nehta

Medical History
Detailed Clinical Model Specification
Version 1.0

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National E-Health Transition Authority

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Document Information

Key Information

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Product Version History

Product version	Date	Release comments
1.0	18 Dec 2015	Initial public release. This specification is published to support the Structured Content Specifications published (in the first half of 2015) that use the versions of DCMs included in this specification. These DCMs used to be published as separate specifications but due to their nature have been combined into one.

Related Documents

Name	Version/Release Date
Participation Data Specification	Version 3.2, Issued 20 July 2011

Included Detailed Clinical Models

This specification contains the following Detailed Clinical Models:

- Problem/Diagnosis, version 5.2
- Exclusion Statement - Problems and Diagnoses, version 1.3
- Procedure (Action), version 4.2
- Exclusion Statement - Procedures, version 1.2
- Uncategorised Medical History Item, version 2.0

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Table of Contents

1 Introduction

1.1 Purpose and Scope

This detailed clinical model (DCM) specification forms part of a suite of data specifications that the National E-Health Transition Authority (NEHTA) is developing for the Australian health informatics community. The suite comprises specifications for a range of health topics (represented as data groups), which are considered to be the most critical to support the work programme given to NEHTA and to realise the benefits derived from Level 4 (semantic) interoperability[1] in the Australian healthcare setting.

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

1.2 Intended Audience

This document is intended to be read by jurisdictional information and communication technology (ICT) managers, clinicians involved in clinical information system specifications, software architects and developers, and implementers of clinical information systems in various healthcare settings.

It is reasonably technical in nature and expects the audience to be familiar with the language of health data specification and have some familiarity with health information standards and specifications. Definitions and examples are provided to clarify relevant terminology usage and intent.

1.3 Background

There are several e-health priority areas to be addressed by NEHTA specifications. One area of priority is identification of the data to be communicated and its structure. NEHTA is addressing this through data specifications, which detail the data elements (logically grouped) and their associated value domains.

Data specifications need to be independent of messaging formats. They are concerned with providing an information framework in which to achieve semantic interoperability.

Data specifications have been developed:

- Based on jurisdiction and clinician identified priorities;
- Specifically to suit the Australian model for a shared electronic health record (EHR);
- To define collections of related information, e.g. event summaries, data groups, data elements;
- To allow for expansion and extension as electronic systems mature;
- So they are human readable (with information enhanced by the hierarchical structure);
- Incorporating clinical examples of use to enhance utility and adoption; and
- To provide a set of clinical terminologies, specific to the requirements of the Australian healthcare system.

While the Personally Controlled Electronic Health Record (PCEHR) system is referred to in these documents, the implementation of the PCEHR system is not dealt with here.

[1] Level 4 interoperability is described in *The Value Of Health Care Information Exchange And Interoperability [WALJ2005a]*.

1.4 Terminology

NEHTA, through the National Clinical Terminology and Information Service (NCTIS), is defining a national approach to clinical terminology. Consistent and accurate articulation and interpretation of clinical terms is critical to the process of safe exchange.

The Systematized Nomenclature of Medicine - Clinical Terms (SNOMED CT) has been recommended by NEHTA and endorsed by the Australian, state and territory governments as the preferred clinical terminology for Australia, and is now freely available for e-health software developers to use in their Australian products under International Health Terminology Standards Development Organisation (IHTSDO) licensing arrangements.

While NEHTA's achievement of a national standard clinical terminology is based on SNOMED CT as the foundational resource, local variations and customisation of terms relevant to the Australian healthcare sector will be incorporated. SNOMED CT Australian Release (SNOMED CT-AU) is the Australian extension to SNOMED CT; the integrated national release of SNOMED CT for implementation in Australian deployed clinical IT systems. NEHTA is also developing the Australian Medicines Terminology (AMT) as the designated clinical terminology for medicines available in Australia. The AMT will provide a consistent approach to the identification and naming of medicines, to support medicines management and activity across the Australian healthcare domain. The AMT will be integrated with SNOMED CT-AU in the near future.

Reference sets listed as value domains within this document have been developed taking into account data element and data group definitions, as well as how they align and complement the SNOMED CT concept model. For further information regarding terminology and the development of reference sets please visit http://www.nehta.gov.au/our-work/clinical-terminology and direct your questions or feedback to *help@nehta.gov.au*.

2 Problem/Diagnosis Detailed Clinical Model

This chapter describes version 5.2 of the *Problem/Diagnosis* Detailed Clinical Model (DCM).

2.1 Purpose

To record details about a problem or diagnosis by a clinician.

2.2 Use

Use to record detailed information about problems or diagnoses recognised by a clinician. There are many uses including: recording a diagnosis during an encounter; populating a problem list or a summary statement, such as a discharge summary.

Use to record all problems or diagnoses, including those with context-specific qualifiers such as past or present, primary or secondary, active or inactive etc. These qualifiers can be documented separately and included in the *Status* `data group`, because their use varies in different settings.

2.3 Misuse

Not to be used to record differential diagnoses - use the *Differential Diagnosis* DCM (to be published).

Not to be used to record reason for encounter - use the *Reason for Encounter* DCM.

Not to be used to record presenting complaint - which is information captured early in the encounter, usually prior to full assessment and will be represented using a separate DCM.

Not to be used to record procedures - use the *Procedure* DCM.

Not to be used to record symptoms or signs - these should be recorded as part of a patient story or history. A problem such as chest pain may masquerade as a symptom, however in this context we are recording it as a problem the person has.

2.4 UML Class Diagrams

The following figure represents the data hierarchy using a UML 2.0 class diagram. The diagram displays data groups and data elements, together with their names, data types and multiplicities. Data elements are displayed as attributes; data groups 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. When a data element has a choice of data types, the data type of the attribute that represents it is an abstract interface class generalised from the individual data types. The diagram shows the data hierarchy excluding the details of participation. The default multiplicity is 1..1.

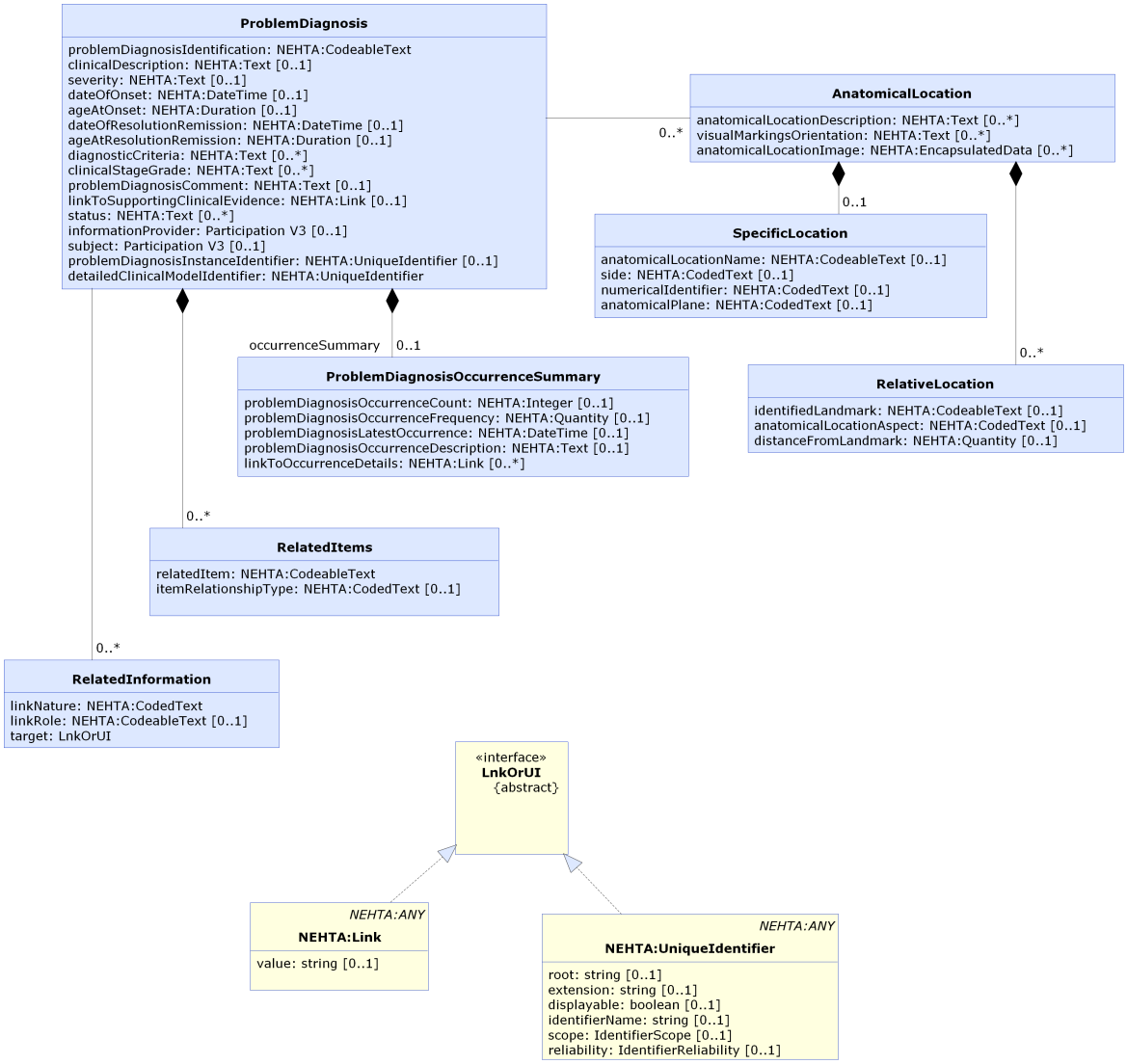

Figure 2.1. Problem Diagnosis

2.5 PROBLEM/DIAGNOSIS

Identification

Label	PROBLEM/DIAGNOSIS
Metadata Type	Data Group
Identifier	DG-15530
OID	1.2.36.1.2001.1001.101.102.15530

Definition

Definition	A health condition that, as determined by a clinician, may have impact on the physical, mental or social well-being of a person. A diagnosis is determined by scientific evaluation of pathological and pathophysiological findings identified from the patient's clinical history, family history, physical examination and diagnostic investigations.
Definition Source	NEHTA
Synonymous Names	
Notes	An account of relevant identified health related problems as reported by a healthcare provider. This can include a disease, condition, injury, poisoning, sign, symptom, abnormal finding, complaint, or other factor influencing health status as assessed by a healthcare provider.

