaterial determinerCode="KIND">
            <code code="53373011000036103"
              codeSystem="2.16.840.1.113883.6.96"
              codeSystemName="SNOMED CT"
              displayName="Ferro-Grad C">
              <originalText>Ferro-Grad C</originalText>
            </code>
          </manufacturedMaterial>
        </manufacturedProduct>
      </consumable>
      <!-- MedicationStatement.reasonCode-->
      <entryRelationship typeCode="RSON">
```

```
<observation classCode="OBS" moodCode="EVN">
  <code code="103.10141"
    codeSystem="1.2.36.1.2001.1001.101"
    codeSystemName="NCTIS Data Components"
    displayName="Clinical Indication"/>
  <value xsi:type="CD">
    <originalText>Iron supplement</originalText>
  </value>
</observation>
</entryRelationship>
<!-- List.entry.flag-->
<entryRelationship typeCode="SUBJ" inversionInd="true">
  <observation classCode="OBS" moodCode="EVN">
    <code code="288533004"
      codeSystem="2.16.840.1.113883.6.96"
      displayName="Change values"/>
    <value xsi:type="CD" code="nochange"
      codeSystem="1.2.36.1.2001.1004.201.10075"/>
  </observation>
</entryRelationship>
</substanceAdministration>
</entryRelationship>
<!-- List.entry.item: amoxicillin-875mg -->
<entryRelationship typeCode="COMP">
  <!-- MedicationStatement; taken=y -->
  <substanceAdministration classCode="SBADM" moodCode="EVN">
    <templateId root="1.2.36.1.2001.1001.102.101.100066"
      extension="1.0"/>
    <id root="42d8d5b0-9178-11e9-bc42-526af7764f64"/>
  <!-- MedicationStatement.dosage-->
  <text>
    <reference value="#medicationstatement-amoxicillin-875mg"/>
  </text>
  <!-- MedicationStatement.status-->
  <statusCode code="active"/>
  <!-- MedicationStatement.effective-->
  <effectiveTime xsi:type="IVL_TS">
    <low value="20181210"/>
    <high value="20190120"/>
  </effectiveTime>
  <!-- MedicationStatement.medication-->
  <consumable>
    <manufacturedProduct>
      <templateId root="1.2.36.1.2001.1001.102.101.100068"
        extension="1.0"/>
      <manufacturedMaterial determinerCode="KIND">
        <code>
          <originalText>Augmentin Duo Forte</originalText>
        </code>
      </manufacturedMaterial>
    </manufacturedProduct>
  </consumable>
  <!-- Medication.medication-brand-name-->
<entryRelationship typeCode="COMP">
  <act classCode="ACT" moodCode="EVN">
    <code code="103.16676"
      codeSystem="1.2.36.1.2001.1001.101"
      codeSystemName="NCTIS Data Components"
      displayName="Pharmaceutical Item Brand"/>
    <text>Augmentin Duo Forte</text>
  </act>
</entryRelationship>
<!-- Medication.medication-generic-name-->
<entryRelationship typeCode="COMP">
  <act classCode="ACT" moodCode="EVN">
    <code code="103.16703"
      codeSystem="1.2.36.1.2001.1001.101"
      codeSystemName="NCTIS Data Components"
      displayName="Pharmaceutical Item Generic Name"/>
    <text>Amoxicillin 875 mg + clavunilic acid 125 mg
      tablet</text>
  </act>
</entryRelationship>
<!-- MedicationStatement.reasonCode-->
<entryRelationship typeCode="RSON">
  <observation classCode="OBS" moodCode="EVN">
    <code code="103.10141"
      codeSystem="1.2.36.1.2001.1001.101"
      codeSystemName="NCTIS Data Components"
      displayName="Clinical Indication"/>
    <value xsi:type="CD">
      <originalText>Infection</originalText>
    </value>
  </observation>
</entryRelationship>
<!-- List.entry.flag-->
<entryRelationship typeCode="SUBJ" inversionInd="true">
  <observation classCode="OBS" moodCode="EVN">
    <code code="288533004"
      codeSystem="2.16.840.1.113883.6.96"
      displayName="Change values"/>
    <value xsi:type="CD" code="new"
      codeSystem="1.2.36.1.2001.1004.201.10075"/>
  </observation>
</entryRelationship>
</substanceAdministration>
</entryRelationship>

