nehta

Pathology Report
Structured Content Specification
Version 1.0

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Approved for external use

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Key information

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Related documents

Name	Version/Release Date
Personally controlled electronic health record system: Glossary of Terms	Issued 2014
Participation Data Specification	Version 3.2, Issued 20 July 2011
Pathology Test Result Detailed Clinical Model Specification	Version 3.0, To be published
eHealth Pathology Report Information Requirements	Version 1.1, Issued 31 December 2014

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Table of Contents

1 Introduction

This document is a Structured Content Specification (SCS) for the Pathology Report documents that are added to a person's Personally Controlled Electronic Health Record (PCEHR).

Appendix C, *Specification Guide for Use* provides definitional details on data type constraints applied to data elements defined in the SCS. It also provides important information on how to best read and use the SCS. Therefore, it is an essential compendium for better understanding of the SCS.

NEHTA values your questions and comments about this document. Please direct your questions or feedback to *help@nehta.gov.au*.

1.1 Document Purpose

This document describes the structured content of Pathology Report documents that are added to the PCEHR system.

The content within this document provides reviewers with the necessary information (or references to information held outside this document) to evaluate and assess the clinical suitability of the specification.

It is also a key input to the *Pathology Report CDA Implementation Guide [NEHT2013y]*, which describes how to implement NEHTA-compliant Pathology Report documents using the *HL7 Clinical Document Architecture [HL7CDAR2]*.

1.2 Intended Audience

This document 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. It is also intended for those who wish to evaluate the clinical suitability of NEHTA-endorsed specifications.

1.3 Document Scope

This document specifies the essential clinical data groups and elements and the constraints on them that should be applied when creating a Pathology Report document for inclusion in the PCEHR system.

Other uses of pathology reports (such as for exchange between pathology laboratories and hospitals or between general practitioners and specialists) have not been considered for this design.

This is not a guide to implementing any specific messaging standard.

This document is not to be used as a guide to presentation (or rendering) of the data. It contains no information as to how the data described by it should be displayed and no such information should be inferred.

1.4 Known Issues

Known issues with this document are described in Appendix A, *Known Issues*.

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2 Pathology Report Structured Document

2.1 Purpose

To specify the logical structure and allowable content of the information to be exchanged to communicate the results of a pathology episode and in a format suitable for sharing within the PCEHR system. A pathology episode is defined as one or more requested pathology tests, where the request meets all of the following conditions:

- The request was directed to a single primary performing laboratory (does not exclude the ability for this lab to forward a component of the request to a secondary laboratory);
- The request is from a unique requester (who must be an individual healthcare provider with a HPI-I);
- The request is for a unique patient; and
- The request was made at a single point in time (this does not exclude the ability to modify the request at a later point in time but does mean that a later request to the same lab from the same requester for the same patient which is not specifically sent through as an amendment to the initial request will result in a different pathology report).

2.2 Use

A pathology report is sent by a laboratory information system to notify an authorised clinician of the results of a pathology service. The report contains all of the relevant information required to interpret the results as the laboratory intended.

This specification supports:

- Pathology reporting from a laboratory to a clinician authorised to receive it. Such a clinician may be the clinician who requested the pathology service on behalf of the subject of care, or it may be a clinician nominated by the requesting clinician; and
- Inclusion of the report in a person's PCEHR by the reporting laboratory; and
- Inclusion of the report in a person's PCEHR by an authorised clinician.

2.3 Misuse

Using for report types other than pathology.

2.4 PATHOLOGY REPORT

Identification

Label	PATHOLOGY REPORT
Metadata Type	Structured Document
Identifier	SD-32001
OID	1.2.36.1.2001.1001.101.100.32001

Definition

Definition	A set of one or more results of pathology tests and associated interpretation.
Definition Source	NEHTA
Synonymous Names	Pathology Result Report Results Report
Assumptions	*Pathology Reports* are generated in response to a request for pathology services.
Assumptions Source	NEHTA
Notes	Reports are expected to contain all of the relevant information required to interpret the results as the laboratory intended.

Data Hierarchy

Note

Items below whose text is lighter (mid-blue and mid-grey) are technical identifiers whose purpose is to facilitate interoperability, sharing of data and secondary use. It is typically expected that such identifiers will be generated internally by systems and not displayed to users since they usually have no clinical significance.

Items below whose background is grey and whose text is struck through are data components that are included in the relevant Detailed Clinical Model Specification, but whose use is prohibited in this particular scenario.

		PATHOLOGY REPORT	
CONTEXT			
		SUBJECT OF CARE	1..1
		DOCUMENT AUTHOR	1..1
		~~ENCOUNTER~~	~~0..0~~
		Document Instance Identifier	1..1
		~~RELATED INFORMATION~~	~~0..0~~
		Document Type	1..1

		REPORTING PATHOLOGIST				1..1
		ORDER DETAILS				1..1
			REQUESTER			1..1
			Requester Order Identifier (Order Identifier)			0..1
			~~Order Name~~			~~0..0~~
CONTENT						
		PATHOLOGY				1..1
			PATHOLOGY TEST RESULT			1..*
				Test Result Name (Pathology Test Result Name)		1..1
				Pathology Discipline (Diagnostic Service)		1..1
				Test Specimen Detail (SPECIMEN)		1..1
					~~Specimen Tissue Type~~	~~0..0~~
					~~Collection Procedure~~	~~0..0~~
					~~Anatomical Site (ANATOMICAL LOCATION)~~	~~0..0~~
					~~Physical Details (PHYSICAL PROPERTIES OF AN OBJECT)~~	~~0..0~~
					~~NEEDLE BIOPSY CORE DETAILS~~	~~0..0~~
					~~COLLECTION AND HANDLING~~	~~0..0~~
					HANDLING AND PROCESSING	1..1
					Collection DateTime	1..1
					~~Collection Setting~~	~~0..0~~
					~~Date and Time of Receipt (DateTime Received)~~	~~0..0~~
					~~Date and Time Processed (DateTime Processed)~~	~~0..0~~
					~~SPECIMEN QUALITY~~	~~0..0~~
					~~IDENTIFIERS~~	~~0..0~~
				Overall Test Result Status (Overall Pathology Test Result Status)		1..1
				~~Clinical Information Provided~~		~~0..0~~

				~~Result Group (PATHOLOGY TEST RESULT GROUP)~~		~~0..0~~
				~~Pathological Diagnosis~~		~~0..0~~
				~~Conclusion (Pathology Test Conclusion)~~		~~0..0~~
				~~Test Result Representation~~		~~0..0~~
				~~Test Comment~~		~~0..0~~
				~~RECEIVING LABORATORY~~		~~0..0~~
				~~TEST REQUEST DETAILS~~		~~0..0~~
				~~Test Procedure~~		~~0..0~~
				~~REPORTING PATHOLOGIST~~		~~0..0~~
				~~INFORMATION PROVIDER~~		~~0..0~~
				~~SUBJECT~~		~~0..0~~
				Observation DateTime		1..1
				Pathology Test Result Instance Identifier		1..1
				~~RELATED INFORMATION~~		~~0..0~~
				Detailed Clinical Model Identifier		1..1
			Pathology Section Instance Identifier (Pathology Instance Identifier)			1..1
			RELATED DOCUMENT			1..1
				Link Nature		1..1
				Link Role		1..1
				Test Result Representation (Document Target)		1..1
				DOCUMENT DETAILS		1..1
					~~DateTime Health Event Ended~~	~~0..0~~
					Document Type	1..1
					~~DOCUMENT AUTHOR~~	~~0..0~~
					~~DOCUMENT CUSTODIAN~~	~~0..0~~

					Report Name (Document Title)	1..1
					~~ADDITIONAL DOCUMENT DETAIL~~	~~0..0~~
					~~Document Summary~~	~~0..0~~
					Report DateTime (Effective Period)	1..1
					Report Identifier (Document Identifier)	1..1
					Report Status (Document Status)	1..1
			Section Type			1..1

2.5 SUBJECT OF CARE

Identification

Label	SUBJECT OF CARE
Metadata Type	Data Group
Identifier	DG-10296
OID	1.2.36.1.2001.1001.101.102.10296

Definition

Definition	Person who receives healthcare services.
Definition Source	NEHTA
Synonymous Names	Patient Individual
Scope	The person who is the focus of this document.
Scope Source	NEHTA

Usage

Conditions of Use	This is a reuse of the *PARTICIPATION* `data group`, which is described in *Participation Data Specification [NEHT2011v]*. The following constraints are additional to those specified in *Participation Data Specification [NEHT2011v]*. Constraints are explained in Appendix C, *Specification Guide for Use*. Additional obligation and occurrence constraints: • Participation Period is **PROHIBITED**. • LOCATION OF PARTICIPATION is **PROHIBITED**. • Entity Identifier is **ESSENTIAL**. • ADDRESS is **ESSENTIAL**. • Relationship to Subject of Care is **PROHIBITED**. • EMPLOYMENT DETAIL is **PROHIBITED**. • DEMOGRAPHIC DATA is **ESSENTIAL**. • Sex is **ESSENTIAL**. • DATE OF BIRTH DETAIL is **ESSENTIAL**. • Indigenous Status is **ESSENTIAL**. • Qualifications is **PROHIBITED**. Other additional constraints: • Participation Type **SHALL** have an implementation-specific value equivalent to “Subject of Care”.

	• Role **SHALL** have an implementation-specific value equivalent to “Patient”. • The value of one Entity Identifier **SHALL** be an Australian IHI. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a PERSON.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	PATHOLOGY REPORT	1..1

2.6 DOCUMENT AUTHOR

Identification

Label	DOCUMENT AUTHOR
Metadata Type	Data Group
Identifier	DG-10296
OID	1.2.36.1.2001.1001.101.102.10296

Definition

Definition	Composer of the document.
Definition Source	NEHTA
Synonymous Names	Author
Notes	The date, or date and time, that the authoring of the document was completed is recorded in the *Participation Period* of the *Author*.

Usage

Conditions of Use	This is a reuse of the *PARTICIPATION* `data group`, which is described in *Participation Data Specification [NEHT2011v]*. The following constraints are additional to those specified in *Participation Data Specification [NEHT2011v]*. Constraints are explained in Appendix C, *Specification Guide for Use*. Additional obligation and occurrence constraints: • Participation Period is **ESSENTIAL**. • LOCATION OF PARTICIPATION is **PROHIBITED**. • Entity Identifier is **ESSENTIAL**. • Relationship to Subject of Care is **PROHIBITED**. • EMPLOYMENT DETAIL is **ESSENTIAL**. • EMPLOYER ORGANISATION is **ESSENTIAL**. • EMPLOYER ORGANISATION.Entity Identifier is **ESSENTIAL**. • DEMOGRAPHIC DATA is **PROHIBITED**. Other additional constraints: • Participation Type **SHALL** have an implementation-specific value equivalent to “Document Author”. • Role **SHOULD** have a value chosen from *1220.0 - ANZSCO - Australian and New Zealand Standard Classification of Occupations, First Edition, Revision 1 [ABS2009]*. However, if a suitable value in this set cannot be found, then any code set that is both registered with HL7 and is publicly available **MAY** be used. • The value of one Entity Identifier **SHALL** be an Australian HPI-I.