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. Typically, such identifiers will be generated internally by systems and not displayed to users since they rarely have clinical significance.

	PROBLEM/DIAGNOSIS			
		Problem/Diagnosis Identification		1..1
		Clinical Description		0..1
		Severity		0..1
		Date of Onset		0..1
		Age at Onset		0..1
		ANATOMICAL LOCATION		0..*
			SPECIFIC LOCATION	0..1

				Anatomical Location Name	0..1
				Side	0..1
				Numerical Identifier	0..1
				Anatomical Plane	0..1
			RELATIVE LOCATION		0..*
				Identified Landmark	0..1
				Anatomical Location Aspect	0..1
				Distance From Landmark	0..1
			Anatomical Location Description		0..*
			Visual Markings/Orientation		0..*
			Anatomical Location Image		0..*
		Occurrence Summary (PROBLEM/DIAGNOSIS OCCURRENCE SUMMARY)			0..1
			Problem/Diagnosis Occurrence Count		0..1
			Problem/Diagnosis Occurrence Frequency		0..1
			Problem/Diagnosis Latest Occurrence		0..1
			Problem/Diagnosis Occurrence Description		0..1
			Link to Occurrence Details		0..*
		RELATED ITEMS			0..*
			Related Item		1..1
			Item Relationship Type		0..1
		Date of Resolution/Remission			0..1
		Age at Resolution/Remission			0..1
		Diagnostic Criteria			0..*
		Clinical Stage/Grade			0..*
		Problem/Diagnosis Comment			0..1

		Link to Supporting Clinical Evidence		0..1
		Status		0..*
		INFORMATION PROVIDER		0..1
		SUBJECT		0..1
		Problem/Diagnosis Instance Identifier		0..1
		RELATED INFORMATION		0..*
			Link Nature	1..1
			Link Role	0..1
			Target	1..1
		Detailed Clinical Model Identifier		1..1

2.6 Problem/Diagnosis Identification

Identification

Label	Problem/Diagnosis Identification
Metadata Type	Data Element
Identifier	DE-15514
OID	1.2.36.1.2001.1001.101.103.15514

Definition

Definition	Identification of the problem or diagnosis.
Definition Source	NEHTA
Synonymous Names	
Notes	This item denotes the name of the condition used by the healthcare provider, after assessment, to describe the health problem or diagnosis experienced by the subject of care.
Data Type	CodeableText
Value Domain	Problem/Diagnosis Reference Set

Usage

Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for CodeableText.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROBLEM/DIAGNOSIS	1..1

2.7 Problem/Diagnosis Reference Set

Identification

Label	Problem/Diagnosis Reference Set
Metadata Type	Value Domain
Identifier	VD-16617
OID	1.2.36.1.2001.1001.101.104.16617
External Identifier	SNOMED CT-AU Concept Id: 32570581000036105 |*Problem/Diagnosis reference set*|

Definition

Definition	The *Problem/Diagnosis reference set* provides terminology to support the recording of a subject of care problem or diagnosis for medical records within Australia.
Definition Source	NEHTA

Value Domain

Source	SNOMED CT-AU

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	Problem/Diagnosis Identification	1..1

2.8 Clinical Description

Identification

Label	Clinical Description
Metadata Type	Data Element
Identifier	DE-15597
OID	1.2.36.1.2001.1001.101.103.15597

Definition

Definition	Narrative description or comments about clinical aspects of the problem/diagnosis.
Definition Source	NEHTA
Synonymous Names	
Notes	Used to provide additional narrative information in relation to a problem/diagnosis.
Data Type	Text

Usage

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROBLEM/DIAGNOSIS	0..1

2.9 Severity

Identification

Label	Severity
Metadata Type	Data Element
Identifier	DE-15531
OID	1.2.36.1.2001.1001.101.103.15531

Definition

Definition	A subjective assessment of the severity of the problem/diagnosis as evaluated by the clinician.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROBLEM/DIAGNOSIS	0..1

2.10 Date of Onset

Identification

Label	Date of Onset
Metadata Type	Data Element
Identifier	DE-15507
OID	1.2.36.1.2001.1001.101.103.15507

Definition

Definition	Estimated or actual date the problem or diagnosis began, as indicated or identified by the clinician.
Definition Source	NEHTA
Synonymous Names	
Data Type	DateTime

Usage

Examples	Please see DateTime in Appendix B, *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)
	PROBLEM/DIAGNOSIS	0..1

2.11 Age at Onset

Identification

Label	Age at Onset
Metadata Type	Data Element
Identifier	DE-16535
OID	1.2.36.1.2001.1001.101.103.16535

Definition

Definition	The estimated or actual age of the individual when the clinician assesses that the problem/diagnosis began.
Definition Source	NEHTA
Synonymous Names	
Notes	May be important in situations where approximations of age based on calculations are not accurate enough, e.g. in infants under one year. It may also be important for assessing clinical implications such as prognosis of condition, e.g. early-onset Alzheimer's, multiple sclerosis, certain cancers, etc.
Data Type	Duration

Usage

Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for Duration.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROBLEM/DIAGNOSIS	0..1

2.12 ANATOMICAL LOCATION

Identification

Label	ANATOMICAL LOCATION
Metadata Type	Data Group
Identifier	DG-16150
OID	1.2.36.1.2001.1001.101.102.16150

Definition

Definition	Slot to contain detailed and structured anatomical location details.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROBLEM/DIAGNOSIS	0..*

Children

Data Type	Name	Occurrences
	SPECIFIC LOCATION	0..1
	RELATIVE LOCATION	0..*
	Anatomical Location Description	0..*
	Visual Markings/Orientation	0..*
	Anatomical Location Image	0..*

2.13 SPECIFIC LOCATION

Identification

Label	SPECIFIC LOCATION
Metadata Type	Data Group
Identifier	DG-16151
OID	1.2.36.1.2001.1001.101.102.16151

Definition

Definition	Specific and identified anatomical location.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	ANATOMICAL LOCATION	0..1

Children

Data Type	Name	Occurrences
	Anatomical Location Name	0..1
	Side	0..1
	Numerical Identifier	0..1
	Anatomical Plane	0..1

2.14 Anatomical Location Name

Identification

Label	Anatomical Location Name
Metadata Type	Data Element
Identifier	DE-16153
OID	1.2.36.1.2001.1001.101.103.16153

Definition

Definition	The name of the anatomical location.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodeableText
Value Domain	Body Structure Foundation Reference Set

Usage

Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for CodeableText.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	SPECIFIC LOCATION	0..1

2.15 Body Structure Foundation Reference Set

Identification

Label	Body Structure Foundation Reference Set
Metadata Type	Value Domain
Identifier	VD-16152
OID	1.2.36.1.2001.1001.101.104.16152
External Identifier	SNOMED CT-AU Concept Id: 32570061000036105

Definition

Definition	The set of values for named anatomical locations.
Definition Source	NEHTA

Value Domain

Source	SNOMED CT-AU

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Anatomical Location Name	1..1

2.16 Side

Identification

Label	Side
Metadata Type	Data Element
Identifier	DE-16336
OID	1.2.36.1.2001.1001.101.103.16336

Definition

Definition	The laterality of the anatomical location.
Definition Source	NEHTA
Synonymous Names	Laterality
Data Type	CodedText
Value Domain	Laterality Reference Set

Usage

Examples	1) Right 2) Left 3) Bilateral

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	SPECIFIC LOCATION	0..1

2.17 Laterality Reference Set

Identification

Label	Laterality Reference Set
Metadata Type	Value Domain
Identifier	VD-16312
OID	1.2.36.1.2001.1001.101.104.16312
External Identifier	SNOMED CT-AU Concept Id: 32570611000036103

Definition

Definition	The set of values for identifying the laterality of an anatomical location.
Definition Source	NEHTA

Value Domain

Source	SNOMED CT-AU

Relationships

Parents

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

2.18 Numerical Identifier

Identification

Label	Numerical Identifier
Metadata Type	Data Element
Identifier	DE-16338
OID	1.2.36.1.2001.1001.101.103.16338

Definition

Definition	An ordinal number that identifies the specific anatomical site from multiple sites.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodedText
Value Domain	*Not specified.* 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[1] 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.

Usage

Conditions of Use	This **SHALL** be an ordinal number between first and eighteenth.
Conditions of Use Source	NEHTA
Examples	1) First, as in 'first rib'. 2) Second, as in 'second toe'. 3) Third, as in 'third lumbar vertebra'.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	SPECIFIC LOCATION	0..1

[1] http://www.hl7.org/oid/index.cfm

2.19 Anatomical Plane

Identification

Label	Anatomical Plane
Metadata Type	Data Element
Identifier	DE-16340
OID	1.2.36.1.2001.1001.101.103.16340

Definition

Definition	Line describing the position of a vertical anatomical plane in the body.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodedText
Value Domain	*Not specified.* 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[2] 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.