<!-- List.entry.item: metformin-500mg -->
```

```
<entryRelationship typeCode="COMP">
  <!-- MedicationStatement; taken=y-->
  <substanceAdministration classCode="SBADM" moodCode="EVN">
    <templateId root="1.2.36.1.2001.1001.102.101.100066"
      extension="1.0"/>
    <id root="69433338-917a-11e9-bc42-526af7764f64"/>
    <!-- MedicationStatement.dosage-->
    <text>
      <reference value="#medicationstatement-metformin-500mg"/>
    </text>
    <!-- MedicationStatement.status-->
    <statusCode code="active"/>
    <!-- MedicationStatement.medication-->
    <consumable>
      <manufacturedProduct>
        <templateId root="1.2.36.1.2001.1001.102.101.100068"
          extension="1.0"/>
        <manufacturedMaterial determinerCode="KIND">
          <code code="23358011000036102"
            codeSystem="2.16.840.1.113883.6.96"
            codeSystemName="SNOMED CT"
            displayName="metformin hydrochloride 500 mg tablet">
            <originalText>Metformin 500mg
              tablet</originalText>
          </code>
        </manufacturedMaterial>
      </manufacturedProduct>
    </consumable>
    <!-- Medication.medication-generic-name-->
    <entryRelationship typeCode="COMP">
      <act classCode="ACT" moodCode="EVN">
        <code code="103.16703"
          codeSystem="1.2.36.1.2001.1001.101"
          codeSystemName="NCTIS Data Components"
          displayName="Pharmaceutical Item Generic Name"/>
        <text>Metformin 500mg tablet</text>
      </act>
    </entryRelationship>
    <!-- Medication.medication-brand-name-->
    <entryRelationship typeCode="COMP">
      <act classCode="ACT" moodCode="EVN">
        <code code="103.16676"
          codeSystem="1.2.36.1.2001.1001.101"
          codeSystemName="NCTIS Data Components"
          displayName="Pharmaceutical Item Brand"/>
        <text>Sandoz</text>
      </act>
    </entryRelationship>
    <!-- MedicationStatement.reasonCode-->
    <entryRelationship typeCode="RSON">
      <observation classCode="OBS" moodCode="EVN">
        <code code="103.10141"
          codeSystem="1.2.36.1.2001.1001.101"
          codeSystemName="NCTIS Data Components"
          displayName="Clinical Indication"/>
        <value xsi:type="CD">
          <originalText>Reduce blood sugar</originalText>
        </value>
      </observation>
    </entryRelationship>
    <!-- List.entry.flag-->
    <entryRelationship typeCode="SUBJ" inversionInd="true">
      <observation classCode="OBS" moodCode="EVN">
        <code code="288533004"
          codeSystem="2.16.840.1.113883.6.96"
          displayName="Change values"/>
        <text>Dose changed</text>
        <value xsi:type="CD" code="amended"
          codeSystem="1.2.36.1.2001.1004.201.10075"/>
      </observation>
    </entryRelationship>
  </substanceAdministration>
</entryRelationship>