	• Address Purpose **SHALL** have the value “B” (Business). • Electronic Communication Usage Code **SHALL** have the value “B” (Business). • The value of one EMPLOYER ORGANISATION.Entity Identifier **SHALL** be an Australian HPI-O. • AUSTRALIAN OR INTERNATIONAL ADDRESS **SHALL** be instantiated as an AUSTRALIAN ADDRESS. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a PERSON.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PATHOLOGY REPORT	1..1

2.7 Document Instance Identifier

Identification

Label	Document Instance Identifier
Metadata Type	Data Element
Identifier	DE-20101
OID	1.2.36.1.2001.1001.101.103.20101

Definition

Definition	A globally unique identifier for each instance of a *Pathology Report* document.
Definition Source	NEHTA
Synonymous Names	
Context	A document can have multiple instances as it passes through its life cycle of creation, revisions before it is first sent, and revised versions after it is first sent. The value of this `data element` enables systems to identify all instances of a document uniquely, thus enabling efficient storage, query and audit trail of information about a subject of care.
Context Source	NEHTA
Notes	This `data element` is intended for machine or system use only and hence need not be displayed on documents.
Data Type	UniqueIdentifier

Usage

Examples	Please see Appendix C, *Specification Guide for Use* for examples and usage information for UniqueIdentifier.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PATHOLOGY REPORT	1..1

2.8 Document Type

Identification

Label	Document Type
Metadata Type	Data Element
Identifier	DE-10335
OID	1.2.36.1.2001.1001.101.103.10335

Definition

Definition	Type of document.
Definition Source	NEHTA
Synonymous Names	
Notes	A document's type is identified by a unique identifier, not by a name.
Data Type	UniqueIdentifier

Usage

Conditions of Use	The value of this item is fixed and **SHALL** be the default value.
Conditions of Use Source	NEHTA
Examples	Please see Appendix C, *Specification Guide for Use* for examples and usage information for UniqueIdentifier.
Default Value	1.2.36.1.2001.1001.101.100.32001

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PATHOLOGY REPORT	1..1

2.9 REPORTING PATHOLOGIST

Identification

Label	REPORTING PATHOLOGIST
Metadata Type	Data Group
Identifier	DG-10296
OID	1.2.36.1.2001.1001.101.102.10296

Definition

Definition	Pathologist responsible for the pathology test result.
Definition Source	NEHTA
Synonymous Names	
Notes	This is the author of the content of the report. The date, and optionally time, the pathology test result is authorised by the reporting pathologist is contained in the *Participation Period* of *Reporting Pathologist*.

Usage

Conditions of Use	This is a reuse of the *PARTICIPATION* `data group`, which is described in *Participation Data Specification [NEHT2011v]*. The following constraints are additional to those specified in *Participation Data Specification [NEHT2011v]*. Constraints are explained in Appendix C, *Specification Guide for Use*. Additional obligation and occurrence constraints: • Participation Period is **ESSENTIAL**. • LOCATION OF PARTICIPATION is **PROHIBITED**. • Entity Identifier is **ESSENTIAL**. • ADDRESS is **ESSENTIAL**. • ELECTRONIC COMMUNICATION DETAIL is **ESSENTIAL**. • Relationship to Subject of Care is **PROHIBITED**. • EMPLOYMENT DETAIL is **ESSENTIAL**. • EMPLOYER ORGANISATION is **ESSENTIAL**. • EMPLOYER ORGANISATION.Entity Identifier is **ESSENTIAL**. • DEMOGRAPHIC DATA is **PROHIBITED**. Other additional constraints: • Participation Type **SHALL** have an implementation-specific value equivalent to “Reporting Pathologist”.

	• Role **SHOULD** have a value chosen from *1220.0 - ANZSCO - Australian and New Zealand Standard Classification of Occupations, First Edition, Revision 1 [ABS2009]*. However, if a suitable value in this set cannot be found, then any code set that is both registered with HL7 and is publicly available **MAY** be used. • The value of one Entity Identifier **SHALL** be an Australian HPI-I. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a PERSON. • AUSTRALIAN OR INTERNATIONAL ADDRESS **SHALL** be instantiated as an AUSTRALIAN ADDRESS. • Address Purpose **SHALL** have the value “B” (Business). • Electronic Communication Usage Code **SHALL** have the value “B” (Business). • The value of one EMPLOYER ORGANISATION.Entity Identifier **SHALL** be an Australian HPI-O.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PATHOLOGY REPORT	1..1

2.10 ORDER DETAILS

Identification

Label	ORDER DETAILS
Metadata Type	Data Group
Identifier	DG-16997
OID	1.2.36.1.2001.1001.101.102.16997

Definition

Definition	Details of order that caused the creation of the document.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PATHOLOGY REPORT	1..1

Children

Data Type	Name	Occurrences
	REQUESTER	1..1
	Requester Order Identifier (Order Identifier)	0..1
	~~Order Name~~	~~0..0~~

2.11 REQUESTER

Identification

Label	REQUESTER
Metadata Type	Data Group
Identifier	DG-10296
OID	1.2.36.1.2001.1001.101.102.10296

Definition

Definition	Party that asks for or orders the provision of service.
Definition Source	NEHTA
Synonymous Names	
Notes	The date, and optionally time, the request is made is contained in the *Participation Period* of the *Requester*.

Usage

Conditions of Use

This is a reuse of the *PARTICIPATION* `data group`, which is described in *Participation Data Specification [NEHT2011v]*.

The following constraints are additional to those specified in *Participation Data Specification [NEHT2011v]*. Constraints are explained in Appendix C, *Specification Guide for Use*.

Additional obligation and occurrence constraints:

- Participation Period is **ESSENTIAL**.
- LOCATION OF PARTICIPATION is **PROHIBITED**.
- Relationship to Subject of Care is **PROHIBITED**.
- DEMOGRAPHIC DATA is **PROHIBITED**.

Other additional constraints:

- Participation Type **SHALL** have an implementation-specific value equivalent to “Service Requester”.
- Role **SHOULD** have a value chosen from *1220.0 - ANZSCO - Australian and New Zealand Standard Classification of Occupations, First Edition, Revision 1 [ABS2009]*. However, if a suitable value in this set cannot be found, then any code set that is both registered with HL7 and is publicly available **MAY** be used.
- The value of one Entity Identifier **SHOULD** be an Australian HPI-I.
- AUSTRALIAN OR INTERNATIONAL ADDRESS **SHALL** be instantiated as an AUSTRALIAN ADDRESS.
- Address Purpose **SHALL** have the value “B” (Business).
- Electronic Communication Usage Code **SHALL** have the value “B” (Business).

	• PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a PERSON. • The value of one EMPLOYER ORGANISATION.Entity Identifier **SHOULD** be an Australian HPI-O.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	ORDER DETAILS	1..1

2.12 Order Identifier

Identification

Label	Requester Order Identifier
Metadata Type	Data Element
Identifier	DE-17007
OID	1.2.36.1.2001.1001.101.103.17007

Definition

Definition	The local identifier assigned to the order by the order requester.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Examples	Please see Appendix C, *Specification Guide for Use* for examples and usage information for UniqueIdentifier.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	ORDER DETAILS	0..1

2.13 PATHOLOGY

Identification

Label	PATHOLOGY
Metadata Type	Section
Identifier	S-20018
OID	1.2.36.1.2001.1001.101.101.20018

Definition

Definition	Group of pathology test results concerning a subject of care and supporting information.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PATHOLOGY REPORT	1..1

Children

Data Type	Name	Occurrences
	PATHOLOGY TEST RESULT	1..*
	Pathology Section Instance Identifier (Pathology Instance Identifier)	1..1
	RELATED DOCUMENT	1..1
	Section Type	1..1

2.14 Pathology Instance Identifier

Identification

Label	Pathology Section Instance Identifier
Metadata Type	Data Element
Identifier	DE-16944
OID	1.2.36.1.2001.1001.101.103.16944

Definition

Definition	A globally unique identifier for each instance of a *Pathology* section.
Definition Source	NEHTA
Synonymous Names	
Notes	This `data element` is intended for machine or system use only and hence need not be displayed on documents.
Data Type	UniqueIdentifier

Usage

Examples	Please see Appendix C, *Specification Guide for Use* for examples and usage information for UniqueIdentifier.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PATHOLOGY	1..1

2.15 RELATED DOCUMENT

Identification

Label	RELATED DOCUMENT
Metadata Type	Data Group
Identifier	DG-16971
OID	1.2.36.1.2001.1001.101.102.16971

Definition

Definition	Information about a document of interest.
Definition Source	NEHTA
Synonymous Names	
Scope	This provides a link to the target document of interest.
Scope Source	NEHTA

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PATHOLOGY	1..1

Children

Data Type	Name	Occurrences
	Link Nature	1..1
	Link Role	1..1
	Test Result Representation (Document Target)	1..1
	DOCUMENT DETAILS	1..1

2.16 Link Nature

Identification

Label	Link Nature
Metadata Type	Data Element
Identifier	DE-16698
OID	1.2.36.1.2001.1001.101.103.16698

Definition

Definition	The general semantic category of the relationship between this instance of this Detailed Clinical Model (DCM), i.e. the source, and the target DCM instance or target document.
Definition Source	NEHTA
Synonymous Names	
Notes	This is one of two attributes which together communicate the semantics of the relationship between the source and target DCMs. This attribute is intended to be a coarse-grained category that can be used to enable interoperability between sender and receiver.
Data Type	CodedText
Value Domain	Link Nature Values

Usage

Conditions of Use	The value **SHALL** be LINK-E0 (“is a related documentation”).
Conditions of Use Source	NEHTA
Examples	Please see Appendix C, *Specification Guide for Use* for examples and usage information for CodedText.