Usage

Examples	1) Midline 2) Midclavicular 3) Midaxillary 4) Midscapular

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	SPECIFIC LOCATION	0..1

[2] http://www.hl7.org/oid/index.cfm

2.20 RELATIVE LOCATION

Identification

Label	RELATIVE LOCATION
Metadata Type	Data Group
Identifier	DG-16341
OID	1.2.36.1.2001.1001.101.102.16341

Definition

Definition	Qualifier(s) to identify a non-specific location.
Definition Source	NEHTA
Synonymous Names	
Notes	An example is: 5cm (distance) inferior (aspect) to the tibial tuberosity (landmark). There may be more than one relative location required to provide a cross reference.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	ANATOMICAL LOCATION	0..*

Children

Data Type	Name	Occurrences
	Identified Landmark	0..1
	Anatomical Location Aspect	0..1
	Distance From Landmark	0..1

2.21 Identified Landmark

Identification

Label	Identified Landmark
Metadata Type	Data Element
Identifier	DE-16343
OID	1.2.36.1.2001.1001.101.103.16343

Definition

Definition	Identified anatomical landmark from which to specify the relative anatomical location.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodeableText
Value Domain	*Not specified.* 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[3] 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.

Usage

Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for CodeableText.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	RELATIVE LOCATION	0..1

[3] http://www.hl7.org/oid/index.cfm

2.22 Anatomical Location Aspect

Identification

Label	Anatomical Location Aspect
Metadata Type	Data Element
Identifier	DE-16345
OID	1.2.36.1.2001.1001.101.103.16345

Definition

Definition	Qualifier to identify which direction the anatomical location is in relation to the identified landmark.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodedText
Value Domain	*Not specified.* 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[4] 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.

Usage

Examples	1) Medial to: Relative location medial to the landmark. 2) Lateral to: Relative location lateral to the landmark. 3) Superior to: Relative location superior to the landmark. 4) Inferior to: Relative location inferior to the landmark. 5) Anterior to: Relative location anterior to the landmark. 6) Posterior to: Relative location posterior to the landmark. 7) Below: Relative location below the landmark. 8) Above: Relative location above the landmark. 9) Inferolateral to: Relative location inferior and lateral to the landmark. 10) Superolateral to: Relative location superior and lateral to the landmark. 11) Inferomedial to: Relative location inferior and medial to the landmark. 12) Superomedial to: Relative location superior and medial to the landmark.

[4] http://www.hl7.org/oid/index.cfm

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	RELATIVE LOCATION	0..1

2.23 Distance From Landmark

Identification

Label	Distance From Landmark
Metadata Type	Data Element
Identifier	DE-16346
OID	1.2.36.1.2001.1001.101.103.16346

Definition

Definition	Distance of location from the identified landmark.
Definition Source	NEHTA
Synonymous Names	
Data Type	Quantity

Usage

Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for Quantity.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	RELATIVE LOCATION	0..1

2.24 Anatomical Location Description

Identification

Label	Anatomical Location Description
Metadata Type	Data Element
Identifier	DE-16319
OID	1.2.36.1.2001.1001.101.103.16319

Definition

Definition	Description of the anatomical location.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	ANATOMICAL LOCATION	0..*

2.25 Visual Markings/Orientation

Identification

Label	Visual Markings/Orientation
Metadata Type	Data Element
Identifier	DE-16407
OID	1.2.36.1.2001.1001.101.103.16407

Definition

Definition	Description of any visual markings used to orientate the viewer.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	1) External reference points 2) Special sutures 3) Ink markings

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	ANATOMICAL LOCATION	0..*

2.26 Anatomical Location Image

Identification

Label	Anatomical Location Image
Metadata Type	Data Element
Identifier	DE-16199
OID	1.2.36.1.2001.1001.101.103.16199

Definition

Definition	An image or images used to identify a location.
Definition Source	NEHTA
Synonymous Names	
Context	This element is intended to be an image, e.g. a photo of the anatomical site such as a wound on the leg.
Context Source	NEHTA
Data Type	EncapsulatedData

Usage

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	ANATOMICAL LOCATION	0..*

2.27 PROBLEM/DIAGNOSIS OCCURRENCE SUMMARY

Identification

Label	Occurrence Summary
Metadata Type	Data Group
Identifier	DG-16554
OID	1.2.36.1.2001.1001.101.102.16554

Definition

Definition	Summary information about occurrences or exacerbations.
Definition Source	NEHTA
Synonymous Names	
Notes	Detailed information about each occurrence or exacerbation is likely to be held in other parts of the health record.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROBLEM/DIAGNOSIS	0..1

Children

Data Type	Name	Occurrences
	Problem/Diagnosis Occurrence Count	0..1
	Problem/Diagnosis Occurrence Frequency	0..1
	Problem/Diagnosis Latest Occurrence	0..1
	Problem/Diagnosis Occurrence Description	0..1
	Link to Occurrence Details	0..*

2.28 Problem/Diagnosis Occurrence Count

Identification

Label	Problem/Diagnosis Occurrence Count
Metadata Type	Data Element
Identifier	DE-16555
OID	1.2.36.1.2001.1001.101.103.16555

Definition

Definition	Cumulative number of occurrences or exacerbations of the problem/diagnosis.
Definition Source	NEHTA
Synonymous Names	
Data Type	Integer

Usage

Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for Integer.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Occurrence Summary (PROBLEM/DIAGNOSIS OCCURRENCE SUMMARY)	0..1

2.29 Problem/Diagnosis Occurrence Frequency

Identification

Label	Problem/Diagnosis Occurrence Frequency
Metadata Type	Data Element
Identifier	DE-16556
OID	1.2.36.1.2001.1001.101.103.16556

Definition

Definition	The frequency or estimated frequency of occurrences or exacerbations of the problem/diagnosis.
Definition Source	NEHTA
Synonymous Names	
Data Type	Quantity

Usage

Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for Quantity.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Occurrence Summary (PROBLEM/DIAGNOSIS OCCURRENCE SUMMARY)	0..1

2.30 Problem/Diagnosis Latest Occurrence

Identification

Label	Problem/Diagnosis Latest Occurrence
Metadata Type	Data Element
Identifier	DE-16557
OID	1.2.36.1.2001.1001.101.103.16557

Definition

Definition	The date of the last occurrence or exacerbation of the problem/diagnosis.
Definition Source	NEHTA
Synonymous Names	
Data Type	DateTime

Usage

Conditions of Use	Record only date, time **SHALL NOT** be recorded.
Conditions of Use Source	NEHTA
Examples	Please see DateTime in Appendix B, *Specification Guide for Use* for examples and usage information on specifying a date.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Occurrence Summary (PROBLEM/DIAGNOSIS OCCURRENCE SUMMARY)	0..1

2.31 Problem/Diagnosis Occurrence Description

Identification

Label	Problem/Diagnosis Occurrence Description
Metadata Type	Data Element
Identifier	DE-16558
OID	1.2.36.1.2001.1001.101.103.16558

Definition

Definition	A narrative description, including outcomes and other key details, about occurrences or exacerbations of the problem/diagnosis.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Occurrence Summary (PROBLEM/DIAGNOSIS OCCURRENCE SUMMARY)	0..1

2.32 Link to Occurrence Details

Identification

Label	Link to Occurrence Details
Metadata Type	Data Element
Identifier	DE-10124
OID	1.2.36.1.2001.1001.101.103.10124

Definition

Definition	Link to further information about past occurrences or exacerbations of the problem/diagnosis that exist elsewhere in the health record.
Definition Source	NEHTA
Synonymous Names	
Data Type	Link

Usage

Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for Link.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Occurrence Summary (PROBLEM/DIAGNOSIS OCCURRENCE SUMMARY)	0..*

2.33 RELATED ITEMS

Identification

Label	RELATED ITEMS
Metadata Type	Data Group
Identifier	DG-16541
OID	1.2.36.1.2001.1001.101.102.16541

Definition

Definition	Further problems, diagnoses, procedures or events that are related in some way to this problem/diagnosis.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROBLEM/DIAGNOSIS	0..*

Children

Data Type	Name	Occurrences
	Related Item	1..1
	Item Relationship Type	0..1

2.34 Related Item

Identification

Label	Related Item
Metadata Type	Data Element
Identifier	DE-15562
OID	1.2.36.1.2001.1001.101.103.15562

Definition

Definition	Identification of a related problem, diagnosis, procedure, or event as text, coded text or link within the health record.
Definition Source	NEHTA
Synonymous Names	
Notes	This item identifies the relevant health problem experienced by the subject of care, as assessed by the healthcare provider. This element provides a link to one or more established problem(s) or diagnoses.
Data Type	CodeableText
Value Domain	Related Item Values

Usage

Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for CodeableText.

Relationships

Parents

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

2.35 Related Item Values

Identification

Label	Related Item Values
Metadata Type	Value Domain
Identifier	VD-15562
OID	1.2.36.1.2001.1001.101.104.15562

Definition

Definition	The set of values for related items.
Definition Source	NEHTA
Notes	An explanation of AMT concepts can be found in *Australian Medicines Terminology v3 Model - Editorial Rules v2.0 [NEHT2014ag]*.