<!-- List.entry.item: multi-vitamins -->
<entryRelationship typeCode="COMP">
  <!-- MedicationStatement; taken=y-->
  <substanceAdministration classCode="SBADM" moodCode="EVN">
    <templateId root="1.2.36.1.2001.1001.102.101.100066"
      extension="1.0"/>
    <id root="f1f476fa-917b-11e9-bc42-526af7764f64"/>
    <!-- MedicationStatement.dosage-->
    <text>
      <reference value="#medicationstatement-multi-vitamins"/>
    </text>
    <!-- MedicationStatement.status-->
    <statusCode code="active"/>
    <!-- MedicationStatement.medication-->
    <consumable>
      <manufacturedProduct>
        <templateId root="1.2.36.1.2001.1001.102.101.100068"
          extension="1.0"/>
        <manufacturedMaterial determinerCode="KIND">
          <code>
            <originalText>Multi-vitamins</originalText>
          </code>
        </manufacturedMaterial>
      </manufacturedProduct>
```

```
</consumable>
<!-- Medication.medication-generic-name-->
<entryRelationship typeCode="COMP">
  <act classCode="ACT" moodCode="EVN">
    <code code="103.16703"
      codeSystem="1.2.36.1.2001.1001.101"
      codeSystemName="NCTIS Data Components"
      displayName="Pharmaceutical Item Generic Name"/>
    <text>Multi-vitamins</text>
  </act>
</entryRelationship>
<!-- List.entry.flag-->
<entryRelationship typeCode="SUBJ" inversionInd="true">
  <observation classCode="OBS" moodCode="EVN">
    <code code="288533004"
      codeSystem="2.16.840.1.113883.6.96"
      displayName="Change values"/>
    <value xsi:type="CD" code="unchanged"
      codeSystem="1.2.36.1.2001.1004.201.10075"/>
  </observation>
</entryRelationship>
</substanceAdministration>
</entryRelationship>

<!-- List.entry.item: paracetamol-665mg -->
<entryRelationship typeCode="COMP">
  <!-- MedicationStatement; taken=y -->
  <substanceAdministration classCode="SBADM" moodCode="EVN">
    <templateId root="1.2.36.1.2001.1001.102.101.100066"
      extension="1.0"/>
    <id root="815d5488-917c-11e9-bc42-526af7764f64"/>
    <!-- MedicationStatement.dosage-->
    <text>
      <reference value="#medicationstatement-paracetamol-665mg"/>
    </text>
    <!-- MedicationStatement.status-->
    <statusCode code="active"/>
    <!-- MedicationStatement.medication-->
    <consumable>
      <manufacturedProduct>
        <templateId root="1.2.36.1.2001.1001.102.101.100068"
          extension="1.0"/>
        <manufacturedMaterial determinerCode="KIND">
          <code>
            <originalText>Panadol Osteo</originalText>
          </code>
        </manufacturedMaterial>
      </manufacturedProduct>
    </consumable>
    <!-- Medication.medication-generic-name-->
    <entryRelationship typeCode="COMP">
      <act classCode="ACT" moodCode="EVN">
        <code code="103.16703"
          codeSystem="1.2.36.1.2001.1001.101"
          codeSystemName="NCTIS Data Components"
          displayName="Pharmaceutical Item Generic Name"/>
        <text>Paracetamol 665mg caplet</text>
      </act>
    </entryRelationship>
    <!-- Medication.medication-brand-name-->
    <entryRelationship typeCode="COMP">
      <act classCode="ACT" moodCode="EVN">
        <code code="103.16676"
          codeSystem="1.2.36.1.2001.1001.101"
          codeSystemName="NCTIS Data Components"
          displayName="Pharmaceutical Item Brand"/>
        <text>Panadol Osteo</text>
      </act>
    </entryRelationship>
    <!-- MedicationStatement.reasonCode-->
    <entryRelationship typeCode="RSON">
      <observation classCode="OBS" moodCode="EVN">
        <code code="103.10141"
          codeSystem="1.2.36.1.2001.1001.101"
          codeSystemName="NCTIS Data Components"
          displayName="Clinical Indication"/>
        <value xsi:type="CD">
          <originalText>Osteoarthritis, pain
            relief</originalText>
        </value>
      </observation>
    </entryRelationship>
    <!-- List.entry.flag-->
    <entryRelationship typeCode="SUBJ" inversionInd="true">
      <observation classCode="OBS" moodCode="EVN">
        <code code="288533004"
          codeSystem="2.16.840.1.113883.6.96"
          displayName="Change values"/>
        <value xsi:type="CD" code="unchanged"
          codeSystem="1.2.36.1.2001.1004.201.10075"/>
      </observation>
    </entryRelationship>
    </substanceAdministration>
  </entryRelationship>