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	RELATED DOCUMENT	1..1

2.17 Link Nature Values

Identification

Label	Link Nature Values
Metadata Type	Value Domain
Identifier	VD-16698
OID	1.2.36.1.2001.1001.101.104.16698
External Identifier	LINK_NATURE

Definition

Definition	Set of values for the general semantic category of the relationship between this instance of this DCM, i.e. the source, and the target DCM instance or target document.
Definition Source	NEHTA

Value Domain

Source	ISO 13606-3:2009	
Permissible Values	The permissible values are those specified in Termlist LINK_NATURE in *ISO 13606-3:2009 Health informatics - Electronic health record communication - Part 3: Reference archetypes and term lists [ISO2009a]*. They are listed here.	
	LINK-A0, is related to	A generic category for any Link, the details of which will be given by the value of Link Role.
	LINK-B0, is confirmed by or authorised by	The target link contains [an instance of a DCM or document] that acts as the legal or clinical basis for the activity documented in the source [DCM instance], or is a declaration of intent to provide (or not to provide) requested care. This Link is to be used to connect two [DCM instances], as opposed to the inclusion of a corroborating or authorising participant as an identified party within a single [DCM instance or document].
	LINK-C0, is related to the same problem or health issue	The target [instance of a DCM or document] documents health or health care that pertains to the same clinical situation as the source [DCM instance]. One of the two might be defining a problem for which the other is a manifestation, or the relationship might for example be cause and effect, stages in an evolving clinical history, a different interpretation of an observation, a clinical indication or contraindication.
	LINK-D0, is related to the same care plan, act or episode	The source and the target [instances of DCM or documents] are each documenting parts of the same care plan, act or episode. One other two might be defining the same care plan, act or episode, or both might be related milestones.

	LINK-E0, is a related documentation	The target [instance of a DCM or document] is an alternative documentary form of the source [DCM instance], such as re-expression of the same clinical information or additional supplementary explanatory information.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Link Nature	1..1

2.18 Link Role

Identification

Label	Link Role
Metadata Type	Data Element
Identifier	DE-16699
OID	1.2.36.1.2001.1001.101.103.16699

Definition

Definition	The detailed semantic description of the relationship between this instance of this DCM, i.e. the source, and the target DCM instance or target document.
Definition Source	NEHTA
Synonymous Names	
Notes	This is one of two attributes that together communicate the semantics of the relationship between the source and target. This attribute provides for a specific description of the actual role played by the target in relation to the source.
Data Type	CodeableText
Value Domain	Link Role Values

Usage

Conditions of Use	The value **SHALL** be LINK-E4 (“excerpts”).
Conditions of Use Source	NEHTA
Examples	Please see Appendix C, *Specification Guide for Use* for examples and usage information for CodeableText.

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	RELATED DOCUMENT	1..1

2.19 Link Role Values

Identification

Label	Link Role Values
Metadata Type	Value Domain
Identifier	VD-16699
OID	1.2.36.1.2001.1001.101.104.16699
External Identifier	LINK_ROLE

Definition

Definition	Set of values for the detailed semantic description of the relationship between this instance of this DCM, i.e. the source, and the target DCM instance or target document.
Definition Source	NEHTA
Context	These values are used within the context of the value of the *Link Nature* `data element`. They provide greater specificity and may be selected more for human readership than for interoperable automated processing.
Context Source	NEHTA

Value Domain

Source	ISO 13606-3:2009
Permissible Values	Values **SHOULD** be from Termlist LINK_ROLE in ISO 13606-3:2009 [ISO2009a]. Values **MAY** be from any suitable terminology. Some values from Termlist LINK_ROLE in *ISO 13606-3:2009 Health informatics - Electronic health record communication - Part 3: Reference archetypes and term lists [ISO2009a]* are:

LINK-A1, unspecified link	The term is used when no semantic information is available for this Link in the EHR system from which the EXTRACT has been created.
LINK-A2, suggests	The interpretation expressed in the target component is a possible cause or outcome of the findings documented in the source component.
LINK-B1, endorses	The interpretation expressed in the source component provides confirmatory evidence or a confirmatory opinion of the interpretation expressed in the target component.
LINK-C3, evidence for	The observation or interpretation documented in the source component provides confirmatory evidence of the interpretation expressed in the target component.
LINK-D1, outcome	The clinical situation documented in the target component is the direct outcome of the situation documented in the source component.

	LINK-E1, documented by	A clinical situation documented in the source component is more formally documented in the target component.
	LINK-E4, excerpts	The source component is an extract (copy) of part or all of the information contained within the target component.

Usage

Conditions of Use	Each of the link terms in LINK_ROLE from ISO 13606-3:2009 is a sub-category of a corresponding term in *Link Nature Values*, where that correspondence is indicated by the first letter after the code string "LINK-" e.g. the term LINK-A1 is a subcategory of term LINK-A0. If a term in this list is used for the *Link Role* `data element`, the appropriate corresponding value **SHALL** be used from *Link Nature Values*.
Conditions of Use Source	ISO 13606-3:2009

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	Link Role	1..1

2.20 Document Target

Identification

Label	Test Result Representation
Metadata Type	Data Element
Identifier	DE-16972
OID	1.2.36.1.2001.1001.101.103.16972

Definition

Definition	The logical “to” object in the link relation.
Definition Source	NEHTA
Synonymous Names	
Notes	Rich text representation of the entire report as issued by the diagnostic service. The report is a verbatim copy of the report as issued. The results reported may also, or instead, be supplied in a machine-readable structured form. As some structured pathology information is unable to be stored and displayed correctly by receiving systems at this time, some structured pathology information (such as microbiology results) is sent in the same way as free text or images. Resistance to structured formatting has been expressed in some quarters. These concerns may be due to the perceived difficulty in ensuring the results are maintained in their entirety as intended by the reporting provider. The nature and intent of DCMs to constrain information and provide context may help to alleviate this problem. In the meantime, the NEHTA *Pathology Test Result* `data group` represents the non-numerical pathology results as a single `data element`. This is similar to the approach taken by *NEHTA Pathology Result Report Structured Document Template [NEHT2009s]*, which is HL7 based. The PCEHR system requires all *Pathology Report*s to use only PDF format files in *Document Target*.
Data Type	EncapsulatedData

Usage

Conditions of Use	The attached document **SHALL** be one of the following formats: • GIF (image/gif) • JPEG (image/jpg, image/jpeg) • PDF (application/pdf) • PNG (image/png) • TIFF (image/tif, image/tiff)
Conditions of Use Source	NEHTA

Examples	Please see Appendix C, *Specification Guide for Use* for examples and usage information for EncapsulatedData.

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	RELATED DOCUMENT	1..1

2.21 DOCUMENT DETAILS

Identification

Label	DOCUMENT DETAILS
Metadata Type	Data Group
Identifier	DG-16720
OID	1.2.36.1.2001.1001.101.102.16720

Definition

Definition	Information about a document of interest.
Definition Source	NEHTA
Synonymous Names	
Scope	Includes, among other things, document metadata (for example title and document type), information about the origination of the document (for example author name and date of creation), life cycle (for example document status).
Scope Source	NEHTA

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	RELATED DOCUMENT	1..1

Children

Data Type	Name	Occurrences
	~~DateTime Health Event Ended~~	~~0..0~~
	Document Type	1..1
	~~DOCUMENT AUTHOR~~	~~0..0~~
	~~DOCUMENT CUSTODIAN~~	~~0..0~~
	Report Name (Document Title)	1..1
	~~ADDITIONAL DOCUMENT DETAIL~~	~~0..0~~
	~~Document Summary~~	~~0..0~~

Data Type	Name	Occurrences
	Report DateTime (Effective Period)	1..1
	Report Identifier (Document Identifier)	1..1
	Report Status (Document Status)	1..1

2.22 Document Type

Identification

Label	Document Type
Metadata Type	Data Element
Identifier	DE-10335
OID	1.2.36.1.2001.1001.101.103.10335

Definition

Definition	Type of the document of interest.
Definition Source	NEHTA
Synonymous Names	
Notes	Each clinical document contains as a coded value an identification of its *Document Type*. This `data element` contains the coded value of *Document Type* of the document of interest.
Data Type	CodedText
Value Domain	Document Type Values

Usage

Conditions of Use	The value **SHALL** be the LOINC code 11526-1 (“Pathology study”).
Conditions of Use Source	NEHTA
Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	DOCUMENT DETAILS	1..1

2.23 Document Type Values

Identification

Label	Document Type Values
Metadata Type	Value Domain
Identifier	VD-10336
OID	1.2.36.1.2001.1001.101.104.10336

Definition

Definition	Set of values for *Document Type*.
Definition Source	NEHTA

Value Domain

Source	NCTIS Document Type Values
Permissible Values	The permissible values are: • LOINC clinical document codes • NEHTA OIDs with the prefix 1.2.36.1.2001.1001.101.100

Usage

Conditions of Use	The value of *Document Type* **SHOULD** be a LOINC code. Where an appropriate LOINC code is not available, the value **SHALL** be a NEHTA OID.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Document Type	1..1

2.24 Document Title

Identification

Label	Report Name
Metadata Type	Data Element
Identifier	DE-16966
OID	1.2.36.1.2001.1001.101.103.16966

Definition

Definition	Title of the document of interest.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	Please see Appendix C, *Specification Guide for Use* for examples and usage information for Text.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	DOCUMENT DETAILS	1..1

2.25 Effective Period

Identification

Label	Report DateTime
Metadata Type	Data Element
Identifier	DE-16981
OID	1.2.36.1.2001.1001.101.103.16981

Definition

Definition	The period of time during which the document of interest is deemed to have clinical utility.
Definition Source	NEHTA
Synonymous Names	
Notes	The date and time the report is written is the start of the time interval.
Data Type	TimeInterval

Usage

Conditions of Use	The start of *Effective Period* **SHALL** be the date and time of the report (*Report DateTime*). *Report DateTime* **SHALL** include a date and a time component.
Conditions of Use Source	NEHTA
Examples	Please see Appendix C, *Specification Guide for Use* for examples and usage information for TimeInterval.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	DOCUMENT DETAILS	1..1

2.26 Document Identifier

Identification

Label	Report Identifier
Metadata Type	Data Element
Identifier	DE-20101
OID	1.2.36.1.2001.1001.101.103.20101

Definition

Definition	Unique identifier of the document of interest.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Examples	Please see Appendix C, *Specification Guide for Use* for examples and usage information for UniqueIdentifier.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	DOCUMENT DETAILS	1..1

2.27 Document Status

Identification

Label	Report Status
Metadata Type	Data Element
Identifier	DE-20104
OID	1.2.36.1.2001.1001.101.103.20104

Definition

Definition	Status of the document of interest.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodeableText
Value Domain	Document Status Values

Usage

Conditions of Use	The receiving system **SHALL NOT** amend the value of the *Document Status* of a received document.
Conditions of Use Source	NEHTA
Examples	Please see Appendix C, *Specification Guide for Use* for examples and usage information for CodeableText.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	DOCUMENT DETAILS	1..1

2.28 Document Status Values

Identification

Label	Document Status Values
Metadata Type	Value Domain
Identifier	VD-20104
OID	1.2.36.1.2001.1001.101.104.20104
External Identifier	2.16.840.1.113883.12.123

Definition

Definition	Set of values for the status of the document.
Definition Source	NEHTA
Notes	In other NEHTA-compliant documents, such as *Discharge Summary* v2.1, values of this `data element` are encoded using *NCTIS Document Status Values*, rather than *HL7 v2.x Table 0123 (Result status)*.