Value Domain

Source	NEHTA
Permissible Values	The permissible values are the members of the following reference sets: SNOMED CT-AU: • 32570071000036102 |*Clinical finding foundation reference set*| • 32570141000036105 |*Procedure foundation reference set*| • 32570091000036103 |*Event foundation reference set*| • 32570111000036109 |*Organism foundation reference set*| • 32570211000036100 |*Substance foundation reference set*| • 32570131000036100 |*Physical object foundation reference set*| • 32570121000036102 |*Physical force foundation reference set*| AMT: • 929360061000036106 |*Medicinal product reference set*| • 929360081000036101 |*Medicinal product pack reference set*| • 929360071000036103 |*Medicinal product unit of use reference set*| • 929360021000036102 |*Trade product reference set*| • 929360041000036105 |*Trade product pack reference set*| • 929360031000036100 |*Trade product unit of use reference set*| • 929360051000036108 |*Containered trade product pack reference set*|

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Related Item	1..1

2.36 Item Relationship Type

Identification

Label	Item Relationship Type
Metadata Type	Data Element
Identifier	DE-16560
OID	1.2.36.1.2001.1001.101.103.16560

Definition

Definition	The type of relationship that this problem/diagnosis has to the related item.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodedText
Value Domain	*Not specified.* 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[5] 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.

Usage

Examples	1) Caused by: This concept identifies the direct cause or causative agent of a problem/diagnosis. The concept includes the idea of complications, causative agent and due to. Note: Where no causality or sequence of events is known, this relationship type should be left blank. 2) Following: This value identifies the sequence of events between the related items, but does not assert causality. This can be used for sequelae or late effects. Note: Where no causality or sequence of events is known, this relationship type should be left blank.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	RELATED ITEMS	0..1

[5] http://www.hl7.org/oid/index.cfm

2.37 Date of Resolution/Remission

Identification

Label	Date of Resolution/Remission
Metadata Type	Data Element
Identifier	DE-15510
OID	1.2.36.1.2001.1001.101.103.15510

Definition

Definition	Estimated or actual date the problem or diagnosis resolved or went into remission, as indicated or identified by the clinician.
Definition Source	NEHTA
Synonymous Names	
Data Type	DateTime

Usage

Examples	Please see DateTime in Appendix B, *Specification Guide for Use* for examples and usage information on specifying a date.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROBLEM/DIAGNOSIS	0..1

2.38 Age at Resolution/Remission

Identification

Label	Age at Resolution/Remission
Metadata Type	Data Element
Identifier	DE-16544
OID	1.2.36.1.2001.1001.101.103.16544

Definition

Definition	The age of the person at the time of resolution or remission of the problem/diagnosis.
Definition Source	NEHTA
Synonymous Names	
Notes	May be important in situations where approximations of age based on calculations are not accurate enough, e.g. in infants under one year.
Data Type	Duration

Usage

Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for Duration.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROBLEM/DIAGNOSIS	0..1

2.39 Diagnostic Criteria

Identification

Label	Diagnostic Criteria
Metadata Type	Data Element
Identifier	DE-16623
OID	1.2.36.1.2001.1001.101.105.16623

Definition

Definition	The criteria on which the problem/diagnosis is based.
Definition Source	NEHTA
Synonymous Names	
Notes	This free text data element is currently a placeholder for further structured data that is as yet undefined. See Appendix A, *Known Issues* for further information.
Data Type	Text

Usage

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROBLEM/DIAGNOSIS	0..*

2.40 Clinical Stage/Grade

Identification

Label	Clinical Stage/Grade
Metadata Type	Data Element
Identifier	DE-16624
OID	1.2.36.1.2001.1001.101.105.16624

Definition

Definition	Clinical stage or grade of a problem/diagnosis.
Definition Source	NEHTA
Synonymous Names	
Notes	This free text data element is currently a placeholder for further structured data that is as yet undefined. See Appendix A, *Known Issues* for further information.
Data Type	Text

Usage

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROBLEM/DIAGNOSIS	0..*

2.41 Problem/Diagnosis Comment

Identification

Label	Problem/Diagnosis Comment
Metadata Type	Data Element
Identifier	DE-16545
OID	1.2.36.1.2001.1001.101.103.16545

Definition

Definition	Additional narrative about the problem or diagnosis not captured in other fields.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROBLEM/DIAGNOSIS	0..1

2.42 Link to Supporting Clinical Evidence

Identification

Label	Link to Supporting Clinical Evidence
Metadata Type	Data Element
Identifier	DE-16546
OID	1.2.36.1.2001.1001.101.103.16546

Definition

Definition	Links to other relevant information, including pathology reports.
Definition Source	NEHTA
Synonymous Names	
Data Type	Link

Usage

Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for Link.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROBLEM/DIAGNOSIS	0..1

2.43 Status

Identification

Label	Status
Metadata Type	Data Element
Identifier	DE-16625
OID	1.2.36.1.2001.1001.101.105.16625

Definition

Definition	Descriptor for context- or use-case specific label or workflow-related aspect of the diagnostic process which may not be safe to exchange between systems or use in a shared environment.
Definition Source	NEHTA
Synonymous Names	
Notes	This free text data element is currently a placeholder for further structured data that is as yet undefined. See Appendix A, *Known Issues* for further information.
Data Type	Text

Usage

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROBLEM/DIAGNOSIS	0..*

2.44 INFORMATION PROVIDER

Identification

Label	INFORMATION PROVIDER
Metadata Type	Data Group
Identifier	DG-10296
OID	1.2.36.1.2001.1001.101.102.10296

Definition

Definition	Details pertinent to the identification of the source of the problem/diagnosis information.
Definition Source	NEHTA
Synonymous Names	
Scope	Generally only used when the recorder needs to make it explicit. Otherwise, the composer/author of the enclosing Structured Document is assumed.
Scope Source	NEHTA
Notes	This does not have to be a person and, in particular, does not have to be a healthcare provider. Types of sources include: • the subject of care; • a subject of care agent, e.g. parent, guardian; • the clinician; and • a device or software.

Usage

Conditions of Use	This **SHALL NOT** be used unless the provider of the information is not the *Composer/Author* of the enclosing Structured Document. 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 B, *Specification Guide for Use*. • Participation Type **SHALL** have an implementation-specific value equivalent to “INFORMATION PROVIDER”. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a PERSON or DEVICE.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROBLEM/DIAGNOSIS	0..1

2.45 SUBJECT

Identification

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

Definition

Definition	The individual about whom the problem/diagnosis information is being recorded.
Definition Source	NEHTA
Synonymous Names	
Scope	Generally only used when the recorder needs to make it explicit. Otherwise, the subject of the enclosing Structured Document is assumed.
Scope Source	NEHTA

Usage

Conditions of Use	This is a reuse of the *PARTICIPATION* `data group`, which is described in *Participation Data Specification [NEHT2011v]*. This **SHALL NOT** be used unless the subject of the information is not the *Subject of Care* of the enclosing Structured Document. The following constraints are additional to those specified in *Participation Data Specification [NEHT2011v]*. Constraints are explained in Appendix B, *Specification Guide for Use*. • Participation Type **SHALL** have an implementation-specific value equivalent to “Subject”. • 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)
	PROBLEM/DIAGNOSIS	0..1

2.46 Problem/Diagnosis Instance Identifier

Identification

Label	Problem/Diagnosis Instance Identifier
Metadata Type	Data Element
Identifier	DE-16702
OID	1.2.36.1.2001.1001.101.103.16702

Definition

Definition	A globally unique object identifier for each instance of a *Problem/Diagnosis* evaluation.
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 B, *Specification Guide for Use* for examples and usage information for UniqueIdentifier.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROBLEM/DIAGNOSIS	0..1

2.47 RELATED INFORMATION

Identification

Label	RELATED INFORMATION
Metadata Type	Data Group
Identifier	DG-16692
OID	1.2.36.1.2001.1001.101.102.16692

Definition

Definition	Information held elsewhere that is relevant to this instance of a data component.
Definition Source	NEHTA
Synonymous Names	
Notes	Items of related information include, but are not limited to, documents, parts of documents, images and web pages. “Elsewhere” includes elsewhere in the same document. 1:1 and 1:N relationships between instances of DCMs can be expressed by using one, or more than one, respectively, links. Chains of links can be used to see problem threads or other logical groupings of items. Links are only to be used between instances of DCMs or documents, i.e. between objects representing complete domain concepts. This is because relationships between sub-elements of whole concepts are not necessarily meaningful and may be confusing. When the item of related information is a complete document (including images) or a web page (or part thereof) an appropriate specialisation of the *Related Information* `data group` should be used. The document or other data component instance containing the *Related Information* `data group` is called the *source*. The related information is called the *target*.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROBLEM/DIAGNOSIS	0..*

Children

Data Type	Name	Occurrences
	Link Nature	1..1

Data Type	Name	Occurrences
	Link Role	0..1
	Target	1..1

2.48 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 that together communicate the semantics of the relationship between the source and target DCMs or document. 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

Examples	1) is related to 2) is confirmed by or authorised by 3) is related to the same problem or health issue

Relationships

Parents

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

2.49 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 or DCM and document], 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 of the 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

2.50 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 DCMs. This attribute provides for a specific description of the actual role played by the target in relation to the source. This attribute may be populated from any suitable terminology, and therefore might support human readership better than interoperable automated processing.
Data Type	CodeableText
Value Domain	Link Role Values

Usage

Examples	1) unspecified link 2) suggests 3) endorses 4) evidence for 5) outcome 6) is documented by 7) excerpts

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	RELATED INFORMATION	0..1

2.51 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 subcategory of a corresponding term in *Link Nature Values*, where that correspondence is indicated by the first letter after the code string “LINK-”. For example 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

2.52 Target

Identification

Label	Target
Metadata Type	Data Element
Identifier	DE-16700
OID	1.2.36.1.2001.1001.101.103.16700

Definition

Definition	The “linked to” or identified information.
Definition Source	NEHTA
Synonymous Names	
Data Type	Link UniqueIdentifier

Usage

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

Relationships

Parents

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

2.53 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	A globally unique identifier for this Detailed Clinical Model.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Conditions of Use	The value of this item **SHALL** be either the default value or a semantically equivalent value from an appropriate code system.
Conditions of Use Source	NEHTA
Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for UniqueIdentifier.
Default Value	1.2.36.1.2001.1001.101.102.15530

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROBLEM/DIAGNOSIS	1..1

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3 Exclusion Statement – Problems and Diagnoses Detailed Clinical Model

This chapter describes version 1.3 of the *Exclusion Statement - Problems and Diagnoses* Detailed Clinical Model (DCM).