  <!-- List.entry.item: warfarin -->
  <entryRelationship typeCode="COMP">
    <!-- MedicationStatement; taken=y -->
```

```
<substanceAdministration classCode="SBADM" moodCode="EVN">
  <templateId root="1.2.36.1.2001.1001.102.101.100066"
    extension="1.0"/>
  <id root="9cb2c758-917d-11e9-bc42-526af7764f64"/>
  <!-- MedicationStatement.dosage-->
  <text>
    <reference value="#medicationstatement-warfarin"/>
  </text>
  <!-- MedicationStatement.status-->
  <statusCode code="active"/>
  <!-- MedicationStatement.medication-->
  <consumable>
    <manufacturedProduct>
      <templateId root="1.2.36.1.2001.1001.102.101.100068"
        extension="1.0"/>
      <manufacturedMaterial determinerCode="KIND">
        <code code="22464011000036101"
          codeSystem="2.16.840.1.113883.6.96"
          codeSystemName="SNOMED CT"
          displayName="warfarin sodium 5 mg tablet">
          <originalText>Warfarin sodium 5 mg
          tablet</originalText>
        </code>
      </manufacturedMaterial>
    </manufacturedProduct>
  </consumable>
  <!-- Medication.medication-brand-name-->
  <entryRelationship typeCode="COMP">
    <act classCode="ACT" moodCode="EVN">
      <code code="103.16676"
        codeSystem="1.2.36.1.2001.1001.101"
        codeSystemName="NCTIS Data Components"
        displayName="Pharmaceutical Item Brand"/>
      <text>Coumadin</text>
    </act>
  </entryRelationship>
  <!-- MedicationStatement.reasonCode-->
  <entryRelationship typeCode="RSON">
    <observation classCode="OBS" moodCode="EVN">
      <code code="103.10141"
        codeSystem="1.2.36.1.2001.1001.101"
        codeSystemName="NCTIS Data Components"
        displayName="Clinical Indication"/>
      <value xsi:type="CD">
        <originalText>Blood thining</originalText>
      </value>
    </observation>
  </entryRelationship>
  <!-- List.entry.flag-->
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <observation classCode="OBS" moodCode="EVN">
      <code code="288533004"
        codeSystem="2.16.840.1.113883.6.96"
        displayName="Change values"/>
      <text>Some reason here</text>
      <value xsi:type="CD" code="suspended"
        codeSystem="1.2.36.1.2001.1004.201.10075"/>
    </observation>
  </entryRelationship>
  </substanceAdministration>
</entryRelationship>

<!-- List.entry.item: paracetamol-500mg -->
<entryRelationship typeCode="COMP">
  <!-- MedicationStatement; taken=y -->
  <substanceAdministration classCode="SBADM" moodCode="EVN">
    <templateId root="1.2.36.1.2001.1001.102.101.100066"
      extension="1.0"/>
    <id root="effedb80-91bf-11e9-bc42-526af7764f64"/>
    <!-- MedicationStatement.dosage-->
    <text>
      <reference value="#medicationstatement-paracetamol-500mg"/>
    </text>
    <!-- MedicationStatement.status-->
    <statusCode code="aborted"/>
    <!-- MedicationStatement.medication-->
    <consumable>
      <manufacturedProduct>
        <templateId root="1.2.36.1.2001.1001.102.101.100068"
          extension="1.0"/>
        <manufacturedMaterial determinerCode="KIND">
          <code code="22464011000036101"
            codeSystem="2.16.840.1.113883.6.96"
            codeSystemName="SNOMED CT"
            displayName="Paracetamol 500 mg
            tablet">
            <originalText>Paracetamol 500 mg
            tablet</originalText>
          </code>
        </manufacturedMaterial>
      </manufacturedProduct>
    </consumable>
    <!-- List.entry.flag-->
    <entryRelationship typeCode="SUBJ" inversionInd="true">
      <observation classCode="OBS" moodCode="EVN">
        <code code="288533004"
          codeSystem="2.16.840.1.113883.6.96"
          displayName="Change values"/>
      <text>Duplicated medicine</text>
    </observation>
  </substanceAdministration>
</entryRelationship>
```