Value Domain

Source	HL7 v2.x Table 0123 (Result status)

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Report Status (Document Status)	1..1

2.29 Section Type

Identification

Label	Section Type
Metadata Type	Data Element
Identifier	DE-16693
OID	1.2.36.1.2001.1001.101.103.16693

Definition

Definition	NEHTA OID for type of Section.
Definition Source	NEHTA
Synonymous Names	
Notes	A section's type is identified by a unique identifier, not by a name.
Data Type	UniqueIdentifier

Usage

Conditions of Use	The value of this item is fixed and **SHALL** be the default value.
Conditions of Use Source	NEHTA
Examples	Please see Appendix C, *Specification Guide for Use* for examples and usage information for UniqueIdentifier.
Default Value	1.2.36.1.2001.1001.101.101.20018

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PATHOLOGY	1..1

3 Pathology Test Result Detailed Clinical Model

This chapter describes a reuse of version 3.0 of the *Pathology Test Result* Detailed Clinical Model (DCM).

See *Pathology Test Result Detailed Clinical Model Specification [NEHT2014ab]* for more information.

3.1 Purpose

To record the findings and interpretation of pathology tests performed on tissues and body fluids. This is typically done in a laboratory, but may be done in other environments, such as at the point of care.

3.2 Use

Use to record any pathology test result, including the result of a test on a specimen taken as part of a composite procedure or operation.

Multi-analyte panels can be represented using templates or specialised DCMs.

More complex tests, such as histopathology or microbiology, should be represented using specialised DCMs where additional report content is required.

The content of instances of this DCM will normally be reported back to the requesting clinician as one component within the context of an overall structured document.

3.3 Misuse

Not to be used for reporting on non-pathology test results, such as diagnostic imaging, ECG or respiratory function tests.

Not to be used to represent an entire cumulative report. This *Pathology Test Result* DCM represents only one of the result sets that is usually viewed as a vertical in a cumulative test report. A cumulative report is a view that is constructed from the results represented by multiple DCMs.

This DCM is suitable for representation of general pathology test results, but is not intended to cover full synoptic reports. For these, additional specialising DCMs are required to represent the data.

3.4 PATHOLOGY TEST RESULT

Identification

Label	PATHOLOGY TEST RESULT
Metadata Type	Data Group
Identifier	DG-16144
OID	1.2.36.1.2001.1001.101.102.16144

Definition

Definition	Findings and interpretation of pathology tests performed on one or more specimens obtained from a person or environment.
Definition Source	NEHTA
Synonymous Names	Lab Test Pathology Biochemistry Haematology Microbiology Immunology
Notes	This data group may be used to record a single valued test, but will often be used to represent multiple value or 'panel' tests.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PATHOLOGY	1..*

Children

Data Type	Name	Occurrences
	Test Result Name (Pathology Test Result Name)	1..1
	Pathology Discipline (Diagnostic Service)	1..1
	Test Specimen Detail (SPECIMEN)	1..1
	Overall Test Result Status (Overall Pathology Test Result Status)	1..1
	~~Clinical Information Provided~~	~~0..0~~
	~~Result Group (PATHOLOGY TEST RESULT GROUP)~~	~~0..0~~

Data Type	Name	Occurrences
	~~Pathological Diagnosis~~	~~0..0~~
	~~Conclusion (Pathology Test Conclusion)~~	~~0..0~~
	~~Test Result Representation~~	~~0..0~~
	~~Test Comment~~	~~0..0~~
	~~RECEIVING LABORATORY~~	~~0..0~~
	~~TEST REQUEST DETAILS~~	~~0..0~~
	~~Test Procedure~~	~~0..0~~
	~~REPORTING PATHOLOGIST~~	~~0..0~~
	~~INFORMATION PROVIDER~~	~~0..0~~
	~~SUBJECT~~	~~0..0~~
	Observation DateTime	1..1
	Pathology Test Result Instance Identifier	1..1
	~~RELATED INFORMATION~~	~~0..0~~
	Detailed Clinical Model Identifier	1..1

3.5 Pathology Test Result Name

Identification

Label	Test Result Name
Metadata Type	Data Element
Identifier	DE-11017
OID	1.2.36.1.2001.1001.101.103.11017

Definition

Definition	Identification of the pathology test performed, sometimes including specimen type.
Definition Source	NEHTA
Notes	The test name can refer to a single test, for example Glycosylated Haemoglobin(HbA1c), or to a test group such as electrolytes, Full Blood Count (FBC) or coagulation tests. When a *Pathology Test Result* record contains only a single individual test, this name may be the same as the name of the individual test.
Data Type	CodeableText
Value Domain	Pathology Test Result Name Values

Usage

Examples	1) Sputum microscopy and culture 2) FBC 3) Serum bilirubin 4) HbA1c

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PATHOLOGY TEST RESULT	1..1

3.6 Pathology Test Result Name Values

Identification

Label	Pathology Test Result Name Values
Metadata Type	Value Domain
Identifier	VD-11017
OID	1.2.36.1.2001.1001.101.104.11017

Definition

Definition	Set of values for the names of pathology tests requested or performed.
Definition Source	NEHTA
Notes	A pathology test may be performed on a pathology specimen or a person. The codes recommended for pathology terminology by The Royal College of Pathologists of Australasia (RCPA) are included in the Requesting Pathology reference set, which is available at http://www.rcpa.edu.au/Library/Practising-Pathology/PTIS/APUTS-Downloads (accessed 30 October 2014).

Value Domain

Source	RCPA Requesting Pathology reference set

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Test Result Name (Pathology Test Result Name)	1..1

3.7 Diagnostic Service

Identification

Label	Pathology Discipline
Metadata Type	Data Element
Identifier	DE-16149
OID	1.2.36.1.2001.1001.101.103.16149

Definition

Definition	The diagnostic service that performs the examination.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodeableText
Value Domain	Diagnostic Service Values

Usage

Examples	1) Microbiology 2) Haematology

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PATHOLOGY TEST RESULT	1..1

3.8 Diagnostic Service Values

Identification

Label	Diagnostic Service Values
Metadata Type	Value Domain
Identifier	VD-16148
OID	1.2.36.1.2001.1001.101.104.16148
External Identifier	2.16.840.1.113883.12.74

Definition

Definition	Set of values for the type of diagnostic service.
Definition Source	NEHTA

Value Domain

Source	HL7 table 0074 (Diagnostic service section ID)

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	Pathology Discipline (Diagnostic Service)	1..1

3.9 SPECIMEN

Identification

Label	Test Specimen Detail
Metadata Type	Data Group
Identifier	DG-16156
OID	1.2.36.1.2001.1001.101.102.16156

Definition

Definition	Details about specimens to which this test result refers.
Definition Source	NEHTA
Synonymous Names	Sample

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PATHOLOGY TEST RESULT	1..1

Children

Data Type	Name	Occurrences
	~~Specimen Tissue Type~~	~~0..0~~
	~~Collection Procedure~~	~~0..0~~
	~~Anatomical Site (ANATOMICAL LOCATION)~~	~~0..0~~
	~~Physical Details (PHYSICAL PROPERTIES OF AN OBJECT)~~	~~0..0~~
	~~NEEDLE BIOPSY CORE DETAILS~~	~~0..0~~
	~~COLLECTION AND HANDLING~~	~~0..0~~
	HANDLING AND PROCESSING	1..1
	~~SPECIMEN QUALITY~~	~~0..0~~
	~~IDENTIFIERS~~	~~0..0~~

3.10 HANDLING AND PROCESSING

Identification

Label	HANDLING AND PROCESSING
Metadata Type	Data Group
Identifier	DG-16528
OID	1.2.36.1.2001.1001.101.102.16528

Definition

Definition	Workflow of specimen processing or handling.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Test Specimen Detail (SPECIMEN)	1..1

Children

Data Type	Name	Occurrences
	Collection DateTime	1..1
	~~Collection Setting~~	~~0..0~~
	~~Date and Time of Receipt (DateTime Received)~~	~~0..0~~
	~~Date and Time Processed (DateTime Processed)~~	~~0..0~~

3.11 Collection DateTime

Identification

Label	Collection DateTime
Metadata Type	Data Element
Identifier	DE-11013
OID	1.2.36.1.2001.1001.101.103.11013

Definition

Definition	Date, and optionally time, of collection.
Definition Source	NEHTA
Synonymous Names	Collected Date/Time
Data Type	DateTime

Usage

Examples	Please see DateTime in Appendix C, *Specification Guide for Use* for examples and usage information on specifying a date or time (or both).

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	HANDLING AND PROCESSING	1..1

3.12 Overall Pathology Test Result Status

Identification

Label	Overall Test Result Status
Metadata Type	Data Element
Identifier	DE-16155
OID	1.2.36.1.2001.1001.101.103.16155

Definition

Definition	The status of the pathology test result as a whole.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodedText
Value Domain	Pathology Test Result Status Values

Usage

Examples	Please see Appendix C, *Specification Guide for Use* for examples and usage information for CodedText.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PATHOLOGY TEST RESULT	1..1

3.13 Pathology Test Result Status Values

Identification

Label	Pathology Test Result Status Values
Metadata Type	Value Domain
Identifier	VD-16488
OID	1.2.36.1.2001.1001.101.104.16488
External Identifier	2.16.840.1.113883.12.123

Definition

Definition	Set of values for the pathology test result status.
Definition Source	NEHTA
Notes	In other PCEHR documents, including *Event Summary* v1.1 and *Discharge Summary* v3.3, values of this `data element` are encoded using *NCTIS Pathology Test Result Status Values*, rather than *HL7 v2.x Table 0123 (Result status)*.