3.1 Purpose

To positively record the absence or exclusion of any problems or diagnoses within the health record.

3.2 Use

Use to record the positive exclusion or absence of problems or diagnoses within the health record. This Detailed Clinical Model (DCM) avoids the need to use terminology to express negation about any problem or diagnoses within the health record.

This DCM is only to be used to record 'point in time' information. It is not to be used for a persistent storage of information as the patient should always be questioned about past or existing problems and diagnoses; diagnosis should always be undertaken prior to initiation of any treatment or management plan.

3.3 UML Class Diagrams

The following figure represents the data hierarchy using a UML 2.0 class diagram. The diagram displays data groups and data elements, together with their names, data types and multiplicities. Data elements are displayed as attributes; data groups 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. When a data element has a choice of data types, the data type of the attribute that represents it is an abstract interface class generalised from the individual data types. The diagram shows the data hierarchy excluding the details of participation. The default multiplicity is 1..1.

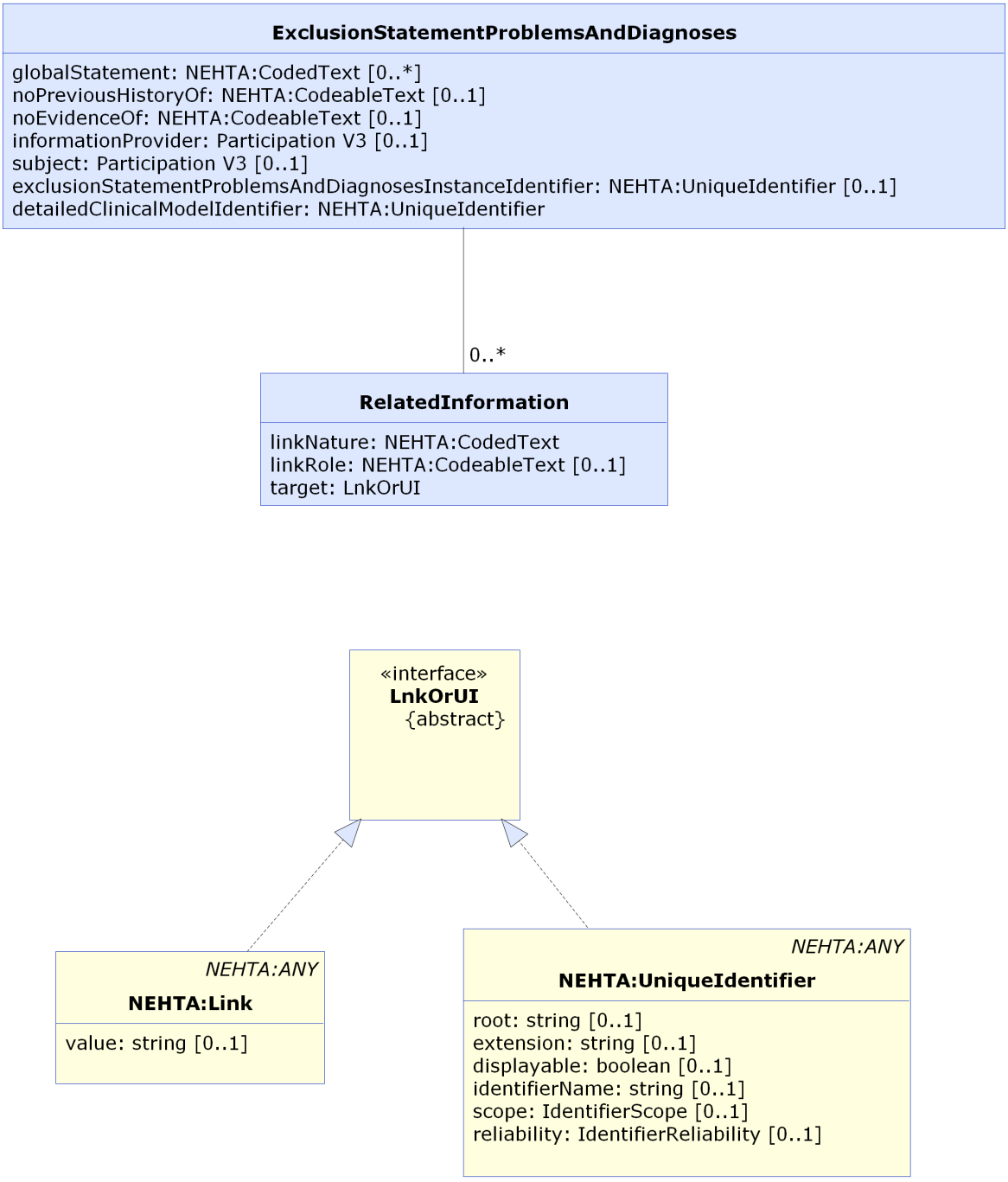

Figure 3.1. Exclusion Statement for Problems and Diagnoses

3.4 EXCLUSION STATEMENT - PROBLEMS AND DIAGNOSES

Identification

Label	EXCLUSION STATEMENT - PROBLEMS AND DIAGNOSES
Metadata Type	Data Group
Identifier	DG-16138
OID	1.2.36.1.2001.1001.101.102.16138

Definition

Definition	Statements which positively assert that the patient does not have the problem or diagnosis.
Definition Source	openEHR Foundation
Scope	To positively record the absence or exclusion of any problems or diagnoses within the health record.
Scope Source	openEHR Foundation

Usage

Conditions of Use	Use to record the positive exclusion or absence of problems or diagnoses within the health record. This data group avoids the need to use terminology to express negation about any problem or diagnosis within the health record. The positive assertion and persistence of absence of problem or diagnosis is time-specific. It is important to note that the patient's condition should be reviewed and required to validate such statement at each encounter.
Conditions of Use Source	openEHR Foundation

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. Typically, such identifiers will be generated internally by systems and not displayed to users since they rarely have clinical significance.

	EXCLUSION STATEMENT - PROBLEMS AND DIAGNOSES		
	001011001	Global Statement	0..*
	001011001	No Previous History of	0..1
	001011001	No Evidence of	0..1

		INFORMATION PROVIDER		0..1
		SUBJECT		0..1
		Exclusion Statement - Problems and Diagnoses Instance Identifier		0..1
		RELATED INFORMATION		0..*
			Link Nature	1..1
			Link Role	0..1
			Target	1..1
		Detailed Clinical Model Identifier		1..1

3.5 Global Statement

Identification

Label	Global Statement
Metadata Type	Data Element
Identifier	DE-16302
OID	1.2.36.1.2001.1001.101.103.16302

Definition

Definition	The statement about the absence or exclusion.
Definition Source	openEHR Foundation
Synonymous Names	
Context	This can be used to capture any information that is needed to be explicitly recorded within the record as being absent or excluded.
Context Source	openEHR Foundation
Data Type	CodedText
Value Domain	Global Statement Values

Usage

Conditions of Use	The value **SHALL NOT** be 02 (“Not asked”).
Conditions of Use Source	NEHTA
Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for CodedText.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	EXCLUSION STATEMENT - PROBLEMS AND DIAGNOSES	0..*

3.6 Global Statement Values

Identification

Label	Global Statement Values
Metadata Type	Value Domain
Identifier	VD-16299
OID	1.2.36.1.2001.1001.101.104.16299

Definition

Definition	The set of values for the global statements about the exclusion of problems or diagnoses.
Definition Source	openEHR Foundation

Value Domain

Source	NEHTA	
Permissible Values	01, None known	No information about any problem or diagnosis is known.
	02, Not asked	No information about any problem or diagnosis is available because the patient was not asked or not able to be asked.
	03, None supplied	No information about any problem or diagnosis is supplied.
	Please see Appendix A, *Known Issues*.	

Relationships

Parents

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

3.7 No Previous History of

Identification

Label	No Previous History of
Metadata Type	Data Element
Identifier	DE-16303
OID	1.2.36.1.2001.1001.101.103.16303

Definition

Definition	Positive statement about problems and diagnoses that are explicitly known to have not been identified at the time of recording.
Definition Source	openEHR Foundation
Synonymous Names	
Data Type	CodeableText
Value Domain	*Not specified.* 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[1] 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.

Usage

Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for CodeableText.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	EXCLUSION STATEMENT - PROBLEMS AND DIAGNOSES	0..1

[1] http://www.hl7.org/oid/index.cfm

3.8 No Evidence of

Identification

Label	No Evidence of
Metadata Type	Data Element
Identifier	DE-16304
OID	1.2.36.1.2001.1001.101.103.16304

Definition

Definition	Positive statement about problems and diagnoses that are explicitly known to have no evidence supporting their existence at the time of recording.
Definition Source	openEHR Foundation
Synonymous Names	
Data Type	CodeableText
Value Domain	*Not specified.* 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[2] 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.