```
<value xsi:type="CD" code="ceased"
      codeSystem="1.2.36.1.2001.1004.201.10075" />
    </observation>
  </entryRelationship>
</substanceAdministration>
</entryRelationship>

<!-- List.entry.item: ibuprofen -->
<entryRelationship typeCode="COMP">
  <!-- MedicationStatement; taken=y -->
  <substanceAdministration classCode="SBADM" moodCode="EVN">
    <templateId root="1.2.36.1.2001.1001.102.101.100066"
      extension="1.0" />
    <id root="ec2f5562-91c3-11e9-bc42-526af7764f64" />
    <!-- MedicationStatement.dosage-->
    <text>
      <reference value="#medicationstatement-ibuprofen" />
    </text>
    <!-- MedicationStatement.status-->
    <statusCode code="aborted" />
    <!-- MedicationStatement.medication-->
    <consumable>
      <manufacturedProduct>
        <templateId root="1.2.36.1.2001.1001.102.101.100068"
          extension="1.0" />
        <manufacturedMaterial determinerCode="KIND">
          <code code="21885011000036105"
            codeSystem="2.16.840.1.113883.6.96"
            codeSystemName="SNOMED CT" displayName="Ibuprofen">
            <originalText>Ibuprofen</originalText>
          </code>
        </manufacturedMaterial>
      </manufacturedProduct>
    </consumable>
    <!-- List.entry.flag-->
    <entryRelationship typeCode="SUBJ" inversionInd="true">
      <observation classCode="OBS" moodCode="EVN">
        <code code="288533004"
          codeSystem="2.16.840.1.113883.6.96"
          displayName="Change values" />
        <text>Allergic reaction</text>
        <value xsi:type="CD" code="ceased"
              codeSystem="1.2.36.1.2001.1004.201.10075" />
      </observation>
    </entryRelationship>
  </substanceAdministration>
</entryRelationship>

</act>
</entry>
</section>
</component>
<!-- section (Allergies) -->
<component>
  <section>
    <templateId root="1.2.36.1.2001.1001.102.101.100069" extension="1.0" />
    <id root="e5911e16-915a-11e9-bc42-526af7764f64" />
    <code code="48765-2" codeSystem="2.16.840.1.113883.6.1"
      displayName="Allergies and/or adverse reactions" />
    <title>Allergies and Adverse Reactions</title>
    <!-- section.text-->
    <text mediaType="text/x-hl7-text+xml">
      <table>
        <caption>Allergies and Adverse Reactions</caption>
        <thead>
          <tr>
            <th>Substance/Agent</th>
            <th>Reaction Type</th>
            <th>Reaction</th>
            <th>Reaction Onset Date</th>
          </tr>
        </thead>
        <tbody>
          <tr ID="A1">
            <td ID="A1A">Amoxicillin</td>
            <td ID="A1RT">Allergic reaction</td>
            <td ID="A1R">Anaphylaxis</td>
            <td>October 2016</td>
          </tr>
        </tbody>
      </table>
    </text>
  <!--entry (Summary Statement of Allergy or Intolerance)-->
<entry>
  <!--AllergyIntolerance (Summary Statement of Allergy or Intolerance)-->
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="1.2.36.1.2001.1001.102.101.100014" extension="1.0" />
    <id root="134649c9-53c9-41fe-984c-2b3123646800" />
    <code code="102.15517" codeSystem="1.2.36.1.2001.1001.101"
      displayName="Adverse Reaction" />
    <!-- AllergyIntolerance.onset-->
    <effectiveTime>
      <low value="201610" />
    </effectiveTime>
    <!--AllergyIntolerance.code-->
    <value xsi:type="CD">
      <originalText>
        <reference value="#A1A" />
      </originalText>
```