Value Domain

Source	HL7 v2.x Table 0123 (Result status)

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Overall Test Result Status (Overall Pathology Test Result Status)	1..1

3.14 Observation DateTime

Identification

Label	Observation DateTime
Metadata Type	Data Element
Identifier	DE-15561
OID	1.2.36.1.2001.1001.101.103.15561

Definition

Definition	Date, and optionally time, when an observation is clinically significant to the condition of the subject of the observation.
Definition Source	NEHTA
Synonymous Names	
Context	For a *Pathology Test Result* the value is the date, and optionally time, of collection of the specimen.
Context Source	NEHTA
Assumptions	For an observation based on a specimen the clinically significant time will have the same value as the time of collection of the specimen.
Assumptions Source	NEHTA
Notes	**Clinical Semantics of Event Time.** (Section 8.2.3.3 of *EHR Information Model [OEHR2008a]*) In most cases, the times recorded in [an *Observation DateTime* `data element`] can be thought of as “the times when the observed phenomena were true”. For example, if a pulse of 88bpm is recorded for 12/feb/2005 12:44:00, this is the time at which the heart rate (for which pulse is a surrogate) existed. In such cases, the *sample* time, and the *measuring* time are one and the same. However in cases where the time of sampling is different from that of measurement, the semantics are more subtle. There are two cases. The first is where a sample is taken (e.g. a tissue sample in a needle biopsy), and is tested later on, but from the point of view of the test, the time delay makes no difference. This might be because the sample was immediately preserved (e.g. freezing, placed in a sterile ... transport container), or because even if it decays in some way, it makes no difference to the test (e.g. bacteria may die, but this makes no difference to [an] analysis, as long as the biological matter is not physically destroyed). The second situation is when the sample does decay in some way, and the delay is relevant. Most such cases are in pathology tests, where presence of live biological organisms (e.g. anaerobic bacteria) is being measured. The sample time (or ‘collection’ time) must be recorded. Depending on when the test is done, the results may be interpreted differently. The key question is: what is the meaning of the [`data element`] in these situations? It is tempting to say that [its value is] (as in other cases) just the [time] of the actual act of observation, e.g. microscopy, chromatography etc. However, there are two problems with this. Firstly, and most importantly, all physical samples must be understood as being *indirect surrogates for some aspect of the patient state at the time of sampling*, which cannot be observed by direct, instantaneous means in the way a pulse can be taken.

	This means that no matter when the laboratory work is done, the time to which the result applies is the *sample* time. It is up to the laboratory to take into account time delays and effects of decay of samples in order to provide a test result which correctly indicates the state of the patient at the time of sampling. The common sense of this is clear when one considers the extreme case where the patient is in a coma or dead (possibly for reasons completely unrelated to the problem being tested for) by the time laboratory testing actually occurs; however, the test result indicates the situation at the point in time when the sample was taken, i.e. when the patient was alive. The second reason is that some kinds of testing are themselves lengthy. For example fungal specimens require 4-6 weeks to confirm a negative result; checks will be made on a daily or weekly basis to find positive growth. However, the result data reported by the laboratory (and therefore the structure of the Observation) is not related to the timing of the laboratory testing; it is reported as being the result for the time of collection of the specimen from the patient. The meaning therefore of the [`data element`] is always the time of sampling. Where delays between sample and measurement times exist and are significant, they are [modelled explicitly].
Data Type	DateTime

Usage

Examples	Please see DateTime in Appendix C, *Specification Guide for Use* for examples and usage information on specifying a date or time (or both).

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PATHOLOGY TEST RESULT	1..1

3.15 Pathology Test Result Instance Identifier

Identification

Label	Pathology Test Result Instance Identifier
Metadata Type	Data Element
Identifier	DE-16714
OID	1.2.36.1.2001.1001.101.103.16714

Definition

Definition	A globally unique identifier for each instance of a *Pathology Test Result* observation.
Definition Source	NEHTA
Synonymous Names	
Notes	This `data element` is intended for machine or system use only and hence need not be displayed on documents.
Data Type	UniqueIdentifier

Usage

Examples	Please see Appendix C, *Specification Guide for Use* for examples and usage information for UniqueIdentifier.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PATHOLOGY TEST RESULT	1..1

3.16 Detailed Clinical Model Identifier

Identification

Label	Detailed Clinical Model Identifier
Metadata Type	Data Element
Identifier	DE-16693
OID	1.2.36.1.2001.1001.101.103.16693

Definition

Definition	The NEHTA OID for the concept represented by this Detailed Clinical Model.
Definition Source	NEHTA
Synonymous Names	
Notes	This `data element` is intended for machine or system use only and hence need not be displayed on documents.
Data Type	UniqueIdentifier

Usage

Conditions of Use	The value of this item is fixed and **SHALL** be the default value.
Conditions of Use Source	NEHTA
Examples	Please see Appendix C, *Specification Guide for Use* for examples and usage information for UniqueIdentifier.
Default Value	1.2.36.1.2001.1001.101.102.16144

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PATHOLOGY TEST RESULT	1..1

4 UML Class Diagrams

The following figure represents the data hierarchy using a UML 2.0 class diagram. The diagram displays data groups, sections, structured documents and data elements, together with their names, data types and multiplicities. Data elements are displayed as attributes; data groups, sections and structured documents are displayed as classes; their label names are represented as association role names. Association role names are only displayed if they differ from the associated class name. The diagram shows the data hierarchy excluding the details of participation. The default multiplicity is 1..1.

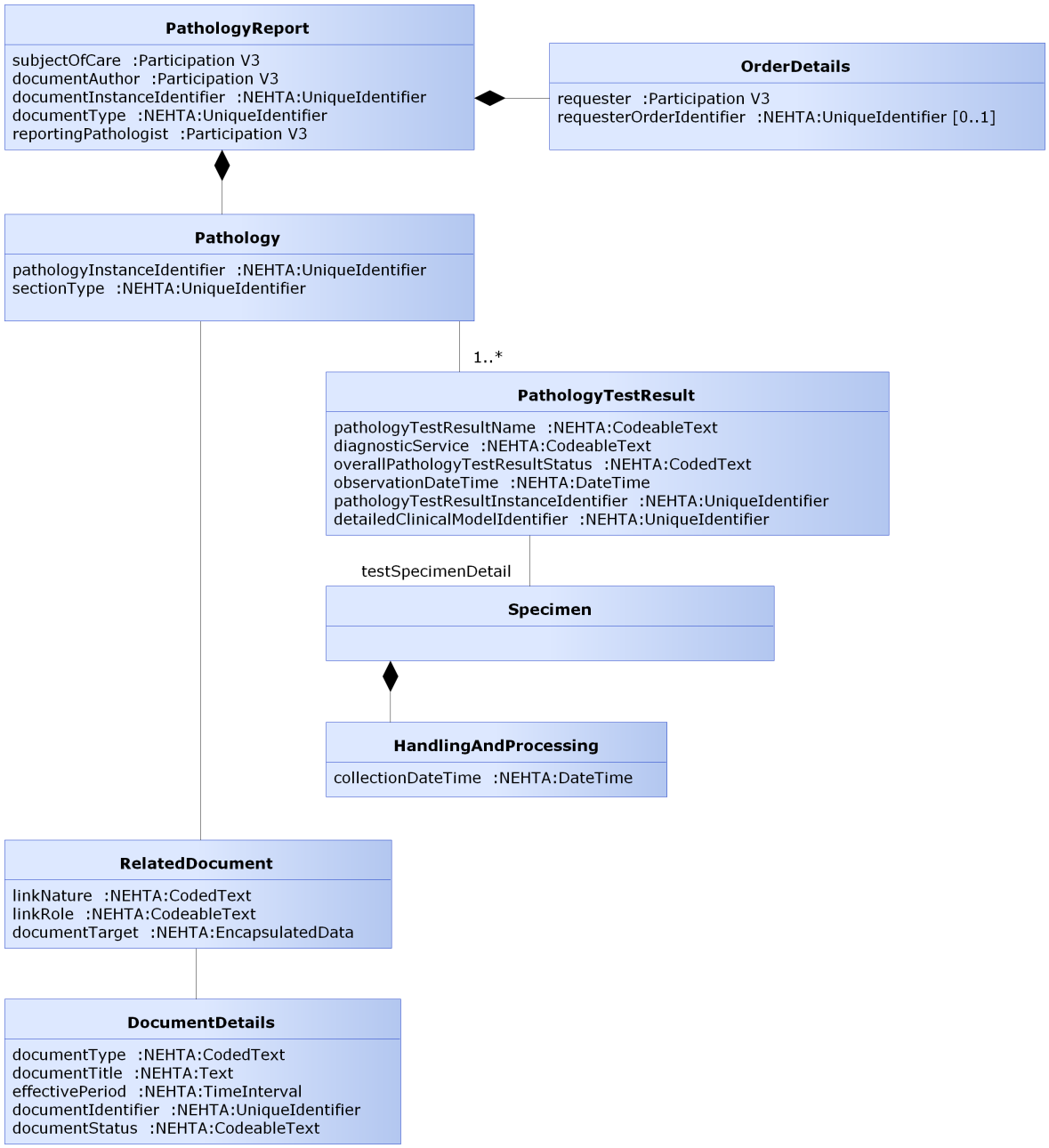

Figure 4.1. Pathology Report data hierarchy

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Appendix A. Known Issues

Reference	Description
Links to external resources	If a link (usually in references section) spans across several lines, certain combinations of PDF reader and web browser have problems opening it.
2.27 Document Status	No guidance is available on avoiding conflict between the values of *Report Status* and *Test Result Status*. It is recommended that document authors check values to avoid conflict of values.
2.27 Document Status	The `data element` *Document Status* is being used to hold *Report Status*. The concepts are not the same, but this is the best option until the *Pathology Test Result* DCM is restructured, the *Pathology Test Result* DCM needs to be normalised.
2.28 Document Status Values	The data set for values of *Document Status* is not the standard NEHTA one. The Australian Government Department of Health chose values from HL7 table 0123 (Result status). HL7 table 0123 is specified here for *Document Status Values*.
3.12 Overall Pathology Test Result Status	The Australian Government Department of Health chose values from HL7 table 0123 (Result status) for values of *Result Status*. Other PCEHR documents (including *e-Discharge Summary*, *e-Referral*, *Specialist Letter* and *Event Summary*) use a different NEHTA endorsed data set for values of *Result Status*.
Workplace address	The requirements specify that clinician addresses shall be workplace addresses. This SCS prohibits giving an address purpose of “Postal”.

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Appendix B. Mappings from Requirements

This appendix lists data elements from the *NEHTA eHealth Pathology Report Information Requirements [NEHT2013am]* document, and matches them to their associated `data elements` in this Structured Content Specification (SCS) augmented with *NEHTA Participation Data Specification [NEHT2011v]*.

Data components are identified by their label, for example *Test Specimen Detail*, rather than by their name, for example *Specimen*.

The mappings table below includes links to the SCS `data elements` that are described in this document.

Some cells in the mapping table are empty. This is used to indicate that the cell has the same value as the cell immediately above it.