Usage

Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for CodeableText.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	EXCLUSION STATEMENT - PROBLEMS AND DIAGNOSES	0..1

[2] http://www.hl7.org/oid/index.cfm

3.9 INFORMATION PROVIDER

Identification

Label	INFORMATION PROVIDER
Metadata Type	Data Group
Identifier	DG-10296
OID	1.2.36.1.2001.1001.101.102.10296

Definition

Definition	The party who was the source of the information.
Definition Source	NEHTA
Synonymous Names	
Scope	Generally only used when the recorder needs to make it explicit. Otherwise, the author of the enclosing Structured Document is assumed.
Scope Source	NEHTA
Notes	This does not have to be a person and, in particular, does not have to be a healthcare provider. Types of sources include: • the subject of care; • a subject of care agent, e.g. parent, guardian; • the clinician; and • a device or software.

Usage

Conditions of Use	This **SHALL NOT** be used unless the provider of the information is not the *Composer/Author* of the enclosing Structured Document. 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 B, *Specification Guide for Use*. • Participation Type **SHALL** have an implementation-specific value equivalent to “Information Provider”. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a PERSON or as a DEVICE.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	EXCLUSION STATEMENT - PROBLEMS AND DIAGNOSES	0..1

3.10 SUBJECT

Identification

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

Definition

Definition	The individual about whom the problem/diagnosis information is being recorded.
Definition Source	NEHTA
Synonymous Names	
Scope	Generally only used when the recorder needs to make it explicit. Otherwise, the subject of the enclosing Structured Document is assumed.
Scope Source	NEHTA

Usage

Conditions of Use	This **SHALL NOT** be used unless the subject of the information is not the *Subject of Care* of the enclosing Structured Document. 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 B, *Specification Guide for Use*. • Participation Type **SHALL** have an implementation-specific value equivalent to “Subject”. • 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)
	EXCLUSION STATEMENT - PROBLEMS AND DIAGNOSES	0..1

3.11 Exclusion Statement - Problems and Diagnoses Instance Identifier

Identification

Label	Exclusion Statement - Problems and Diagnoses Instance Identifier
Metadata Type	Data Element
Identifier	DE-16710
OID	1.2.36.1.2001.1001.101.103.16710

Definition

Definition	A globally unique object identifier for each instance of an *Exclusion Statement - Problems and Diagnoses* evaluation.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	EXCLUSION STATEMENT - PROBLEMS AND DIAGNOSES	0..1

3.12 RELATED INFORMATION

Identification

Label	RELATED INFORMATION
Metadata Type	Data Group
Identifier	DG-16692
OID	1.2.36.1.2001.1001.101.102.16692

Definition

Definition	Information held elsewhere that is relevant to this instance of a data component.
Definition Source	NEHTA
Synonymous Names	
Notes	Items of related information include, but are not limited to, documents, parts of documents, images and web pages. “Elsewhere” includes elsewhere in the same document. 1:1 and 1:N relationships between instances of DCMs can be expressed by using one, or more than one, respectively, links. Chains of links can be used to see problem threads or other logical groupings of items. Links are only to be used between instances of DCMs or documents, i.e. between objects representing complete domain concepts. This is because relationships between sub-elements of whole concepts are not necessarily meaningful and may be confusing. When the item of related information is a complete document (including images) or a web page (or part thereof) an appropriate specialisation of the *Related Information* `data group` should be used. The document or other data component instance containing the *Related Information* `data group` is called the *source*. The related information is called the *target*.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	EXCLUSION STATEMENT - PROBLEMS AND DIAGNOSES	0..*

Children

Data Type	Name	Occurrences
	Link Nature	1..1

Data Type	Name	Occurrences
	Link Role	0..1
	Target	1..1

3.13 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 that together communicate the semantics of the relationship between the source and target DCMs or document. 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

Examples	1) is related to 2) is confirmed by or authorised by 3) is related to the same problem or health issue

Relationships

Parents

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

3.14 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 or DCM and document], 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 of the 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

3.15 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 DCMs. This attribute provides for a specific description of the actual role played by the target in relation to the source. This attribute may be populated from any suitable terminology, and therefore might support human readership better than interoperable automated processing.
Data Type	CodeableText
Value Domain	Link Role Values

Usage

Examples	1) unspecified link 2) suggests 3) endorses 4) evidence for 5) outcome 6) is documented by 7) excerpts

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	RELATED INFORMATION	0..1

3.16 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 subcategory of a corresponding term in *Link Nature Values*, where that correspondence is indicated by the first letter after the code string "LINK-". For example 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

3.17 Target

Identification

Label	Target
Metadata Type	Data Element
Identifier	DE-16700
OID	1.2.36.1.2001.1001.101.103.16700

Definition

Definition	The “linked to” or identified information.
Definition Source	NEHTA
Synonymous Names	
Data Type	Link UniqueIdentifier

Usage

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

Relationships

Parents

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

3.18 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	A globally unique identifier for this Detailed Clinical Model.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Conditions of Use	The value of this item **SHALL** be either the default value or a semantically equivalent value from an appropriate code system.
Conditions of Use Source	NEHTA
Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for UniqueIdentifier.
Default Value	1.2.36.1.2001.1001.101.102.16138

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	EXCLUSION STATEMENT - PROBLEMS AND DIAGNOSES	1..1

4 Procedure Detailed Clinical Model

This chapter describes version 4.2 of the *Procedure (Action)* Detailed Clinical Model (DCM).

4.1 Purpose

To record information about the activities required to carry out a procedure, including the planning, scheduling, performance, suspension, cancellation, documentation and completion.

4.2 Use

Use to record information about the activities required to carry out a procedure, including the planning, scheduling, performance, suspension, cancellation, documentation and completion.

The scope of this archetype encompasses activities for a broad range of clinical procedures performed for therapeutic, evaluative, investigative, screening or diagnostic purposes. Examples range from the relatively simple activities, such as insertion of an intravenous cannula, through to complex surgical operations.

Additional structured and detailed information about the procedure can be captured using purpose-specific data groups inserted into the *Procedure Detail* slot, where required.

Within the context of an operation report, this DCM will be used to record only what was done during the procedure. Separate DCMs will be used to record the other required components of the operation report, including the taking of tissue specimen samples, use of imaging guidance, operation findings, post-operative instructions and plans for follow-up.

Within the context of a problem list or summary, this DCM may be used to represent procedures that have been performed. The *Problem/Diagnosis* archetype will be used to represent the patient's problems and diagnoses.

Recording information using this *Procedure* DCM indicates that some sort of activity has actually occurred; this will usually be the procedure itself but may be a failed attempt or another activity such as postponing the procedure.

4.3 Misuse

Not to be used to record details about related DCMs, such as use of imaging guidance during the procedure or collection of tissue samples for analysis - use a specific DCM for this purpose.

Not to be used to record a whole operation or procedure report.

Not to be used to record an observation such as a pathology test result or an imaging test.

4.4 UML Class Diagrams

The following figure represents the data hierarchy using a UML 2.0 class diagram. The diagram displays data groups and data elements, together with their names, data types and multiplicities. Data elements are displayed as attributes; data groups 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. When a data element has a choice of data types, the data type of the attribute that represents it is an abstract interface class generalised from the individual data types. The diagram shows the data hierarchy excluding the details of participation. The default multiplicity is 1..1.

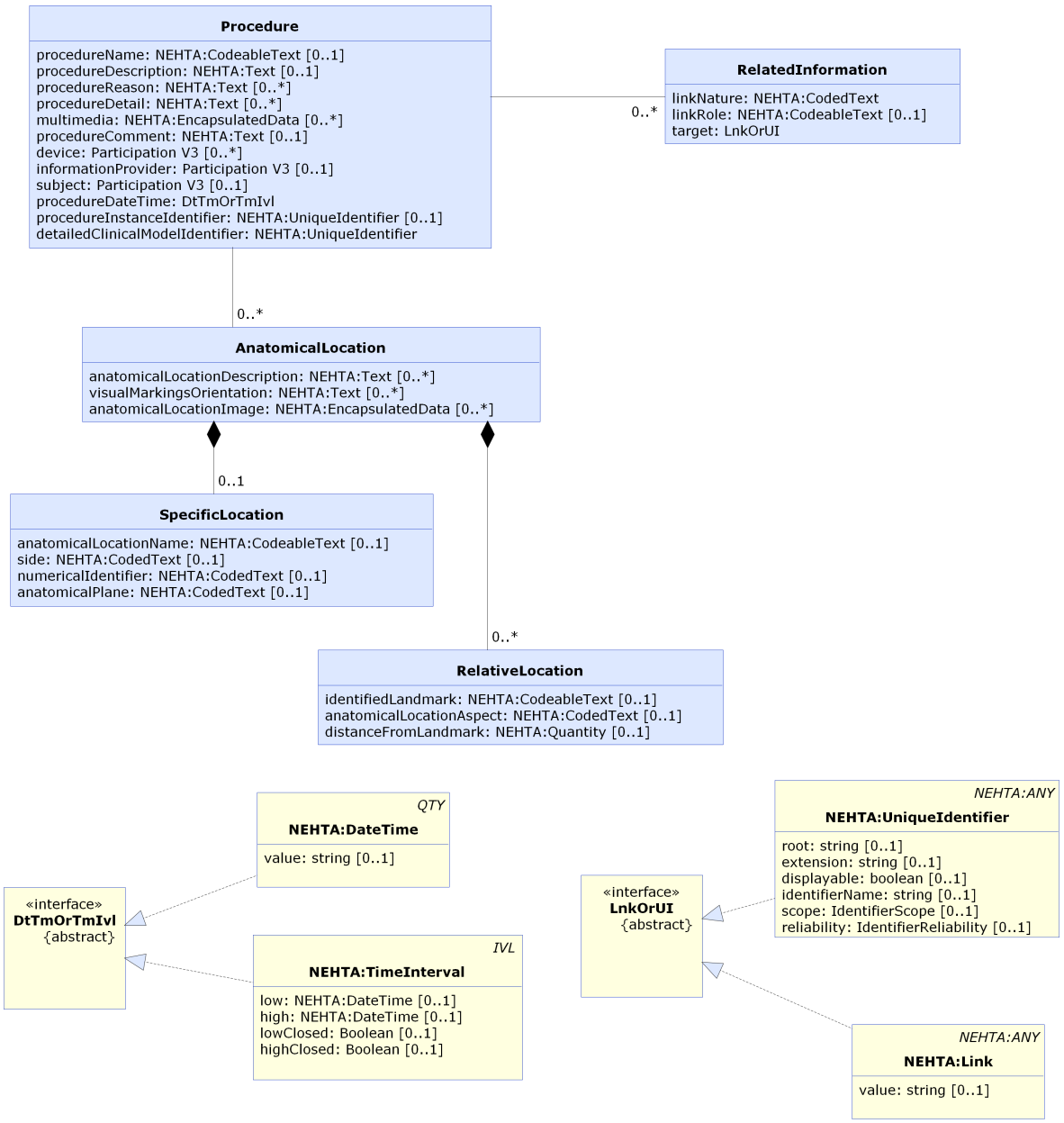

Figure 4.1. Procedure

4.5 PROCEDURE

Identification

Label	PROCEDURE
Metadata Type	Data Group
Identifier	DG-15514
OID	1.2.36.1.2001.1001.101.102.15514