```
</value>
<!-- AllergyIntolerance.verificationStatus -->
<entryRelationship typeCode="COMP">
  <observation classCode="OBS" moodCode="EVN">
    <code code="103.32012" codeSystem="1.2.36.1.2001.1001.101"
      codeSystemName="NCTIS Data Components Code System"
      displayName="Verification Status"/>
    <value xsi:type="CD" code="unconfirmed"
      codeSystem="2.16.840.1.113883.4.642.1.116"
      codeSystemName="AllergyIntoleranceVerificationStatus"
      displayName="Unconfirmed"/>
  </observation>
</entryRelationship>
<!-- AllergyIntolerance.clinicalStatus -->
<entryRelationship typeCode="COMP">
  <observation classCode="OBS" moodCode="EVN">
    <code code="103.32013" codeSystem="1.2.36.1.2001.1001.101"
      codeSystemName="NCTIS Data Components Code System"
      displayName="Clinical Status"/>
    <value xsi:type="CD" code="active"
      codeSystem="2.16.840.1.113883.4.642.1.118"
      codeSystemName="AllergyIntoleranceClinicalStatus"
      displayName="Active"/>
  </observation>
</entryRelationship>
<!-- AllergyIntolerance.reaction -->
<entryRelationship typeCode="COMP">
  <observation classCode="OBS" moodCode="EVN">
    <code code="102.16474" codeSystem="1.2.36.1.2001.1001.101"
      displayName="Reaction Event"/>
    <!-- AllergyIntolerance.type-->
    <value xsi:type="CD">
      <originalText>
        <reference value="#A1RT"/>
      </originalText>
    </value>
    <!-- AllergyIntolerance.reaction.substance-->
    <participant typeCode="CAGNT">
      <participantRole>
        <playingEntity>
          <code>
            <originalText>
              <reference value="#A1A"/>
            </originalText>
          </code>
        </playingEntity>
      </participantRole>
    </participant>
    <!-- AllergyIntolerance.reaction.manifestation -->
    <entryRelationship typeCode="MFST" inversionInd="true">
      <observation classCode="OBS" moodCode="EVN">
        <code>
          <originalText>
            <reference value="#A1R"/>
          </originalText>
        </code>
      </observation>
    </entryRelationship>
    <observation>
  </entryRelationship>
</observation>
</entry>
</section>
</component>
</structuredBody>
</component>
</ClinicalDocument>
```

B.2 Dispense List example 2

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

Example B.2. Dispense List 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 classCode="DOCCLIN" moodCode="EVN" xmlns="urn:hl7-org:v3"  
xmlns:ex="urn:hl7-org/v3-example"  
xmlns:ext="http://ns.electronichealth.net.au/Ci/Cda/Extensions/3.0"  
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
xsi:schemaLocation="urn:hl7-org:v3 ../../library/schema_au_published/CDA-AU-V1_0.xsd">  
<typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>  
<!-- Put content here -->
```

```
</ClinicalDocument>
```

B.3 Prescription and Dispense List example 3

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

Example B.3. Prescription and Dispense List example 3

```
<!-- 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 classCode="DOCCLIN" moodCode="EVN" xmlns="urn:h17-org:v3"  
xmlns:ex="urn:h17-org/v3-example"  
xmlns:ext="http://ns.electronichealth.net.au/Ci/Cda/Extensions/3.0"  
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">  
<typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>  
<!-- Put content here -->  
</ClinicalDocument>
```

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