Requirement Section	Data Item	Req No.	SCS Data Component
Individual - Subject of Care	N/A	N/A	Subject of Care [SOC]
	N/A	N/A	[SOC] > Participant > Person or Organisation or Device > Person [SOC > P > POD > P]
Individual (Core)	N/A	N/A	N/A
	Individual Healthcare Identifier	022082	[SOC] > Participant > Entity Identifier
	Individual's Title	022081	[SOC > P > POD > P] > Person Name > Name Title
	Individual's Given Name	023056	[SOC > P > POD > P] > Person Name > Given Name
	Individual's Family Name	023058	[SOC > P > POD > P] > Person Name > Family Name
	Individual's Name Suffix	023059	[SOC > P > POD > P] > Person Name > Name Suffix
	Individual's Sex	024032	[SOC > P > POD > P] > Demographic Data > Sex
	Individual's Date of Birth	023060	[SOC > P > POD > P] > Demographic Data > Date of Birth Detail > Date of Birth
	Date of Birth accuracy indicator	024026	[SOC > P > POD > P] > Demographic Data > Date of Birth Detail > Date of Birth Accuracy Indicator
Individual (extension)	N/A	N/A	N/A
	Individual's Address	024041	[SOC] > Participant > Address
	Individual's Electronic Communication Details	024042	[SOC] > Participant > Electronic Communication Detail
	Indigenous Status	024033	[SOC > P > POD > P] > Demographic Data > Indigenous Status
Healthcare Provider - Pathology Test Requester	N/A	N/A	Order Details > Requester [OD > R]

Requirement Section	Data Item	Req No.	SCS Data Component
	N/A	N/A	[OD > R] > Participant > Person or Organisation or Device > Person [OD > R > P > POD > P]
	Healthcare Provider Organisation Name (optional)	024603	[OD > R > P > POD > P] > Employment Detail > Employer Organisation > Person or Organisation or Device > Organisation > Organisation Name
non-PCEHR participating Healthcare Provider (core)	N/A	N/A	N/A
	Healthcare Provider Identifier-Individual (optional)	024601	[OD > R] > Participant > Entity Identifier
	Healthcare Provider Identifier-Organisation (optional)	024602	[OD > R > P > POD > P] > Employment Detail > Employer Organisation > Entity Identifier
	Healthcare Provider's Title	023061	[OD > R > P > POD > P] > Person Name > Name Title
	Healthcare Provider Given Name	023062	[OD > R > P > POD > P] > Person Name > Given Name
	Healthcare Provider Family Name	023064	[OD > R > P > POD > P] > Person Name > Family Name
	Healthcare Provider Name Suffix	023065	[OD > R > P > POD > P] > Person Name > Name Suffix
Healthcare Provider - Pathologist	N/A	N/A	Reporting Pathologist [RP]
	N/A	N/A	[RP] > Participant > Person or Organisation or Device > Person [RP > P > POD > P]
	Healthcare Provider Individual's Workplace Address (mandatory)	022061	[RP] > Participant > Address
	Healthcare Provider Individual's Workplace Electronic Communication Details (mandatory)	022058	[RP] > Participant > Electronic Communication Detail

Requirement Section	Data Item	Req No.	SCS Data Component
	Healthcare Provider Organisation Name (mandatory)	023070	[RP > P > POD > P] > Employment Detail > Employer Organisation > Person or Organisation or Device > Organisation > Organisation Name
PCEHR participating Healthcare Provider (core)	N/A	N/A	N/A
	Healthcare Provider Identifier-Individual (mandatory)	023066	[RP] > Participant > Entity Identifier
	Healthcare Provider Identifier-Organisation (mandatory)	023071	[RP > P > POD > P] > Employment Detail > Employer Organisation > Entity Identifier
	Healthcare Provider's Title	023061	[RP > P > POD > P] > Person Name > Name Title
	Healthcare Provider Given Name	023062	[RP > P > POD > P] > Person Name > Given Name
	Healthcare Provider Family Name	023064	[RP > P > POD > P] > Person Name > Family Name
	Healthcare Provider Name Suffix	023065	[RP > P > POD > P] > Person Name > Name Suffix
CDA Document Author	N/A	N/A	Document Author [DA]
	N/A	N/A	[DA] > Participant > Person or Organisation or Device > Person [DA > P > POD > P]
	Healthcare Provider Organisation Name (mandatory)	023070	[DA > P > POD > P] > Employment Detail > Employer Organisation > Person or Organisation or Device > Organisation > Organisation Name
	Healthcare Provider Professional Role	024040	[DA] > Role
PCEHR participating Healthcare Provider (core)	N/A	N/A	N/A
	Healthcare Provider Identifier-Individual (mandatory)	023066	[DA] > Participant > Entity Identifier

Requirement Section	Data Item	Req No.	SCS Data Component
	Healthcare Provider ~~Identifier-Organisation~~ (mandatory)	023071	[DA > P > POD > P] > Employment Detail > Employer Organisation > Entity Identifier
	Healthcare Provider's Title	023061	[DA > P > POD > P] > Person Name > Name Title
	Healthcare Provider Given Name	023062	[DA > P > POD > P] > Person Name > Given Name
	Healthcare Provider Family Name	023064	[DA > P > POD > P] > Person Name > Family Name
	Healthcare Provider Name Suffix	023065	[DA > P > POD > P] > Person Name > Name Suffix
Healthcare Provider (extension)	N/A	N/A	N/A
	Healthcare Provider Individual's Workplace Address (optional)	024035	[DA] > Participant > Address
	Healthcare Provider Individual's Workplace Communication Details (optional)	024036	[DA] > Participant > Electronic Communication Detail
Document control (core)	N/A	N/A	N/A
	Document Version Number	023068	*This is managed in the implementation level (e.g. CDA).*
	Document Instance Identifier	023067	Document Instance Identifier
	Template identifier	023069	*This is managed in the implementation level (e.g. CDA).*
	Date and time of document creation	024025	*This is managed in the implementation level (e.g. CDA).*
	Document type	024027	Document Type
Domain Specific - Pathology	N/A	N/A	Pathology > Pathology Test Result [P > PTR]
	Request Date/Time	024364	[OD > R] > Participation Period
	Request Identifier	024029	Order Details > Requester Order Identifier (Order Identifier)
	Report Identifier	024030	Pathology > Related Document > Document Details > Report Identifier (Document Identifier)
	Report date/time	024367	Pathology > Related Document > Document Details > Report DateTime (Effective Period)

Requirement Section	Data Item	Req No.	SCS Data Component
	Report status	024366	Pathology > Related Document > Document Details > Report Status (Document Status)
	Report name	024365	Pathology > Related Document > Document Details > Report Name (Document Title)
	Authorisation date/time (internally authorised)	024046	[RP] > Participation Period
	Single PDF attachment	024372	Pathology > Related Document > Test Result Representation (Document Target) *The PCEHR requirement for the attachment to be in PDF format is covered by the PCEHR conformance profile.*
	Pathology Discipline	024368	[P > PTR] > Pathology Discipline (Diagnostic Service)
	Test Name	024369	[P > PTR] > Test Result Name (Pathology Test Result Name)
	Test status	024370	[P > PTR] > Overall Test Result Status (Overall Pathology Test Result Status)
	Specimen Collected Date/Time	024371	[P > PTR] > Handling and Processing > Collection DateTime

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Appendix C. Specification Guide for Use

C.1 Overview

Each Detailed Clinical Model (DCM) and Structured Content Specification (SCS) is designed to be a shared basis for data interpretation. It specifies rigorous business and technical definitions of data which systems may need to share. It is intended to be a logical specification of the data to be persisted within or communicated between systems. It is also the foundation for conformance, compliance and accreditation testing of implemented systems. NEHTA's CDA implementation guides are guides to the implementation of HL7 CDA R2 messages based upon these DCMs and SCSs.

Each DCM specifies all of the data components required for any use of a clinical concept, for instance an entry in a medical record such as a procedure or an imaging test. As such, they are maximal data sets. DCMs are building blocks which are trimmed to size for use in the construction of SCSs.

Each SCS specifies the data for a single type of clinical document or information exchange, such as a discharge summary. It is assembled using DCMs that have been constrained to eliminate data components not relevant to the particular context. For example, *Procedure* in a discharge summary uses only some of the data components required by *Procedure* in a specialist report.

C.2 The Structured Content Specification Metamodel

The NEHTA Structured Content Specification Metamodel (see Figure 1) is used to specify the overall structure of a Structured Content Specification.

A DCM can be regarded as a data group with no parent.

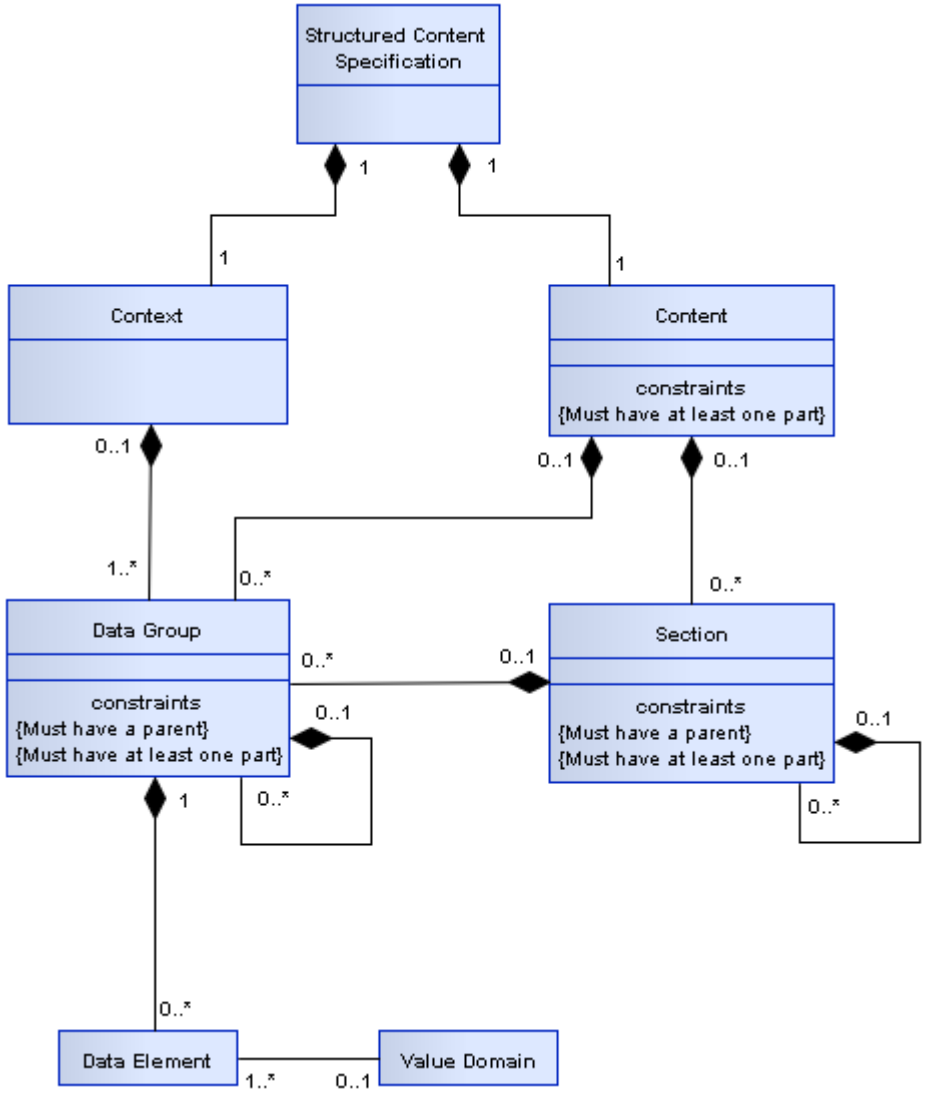

Figure 1: SCS Metamodel

There are two main components used to organise information within an SCS as follows:

Context: This contains information related to the overall context of the document.