Definition

Definition	A clinical activity carried out for therapeutic, evaluative, investigative, screening or diagnostic purposes.
Definition Source	NEHTA
Synonymous Names	Clinical Intervention

Usage

Misuse	Recording details about related activities such as use of imaging guidance during the procedure or collection of tissue samples for analysis - use specific DCMs for these purposes. Recording a whole operation or procedure report. Recording an observation such as a pathology test result or an imaging test.

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. Typically, such identifiers will be generated internally by systems and not displayed to users since they rarely have clinical significance.

	PROCEDURE			
		Procedure Name		0..1
		Procedure Description		0..1
		Procedure Reason		0..*
		ANATOMICAL LOCATION		0..*
			SPECIFIC LOCATION	0..1

				Anatomical Location Name	0..1
				Side	0..1
				Numerical Identifier	0..1
				Anatomical Plane	0..1
			RELATIVE LOCATION		0..*
				Identified Landmark	0..1
				Anatomical Location Aspect	0..1
				Distance From Landmark	0..1
			Anatomical Location Description		0..*
			Visual Markings/Orientation		0..*
			Anatomical Location Image		0..*
		Procedure Detail			0..*
		Multimedia			0..*
		Procedure Comment			0..1
		DEVICE			0..*
		INFORMATION PROVIDER			0..1
		SUBJECT			0..1
		Procedure DateTime			1..1
		Procedure Instance Identifier			0..1
		RELATED INFORMATION			0..*
			Link Nature		1..1
			Link Role		0..1
			Target		1..1
		Detailed Clinical Model Identifier			1..1

4.6 Procedure Name

Identification

Label	Procedure Name
Metadata Type	Data Element
Identifier	DE-15579
OID	1.2.36.1.2001.1001.101.103.15579

Definition

Definition	The name of the procedure (to be) performed.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodeableText
Value Domain	Procedure Foundation Reference Set

Usage

Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for CodeableText.

Relationships

Parents

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

4.7 Procedure Foundation Reference Set

Identification

Label	Procedure Foundation Reference Set
Metadata Type	Value Domain
Identifier	VD-16580
OID	1.2.36.1.2001.1001.101.104.16580
External Identifier	SNOMED CT-AU Concept Id: 32570141000036105 |*Procedure foundation reference set*|

Definition

Definition	The *Procedure foundation reference set* provides the broadest possible terminology to support the recording of clinical interventions in Australian eHealth implementations.
Definition Source	NEHTA

Value Domain

Source	SNOMED CT-AU

Relationships

Parents

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

4.8 Procedure Description

Identification

Label	Procedure Description
Metadata Type	Data Element
Identifier	DE-16582
OID	1.2.36.1.2001.1001.101.103.16582

Definition

Definition	Narrative description about the activity or care pathway step for the identified procedure.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	Examples include description about • the performance and findings from the procedure; or • the failed attempt or the cancellation of the procedure.

Relationships

Parents

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

4.9 Procedure Reason

Identification

Label	Procedure Reason
Metadata Type	Data Element
Identifier	DE-16583
OID	1.2.36.1.2001.1001.101.103.16583

Definition

Definition	Reason that the activity or care pathway step for the identified procedure was carried out.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	1) The reason for the cancellation or suspension of the procedure.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROCEDURE	0..*

4.10 ANATOMICAL LOCATION

Identification

Label	ANATOMICAL LOCATION
Metadata Type	Data Group
Identifier	DG-16150
OID	1.2.36.1.2001.1001.101.102.16150

Definition

Definition	Structured information about the specific anatomical location of the procedure.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROCEDURE	0..*

Children

Data Type	Name	Occurrences
	SPECIFIC LOCATION	0..1
	RELATIVE LOCATION	0..*
	Anatomical Location Description	0..*
	Visual Markings/Orientation	0..*
	Anatomical Location Image	0..*

4.11 SPECIFIC LOCATION

Identification

Label	SPECIFIC LOCATION
Metadata Type	Data Group
Identifier	DG-16151
OID	1.2.36.1.2001.1001.101.102.16151

Definition

Definition	Specific and identified anatomical location.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	ANATOMICAL LOCATION	0..1

Children

Data Type	Name	Occurrences
	Anatomical Location Name	0..1
	Side	0..1
	Numerical Identifier	0..1
	Anatomical Plane	0..1

4.12 Anatomical Location Name

Identification

Label	Anatomical Location Name
Metadata Type	Data Element
Identifier	DE-16153
OID	1.2.36.1.2001.1001.101.103.16153

Definition

Definition	The name of the anatomical location.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodeableText
Value Domain	Body Structure Foundation Reference Set

Usage

Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for CodeableText.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	SPECIFIC LOCATION	0..1

4.13 Body Structure Foundation Reference Set

Identification

Label	Body Structure Foundation Reference Set
Metadata Type	Value Domain
Identifier	VD-16152
OID	1.2.36.1.2001.1001.101.104.16152
External Identifier	SNOMED CT-AU Concept Id: 32570061000036105

Definition

Definition	The set of values for named anatomical locations.
Definition Source	NEHTA

Value Domain

Source	SNOMED CT-AU

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Anatomical Location Name	1..1

4.14 Side

Identification

Label	Side
Metadata Type	Data Element
Identifier	DE-16336
OID	1.2.36.1.2001.1001.101.103.16336

Definition

Definition	The laterality of the anatomical location.
Definition Source	NEHTA
Synonymous Names	Laterality
Data Type	CodedText
Value Domain	Laterality Reference Set

Usage

Examples	1) Right 2) Left 3) Bilateral

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	SPECIFIC LOCATION	0..1

4.15 Laterality Reference Set

Identification

Label	Laterality Reference Set
Metadata Type	Value Domain
Identifier	VD-16312
OID	1.2.36.1.2001.1001.101.104.16312
External Identifier	SNOMED CT-AU Concept Id: 32570611000036103

Definition

Definition	The set of values for identifying the laterality of an anatomical location.
Definition Source	NEHTA

Value Domain

Source	SNOMED CT-AU

Relationships

Parents

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

4.16 Numerical Identifier

Identification

Label	Numerical Identifier
Metadata Type	Data Element
Identifier	DE-16338
OID	1.2.36.1.2001.1001.101.103.16338

Definition

Definition	An ordinal number that identifies the specific anatomical site from multiple sites.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodedText
Value Domain	*Not specified.* 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[1] 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.

Usage

Conditions of Use	This **SHALL** be an ordinal number between first and eighteenth.
Conditions of Use Source	NEHTA
Examples	1) First, as in 'first rib'. 2) Second, as in 'second toe'. 3) Third, as in 'third lumbar vertebra'.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	SPECIFIC LOCATION	0..1

[1] http://www.hl7.org/oid/index.cfm

4.17 Anatomical Plane

Identification

Label	Anatomical Plane
Metadata Type	Data Element
Identifier	DE-16340
OID	1.2.36.1.2001.1001.101.103.16340

Definition

Definition	Line describing the position of a vertical anatomical plane in the body.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodedText
Value Domain	*Not specified.* 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[2] 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.

Usage

Examples	1) Midline 2) Midclavicular 3) Midaxillary 4) Midscapular

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	SPECIFIC LOCATION	0..1

[2] http://www.hl7.org/oid/index.cfm

4.18 RELATIVE LOCATION

Identification

Label	RELATIVE LOCATION
Metadata Type	Data Group
Identifier	DG-16341
OID	1.2.36.1.2001.1001.101.102.16341

Definition

Definition	Qualifier(s) to identify a non-specific location.
Definition Source	NEHTA
Synonymous Names	
Notes	An example is: 5cm (distance) inferior (aspect) to the tibial tuberosity (landmark). There may be more than one relative location required to provide a cross reference.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	ANATOMICAL LOCATION	0..*

Children

Data Type	Name	Occurrences
	Identified Landmark	0..1
	Anatomical Location Aspect	0..1
	Distance From Landmark	0..1

4.19 Identified Landmark

Identification

Label	Identified Landmark
Metadata Type	Data Element
Identifier	DE-16343
OID	1.2.36.1.2001.1001.101.103.16343

Definition

Definition	Identified anatomical landmark from which to specify the relative anatomical location.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodeableText
Value Domain	*Not specified.* 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[3] 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.