Content: This contains information that changes between different SCSs, but is always structured as shown, and consists of the following components:

- Section
- Data Group
- Data Element
- Value Domain

These components are described in more detail below.

Context

The purpose of the context is to identify and classify the document and to provide subjects of care and involved healthcare providers with the information related to the relevant healthcare events.

Content

Content contains a collection of personal information and health information pertinent to a subject of care which is derived from the healthcare event described in the document. The detail is organised into one or more data groups which are optionally grouped into sections.

Section

A section is composed of other sections, data groups, or both. It is an organising container that gives the reader a clue as to the expected content. The primary purpose of a section is to organise information in a manner that is suitable for the primary purpose for which it is collected, and to provide a way to navigate through the data components within the document, thereby enabling more efficient querying. It is recommended that the section support safe reuse for secondary purposes, e.g. clinical coding or inclusion in a summarised form in an electronic health record. A section is context-specific to the document in which it resides.

Data Group

Each data group is used to represent one concept. A data group consists of other data groups or data elements (or both). Some data groups are reused across DCMs.

Every instance of a data group **SHALL** have at least one child data component instantiated.

Participation

Participation is a special case of a data group that is based on a data group template, which is reused throughout the DCMs and SCSs. Participations are an amalgam of the Actors (see below) operating within a defined healthcare domain and the Roles they are playing within that domain.

A Participant has been defined to align with the concepts of the NEHTA interoperability framework [NEHT2007b]. It equates to an *Entity* that is related to the action described in an SCS as an *Actor*. A Participant can be a human, an organisation or an IT system.

[NEHT2011v] defines the full Participation specification.

Choice

Choice represents a decision to be made at run-time between a disjunctive mandatory set of data groups defined at design-time, i.e. one and only one member of the set is chosen for each instance of the choice.

For example, at design-time a Healthcare Provider provides a service but it is not until run-time that a decision can be made as to whether the provider is a person or an organisation. Hence when a Healthcare Provider Participant is instantiated, it will contain either an instance of the *Person* data group or an instance of the *Organisation* data group.

Data Element

A data element is the smallest named unit of information in the model that can be assigned a value. For example, *DateTime of Observation* and *Observation Note*. Data elements are bound to data types (see Data Types Legend). Some data elements are reused in different data groups.

While all data elements are constrained by their data type, some data elements are further constrained by value domains (see Value Domain below).

Value Domain

A value domain constrains the permissible values for a data element. The values are often a subset of values based on a generic data type.

Value domains are reusable components and therefore, the same value domain can be referred to by different data elements in different contexts. Value domains are often specified as a reference set. A reference set (or a subset) is a constrained list of SNOMED CT-AU, AMT or LOINC concepts that are appropriate to a particular context. It is noted that many of these reference sets have been developed specifically for the context in which they appear. It is recommended that an assessment of fitness for purpose be undertaken before using any of the reference sets in another context.

Value domains constrain by either specifying a lower or upper bound (or both) on the range of permissible values or else by specifying a finite set of prescribed values. Such a set of prescribed values can be specified directly within the definition of the data element, or in a separate but associated specification or else by reference to one or more vocabulary/terminology reference sets. The table below provides some examples of value domains.

Table 1: Value Domain Examples

<table>
<tr><th>Data Element</th><th>Data Type</th><th>Example of Value Domain</th></tr>
<tr><td>Sex</td><td>CodedText</td><td>[SA2006a] and [SA2006b] derive their values from METeOR 287316 which includes values such as:

<table><tr><th>Value</th><th>Meaning</th></tr><tr><td>1</td><td>Male</td></tr><tr><td>2</td><td>Female</td></tr><tr><td>3</td><td>Intersex or Indeterminate</td></tr><tr><td>9</td><td>Not Stated/Inadequately Described</td></tr></table></td></tr>
<tr><td>Diagnosis</td><td>CodeableText</td><td>A SNOMED CT-AU reference set which references concepts such as “Bronchitis” (Concept ID: 32398004).</td></tr>
<tr><td>Therapeutic Good Identification</td><td>CodeableText</td><td>An AMT reference set which references concepts such as “Ibuprofen Blue (Herron) (ibuprofen 200 mg) tablet: film-coated, 1 tablet” (Concept ID: 54363011000036107).</td></tr>
<tr><td>Individual Pathology Test Result Name</td><td>CodeableText</td><td>A LOINC subset which references concepts such as “Cholesterol [Moles/volume] in Serum or Plasma” (ID: 14647-2).</td></tr>
</table>

C.3 Icon Legend

These legends describe all icons that are used within the various NEHTA information specifications.

Metadata Types Legend

The following table explains each of the icons used to represent the metadata types within DCMs and SCSs.

Table 2: Metadata Types Legend

Icon	Metadata Types
	Structured Document

	Section
	Data Group
	Participation
	Choice

Data Types Legend

The following table explains each of the icons used to represent the data types bound to each data element in the SCSs. These data types are a profile of the **ISO 21090-2011** data types as specified in [NEHT2010c].

Table 3: Data Types Legend

Icon	Data type	Explanation
	Boolean (ISO 21090: BL)	A primitive data type, sometimes called the logical data type, having one of two values: *true* and *false*. Many systems represent true as *non-zero* (often 1, or -1) and false as *zero*. **Usage/Examples** • An actual value entered by a user might be “yes” or could be chosen by a mouse click on an icon such as ☑.
	CodeableText (ISO 21090: CD)	Coded text *with* exceptions; a flexible data type to support various ways of holding text, both free text and coded text. Commonly used to support compliance for early adopters of the Structured Content Specifications. While it is recommended that the values in this data type come from the bound value domain, it allows other value domains to also be used (with or without translations to the bound value domain) or free text alternatives. This is in recognition that it may not be possible to define an entire value domain for a complex concept (e.g. *Diagnosis*) or that there may be competing code sets in existence. Note that within exchange specifications or message profiles this data type **MAY** be constrained to mandate compliance with the bound value domain. **Usage/Examples** • AIHW Separation Mode specifies the status at separation of a person from an organisation. An early adopter **MAY** have a similar concept (coded or otherwise) that maps to this data element but does not strictly comply with the AIHW values. • A SNOMED CT-AU coded/complex expression that embodies single or multiple concepts. The SNOMED CT-AU concepts behind these CodeableText components are specified in the Structured Content Specification value domains.

CodedText

(ISO 21090: CD)

Coded text *without* exceptions; text with code mappings. Values in this data type **SHALL** come from the bound value domain, with no exceptions. Often used for reference sets with only a small number of applicable values, e.g. Gender and Document Status.

Usage/Examples

[SA2006b] specifies the following value domain representing a type of address:

Value	Meaning
1	Business
2	Mailing or Postal
3	Temporary Accommodation
4	Residential (permanent)
9	Not Stated/Unknown/Inadequately Described

DateTime

(ISO 21090: TS)

Used for specifying a single date or time (or both). Has the ability to indicate a level of precision, but not whether the date or time is estimated. String representations of known dates **SHALL** conform to the nonextended format within the **ISO 21090-2011** standard, i.e. YYYY[MM[DD[HH[MM[SS[.U[U[U[U]]]]]]]]][+|-ZZzz].

Usage/Examples

- Partial dates: 2008, 20081001.
- To indicate 1:20 pm on May the 31st, 1999 for a time zone which is 5 hours behind Coordinated Universal Time (UTC): 19990531132000-0500.

Duration

(ISO 21090: PQ.TIME)

The period of time during which something continues. Consists of a value and a unit which represents the time value, e.g. hours, months. Compound durations are not allowed, e.g. 10 days 3 weeks 5 hours.

Usage/Examples

- 3 hours
- 6 months
- 1 year

Any

(ISO 21090: ANY)

Represents a data element where the data type to be used is conditional on another data component. The values that can be required will vary considerably depending on the context. Note that this is an abstract data type that is the basis for all data types and **SHOULD NOT** be used in an actual implementation.

EncapsulatedData

(ISO 21090: ED)

Data that is primarily intended for human interpretation or for further machine processing outside the scope of this specification. This includes unformatted or formatted written language, multimedia data, or structured information as defined by a different standard (e.g. XML signatures).

Usage/Examples

- JPEG images
- HTML documents
- [RFC1521] MIME types

 Integer (ISO 21090: INT)	The mathematical data type comprising the exact integral values (according to [NEHT2010c]). **Usage/Examples** • 1 • -50 • 125
 Link (ISO 21090: TEL)	This is a general link, reference or pointer to an object, data or application that exists logically or is stored electronically in a computer system. **Usage/Examples** • URL (Uniform Resource Locator) – the World Wide Web address of a site on the internet, such as the URL for the Google internet search engine – *http://www.google.com*. • An absolute or relative path within a file or directory structure – e.g. in the Windows® operating system, the “link” or absolute path to a particular letter could be *C:\Documents and Settings\GuestUser\MyDocuments\letter.doc*
 Quantity (ISO 21090: PQ)	Used for recording many real world measurements and observations. Includes the magnitude value and the units. **Usage/Examples** • 100 centimetres • 25.5 grams
 QuantityRatio (ISO 21090: RTO)	The relative magnitudes of two *Quantity* values (usually expressed as a quotient). **Usage/Examples** • 25 mg/500 ml • 200 mmol per litre
 QuantityRange (ISO 21090: IVL)	Two *Quantity* values that define the minimum and maximum values, i.e. lower and upper bounds. This is typically used for defining the valid range of values for a particular measurement or observation. Unbounded quantity ranges can be defined by not including a minimum and/or a maximum quantity value. **Usage/Examples** • -20 to 100 Celsius • 30-50 mg • >10 kg

 Real (ISO 21090: REAL)	A computational approximation to the standard mathematical concept of real numbers. These are often called floating-point numbers. **Usage/Examples** • 1.075 • -325.1 • 3.14157
 Text (ISO 21090: ST)	Character strings (with optional language). Unless otherwise constrained by an implementation, can be any combination of alpha, numeric or symbols from the Unicode character set. This is sometimes referred to as free text. **Usage/Examples** “The patient is a 37 year old man who was referred for cardiac evaluation after complaining of occasional palpitations, racing heart beats and occasional dizziness.”
 TimeInterval (ISO 21090:TS)	An interval in time, with (optionally) a start date/time and (optionally) an end date/time and/or a duration/width. **Usage/Examples** • 01/01/2008 – 31/12/2008 • 1:30 a.m. – 6:00 p.m., duration/width = 16.5 hours

	UniqueIdentifier (ISO 21090: II)	A general unique value to identify a physical or virtual object or concept. In using this data type, the attributes of the UniqueIdentifier data type **SHOULD** be populated from the identifiers as defined in AS 4846 (2006) [SA2006a] and AS 5017 (2006) [SA2006b] as follows: • *root*: a globally unique object identifier that identifies the combination of geographic area, issuer and type. If no such globally unique object identifier exists, it **SHALL** be created. • *extension*: a unique identifier within the scope of the root that is directly equivalent to the identifier designation element. • *identifierName*: a human readable name for the namespace represented by the root that is populated with the issuer or identifier type values, or a concatenation of both, as appropriate. The content of this attribute is not intended for machine processing and **SHOULD NOT** be used for that purpose. • *identifierScope*: the geographic span or coverage that applies to or constrains the identifier. It is directly equivalent to the geographic area element. The content of this attribute is not intended for machine processing and **SHOULD NOT** be used as such. Also, the following constraints apply on the UniqueIdentifier data type: 1) The *root* attribute **SHALL** be used. 2) For an entity identifier, the *root* attribute **SHALL** be an OID that consists of a node in a hierarchically-assigned namespace, formally defined using the ITU-T's ASN.1 standard. 3) For an entity identifier, the *root* attribute **SHALL NOT** be a UUID. 4) The *extension* attribute **SHALL** be used. **Usage/Examples** IHIs, HPI-Is, HPI-Os and patient hospital medical record numbers are examples of identifiers that **MAY** be carried by this data type.

Keywords Legend

Where used in this document and in DCMs and SCSs, the keywords **SHALL, SHOULD, MAY, SHALL NOT** and **SHOULD NOT** are to be interpreted as described in [RFC2119].

The following table defines these keywords.

Table 4: Keywords Legend

Keyword	Interpretation
SHALL	This word, or the term “required”, means that the statement is an absolute requirement of the specification.
SHOULD	This word, or the adjective “recommended”, means that there **MAY** exist valid reasons in particular circumstances to ignore a particular component, but the full implications **SHALL** be understood and carefully weighed before choosing a different course.

MAY	This word, or the adjective “optional”, means that a component is truly optional. One implementer may choose to include the component because a particular implementation requires it, or because the implementer determines that it enhances the implementation, while another implementer may omit the same component. An implementation that does not include a particular option **SHALL** be prepared to interoperate with another implementation that does include the option, perhaps with reduced functionality. In the same vein, an implementation that does include a particular option **SHALL** be prepared to interoperate with another implementation that does not include the option (except of course, for the feature the option provides).
SHALL NOT	This phrase means that the statement is an absolute prohibition of the specification.
SHOULD NOT	This phrase, or the phrase “not recommended” means that there **MAY** exist valid reasons in particular circumstances when the particular behaviour is acceptable or even useful, but the full implications **SHOULD** be understood and the case carefully weighed before implementing any behaviour described with this label.

Obligation Legend

Obligation in DCMs or SCSs specifies whether or not a data component **SHALL** be populated in the logical record architecture of a message. NEHTA intends that all data components will be implemented.

Implementation guides specify the rules and formats for implementing and populating data components in specific messaging formats.

The following table defines the obligations.

Table 5: Obligations Legend

Keyword	Interpretation
ESSENTIAL	Indicates that the data component is considered a mandatory component of information and **SHALL** be populated. **Usage/Examples:** The Participant component for a Subject of Care **SHALL** include an Entity Identifier data component in order to hold the IHI.
OPTIONAL	Indicates that the data component is not considered a mandatory component of information and **MAY** be populated. **Usage/Examples:** This is only needed when a DCM incorrectly asserts that a data component is **ESSENTIAL**. It will be used with a note stating that the DCM needs revision.
PROHIBITED	Indicates that the data component is considered a forbidden component of information and **SHALL NOT** be populated. **Usage/Examples:** Within a Participation data group depicting a Subject of Care, the Participation Healthcare Role **SHALL NOT** be completed.

CONDITIONAL	Indicates that a data component is considered **ESSENTIAL** only on satisfaction of a given condition. Individual data components specify the obligation of the data component when the condition is not met. When a condition is met, the data component is considered to be **ESSENTIAL** and **SHALL** be populated. When a condition is not met, the data component may be considered as **PROHIBITED**, or the data component may be considered **OPTIONAL**. **Usage/Examples:** Within a Pathology Result Report, the *Specimen Detail* `data group` is **ESSENTIAL** if the requested test is to be performed on a specimen, otherwise it **SHALL NOT** be populated.

Where **ESSENTIAL** child data components are contained within **OPTIONAL** parent data components, the child data components only need to be populated when the parent is populated.

C.4 Information Model Specification Parts Legends

This section illustrates the format and parts used to define each section, data group and data element within NEHTA's information model specifications and identifies when each part is applicable.

Data Hierarchy

The top-level component contains a data hierarchy. Each row contains information about a single data component. The entries are nested to represent inclusion of one component in another. Each entry contains at least three occupied cells. The left-most cell contains an icon to indicate the entry's data type. The next cell to the right contains the label and description of the component (if the label is different from the name, the name is displayed in brackets after the label). The next cell to the right contains the multiplicity range for the data component.

The right-hand side of the data hierarchy may contain one or more columns under the heading "Core Requirement". Each column contains information for one document exchange scenario. A cell that is empty indicates that the data component on that row is **OPTIONAL** to implement. That is, software that creates documents made in conformance with this specification **MAY** exclude the data component; and software that reads documents made in conformance with this specification **MAY** ignore the data component. All other components **SHALL** be implemented.

In an SCS, a component may be prohibited, that is, it occurs in the referenced DCM but it **SHALL NOT** be included in documents created according to the SCS. This is represented by a multiplicity range of 0..0. The text of the entry is also in a ~~strike-through~~ font and it has a grey background.

Chapter Name

Each section, data group, data element, value domain or choice has its own eponymous chapter. The chapter name is used in all data hierarchies.

Identification Section Legend

The following table illustrates the layout of the Identification section and describes the various parts of the section.

Table 6: Identification Section Legend

Label	A suggested display name for the component. (Source NEHTA.)
Metadata Type	The type of the component, e.g. section, data group or data element. (Source NEHTA.)
Identifier	A NEHTA assigned internal identifier of the concept represented by the component. (Source NEHTA.)
OID	An object identifier that uniquely identifies the concept represented by the data component. (Source NEHTA.)
External Identifier	An identifier of the concept represented by the data component that is assigned by an organisation other than NEHTA. (Source NEHTA.)

Definition Section Legend

The following table illustrates the layout of the Definition section and describes the various parts of the section.

Table 7: Definition Section Legend

Definition	The meaning, description or explanation of the data component. (Source NEHTA.) For data groups used in a particular context, the definition **MAY** be a refinement of the generic data group definition.
Definition Source	The authoritative source for the Definition statement.
Synonymous Names	A list of any names the data component **MAY** also be known as. (Source NEHTA.) Implementers **MAY** prefer to use synonymous names to refer to the component in specific contexts.
Scope	Situations in which the data component may be used, i.e. the extent and capacity within which this data component may be used, including the circumstances under which the collection of specified data is required or recommended. For example, Medication Instruction (data group) has a scope which includes all prescribable therapeutic goods, both medicines and non-medicines. This attribute is not relevant to data elements or value domains. (Source NEHTA.)
Scope Source	The authoritative source for the Scope statement.
Context	The environment in which the data component is meaningful, i.e. the circumstance, purpose and perspective under which this data component is defined or used. For example, Street Name has a context of Address. (Source NEHTA.)
Assumptions	Suppositions and notions used in defining the data component. (Source NEHTA.)
Assumptions Source	The authoritative source for the Assumptions statement.
Notes	Informative text that further describes the data component, or assists in the understanding of how the data component can be used. (Source NEHTA.)
Notes Source	The authoritative source for the Notes statement.
Data Type	The data type of the data element, e.g. DateTime or Text. (Source NEHTA.) The data type is applicable only to data elements. The valid data types are specified in the Data Types Legend.

Value Domain	The name and identifier of the terminologies, code sets and classifications to define the data element value range, or a statement describing what values to use in the absence of a defined value domain for the related data element. In the absence of national standard code sets, the code sets used **SHALL** be registered code sets, i.e. registered through the HL7 code set registration procedure with an appropriate object identifier (OID), and **SHALL** be publicly available. When national standard code sets become available, they **SHALL** be used and the non-standard code sets **SHALL** be deprecated. (Source NEHTA.) The Value Domain is applicable only to CodedText and CodeableText data elements.

Value Domain Section Legend

The following table illustrates the layout of the Value Domain section and describes the various parts of the section.

Table 8: Value Domain Section Legend

Source	The name of the terminology or vocabulary from which the value domain's permissible values are sourced, e.g. SNOMED CT-AU, LOINC.
Version Number	Version number of the value domain source.
Permissible Values	List of permissible values in the value domain.

Usage Section Legend

The following table illustrates the layout of the Usage section and describes the various parts of the section.

Table 9: Usage Section Legend

Examples	One or more demonstrations of the data that is catered for by the data element. (Source NEHTA.) Where a data element has an associated value domain, examples representative of that domain are used where possible. Where the value domain is yet to be determined, an indicative example is provided. Implementation guides **MAY** contain specific examples for how data elements **SHALL** be populated and how they relate to each other. The Value Domain is applicable only to CodedText and CodeableText data elements.
Conditions of Use	Prerequisites, provisos or restrictions for use of the component. (Source NEHTA.)
Conditions of Use Source	The authoritative source for the Conditions of Use statement.
Misuse	Incorrect, inappropriate or wrong uses of the component. (Source NEHTA.)
Default Value	A common denomination, or at least a usable denomination, from the Value Domain where available or applicable, typically assigned at the creation of an instance of the component. (Source NEHTA.)

Relationships Section Legend

The Relationships section specifies the cardinality and conditionality between parent and child data components. Note that if no components in either table have any conditions, then the condition column will be omitted for that table.

The following table illustrates the layout of the Parent relationships table. Note that the occurrences and conditions in the relationships described by this table are from the parent to the child component, i.e. from the component listed in the table to the component described by the section.

Table 10: Parent Legend

Data Type	Name	Occurrences (child within parent)	Condition
The icon illustrating the metadata type or data type.	Parent Component Name	The minimum and maximum number of instances of the component described on this page that **SHALL** occur.	The conditions that **SHALL** be met to include the data element. Only applicable for elements with a conditional obligation.

The following table illustrates the layout of the Children relationships table.

Table 11: Children Legend

Data Type	Name	Occurrences	Condition
The icon illustrating the metadata type or data type.	Child Component Name	The minimum and maximum number of instances of the component described on this page that **SHALL** occur.	The conditions that **SHALL** be met to include this child data element. Only applicable for elements with a conditional obligation.

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