Usage

Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for CodeableText.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	RELATIVE LOCATION	0..1

[3] http://www.hl7.org/oid/index.cfm

4.20 Anatomical Location Aspect

Identification

Label	Anatomical Location Aspect
Metadata Type	Data Element
Identifier	DE-16345
OID	1.2.36.1.2001.1001.101.103.16345

Definition

Definition	Qualifier to identify which direction the anatomical location is in relation to the identified landmark.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodedText
Value Domain	*Not specified.* 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[4] 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.

Usage

Examples	1) Medial to: Relative location medial to the landmark. 2) Lateral to: Relative location lateral to the landmark. 3) Superior to: Relative location superior to the landmark. 4) Inferior to: Relative location inferior to the landmark. 5) Anterior to: Relative location anterior to the landmark. 6) Posterior to: Relative location posterior to the landmark. 7) Below: Relative location below the landmark. 8) Above: Relative location above the landmark. 9) Inferolateral to: Relative location inferior and lateral to the landmark. 10) Superolateral to: Relative location superior and lateral to the landmark. 11) Inferomedial to: Relative location inferior and medial to the landmark. 12) Superomedial to: Relative location superior and medial to the landmark.

[4] http://www.hl7.org/oid/index.cfm

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	RELATIVE LOCATION	0..1

4.21 Distance From Landmark

Identification

Label	Distance From Landmark
Metadata Type	Data Element
Identifier	DE-16346
OID	1.2.36.1.2001.1001.101.103.16346

Definition

Definition	Distance of location from the identified landmark.
Definition Source	NEHTA
Synonymous Names	
Data Type	Quantity

Usage

Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for Quantity.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	RELATIVE LOCATION	0..1

4.22 Anatomical Location Description

Identification

Label	Anatomical Location Description
Metadata Type	Data Element
Identifier	DE-16319
OID	1.2.36.1.2001.1001.101.103.16319

Definition

Definition	Description of the anatomical location.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	ANATOMICAL LOCATION	0..*

4.23 Visual Markings/Orientation

Identification

Label	Visual Markings/Orientation
Metadata Type	Data Element
Identifier	DE-16407
OID	1.2.36.1.2001.1001.101.103.16407

Definition

Definition	Description of any visual markings used to orientate the viewer.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	1) External reference points 2) Special sutures 3) Ink markings

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	ANATOMICAL LOCATION	0..*

4.24 Anatomical Location Image

Identification

Label	Anatomical Location Image
Metadata Type	Data Element
Identifier	DE-16199
OID	1.2.36.1.2001.1001.101.103.16199

Definition

Definition	An image or images used to identify a location.
Definition Source	NEHTA
Synonymous Names	
Context	This element is intended to be an image, e.g. a photo of the anatomical site such as a wound on the leg.
Context Source	NEHTA
Data Type	EncapsulatedData

Usage

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	ANATOMICAL LOCATION	0..*

4.25 Procedure Detail

Identification

Label	Procedure Detail
Metadata Type	Data Element
Identifier	DE-16325
OID	1.2.36.1.2001.1001.101.105.16325

Definition

Definition	Further information about the procedure.
Definition Source	NEHTA
Synonymous Names	
Notes	This free text data element is currently a placeholder for further structured data that is as yet undefined. See Appendix A, *Known Issues* for further information.
Data Type	Text

Usage

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROCEDURE	0..*

4.26 Multimedia

Identification

Label	Multimedia
Metadata Type	Data Element
Identifier	DE-16376
OID	1.2.36.1.2001.1001.101.103.16376

Definition

Definition	Multimedia representation of the procedure undertaken.
Definition Source	NEHTA
Synonymous Names	
Notes	Inclusion of any multimedia file to support the recording of the procedure, for example, a link to a video of the procedure performed or a drawing of the wound/surgery.
Data Type	EncapsulatedData

Usage

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROCEDURE	0..*

4.27 Procedure Comment

Identification

Label	Procedure Comment
Metadata Type	Data Element
Identifier	DE-15595
OID	1.2.36.1.2001.1001.101.103.15595

Definition

Definition	Additional narrative about the procedure not captured in other fields.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

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

Relationships

Parents

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

4.28 DEVICE

Identification

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

Definition

Definition	Structured information about any device used during the procedure.
Definition Source	NEHTA
Synonymous Names	

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 B, *Specification Guide for Use*. • Participation Type **SHALL** have an implementation-specific value equivalent to “Device”. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a DEVICE.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROCEDURE	0..*

4.29 INFORMATION PROVIDER

Identification

Label	INFORMATION PROVIDER
Metadata Type	Data Group
Identifier	DG-10296
OID	1.2.36.1.2001.1001.101.102.10296

Definition

Definition	Details pertinent to the identification of the source of the information about the procedure.
Definition Source	NEHTA
Synonymous Names	
Notes	This does not have to be a person and, in particular, does not have to be a healthcare provider. Types of sources include: • the subject of care; • a subject of care agent, e.g. parent, guardian; • the clinician; and • a device or software.

Usage

Conditions of Use	This **SHALL NOT** be used unless the provider of the information is not the *Composer/Author* of the enclosing Structured Document. 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 B, *Specification Guide for Use*. • Participation Type **SHALL** have an implementation-specific value equivalent to “Information Provider”. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a PERSON or as a DEVICE.
Conditions of Use Source	NEHTA

Relationships

Parents

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

4.30 SUBJECT

Identification

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

Definition

Definition	The individual upon whom the procedure is (to be) performed.
Definition Source	NEHTA
Synonymous Names	
Scope	Generally only used when the recorder needs to make it explicit. Otherwise, the subject of the enclosing Structured Document is assumed.
Scope Source	NEHTA

Usage

Conditions of Use	This **SHALL NOT** be used unless the subject of the information is not the *Subject of Care* of the enclosing Structured Document. 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 B, *Specification Guide for Use*. • Participation Type **SHALL** have an implementation-specific value equivalent to “Subject”. • 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)
	PROCEDURE	0..1

4.31 Procedure DateTime

Identification

Label	Procedure DateTime
Metadata Type	Data Element
Identifier	DE-16475
OID	1.2.36.1.2001.1001.101.103.16475

Definition

Definition	Date, and optionally time, of the *Procedure* action.
Definition Source	NEHTA
Synonymous Names	
Notes	This will typically be the date of completion. It may be the start date and time, or even the time period of the action.
Data Type	DateTime TimeInterval

Usage

Examples	Please see DateTime in Appendix B, *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)
	PROCEDURE	1..1

4.32 Procedure Instance Identifier

Identification

Label	Procedure Instance Identifier
Metadata Type	Data Element
Identifier	DE-16561
OID	1.2.36.1.2001.1001.101.103.16561

Definition

Definition	A globally unique identifier for each instance of a *Procedure* action.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

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

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	PROCEDURE	0..1

4.33 RELATED INFORMATION

Identification

Label	RELATED INFORMATION
Metadata Type	Data Group
Identifier	DG-16692
OID	1.2.36.1.2001.1001.101.102.16692

Definition

Definition	Information held elsewhere that is relevant to this instance of a data component.
Definition Source	NEHTA
Synonymous Names	
Notes	Items of related information include, but are not limited to, documents, parts of documents, images and web pages. “Elsewhere” includes elsewhere in the same document. 1:1 and 1:N relationships between instances of DCMs can be expressed by using one, or more than one, respectively, links. Chains of links can be used to see problem threads or other logical groupings of items. Links are only to be used between instances of DCMs or documents, i.e. between objects representing complete domain concepts. This is because relationships between sub-elements of whole concepts are not necessarily meaningful and may be confusing. When the item of related information is a complete document (including images) or a web page (or part thereof) an appropriate specialisation of the *Related Information* `data group` should be used. The document or other data component instance containing the *Related Information* `data group` is called the *source*. The related information is called the *target*.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	PROCEDURE	0..*

Children

Data Type	Name	Occurrences
	Link Nature	1..1

Data Type	Name	Occurrences
	Link Role	0..1
	Target	1..1

4.34 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 that together communicate the semantics of the relationship between the source and target DCMs or document. 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

Examples	1) is related to 2) is confirmed by or authorised by 3) is related to the same problem or health issue

Relationships

Parents

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

4.35 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 or DCM and document], 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 of the 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

4.36 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 DCMs. This attribute provides for a specific description of the actual role played by the target in relation to the source. This attribute may be populated from any suitable terminology, and therefore might support human readership better than interoperable automated processing.
Data Type	CodeableText
Value Domain	Link Role Values

Usage

Examples	1) unspecified link 2) suggests 3) endorses 4) evidence for 5) outcome 6) is documented by 7) excerpts

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	RELATED INFORMATION	0..1

4.37 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 subcategory of a corresponding term in *Link Nature Values*, where that correspondence is indicated by the first letter after the code string “LINK-”. For example 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

4.38 Target

Identification

Label	Target
Metadata Type	Data Element
Identifier	DE-16700
OID	1.2.36.1.2001.1001.101.103.16700

Definition

Definition	The “linked to” or identified information.
Definition Source	NEHTA
Synonymous Names	
Data Type	Link UniqueIdentifier

Usage

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

Relationships

Parents

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

4.39 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	A globally unique identifier for this Detailed Clinical Model.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Conditions of Use	The value of this item **SHALL** be either the default value or a semantically equivalent value from an appropriate code system.
Conditions of Use Source	NEHTA
Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for UniqueIdentifier.
Default Value	1.2.36.1.2001.1001.101.102.15514

Relationships

Parents

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

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5 Exclusion Statement - Procedures Detailed Clinical Model

This chapter describes version 1.2 of the *Exclusion Statement - Procedures* Detailed Clinical Model (DCM).

5.1 Purpose

To positively record the non-performance or exclusion of general groups of procedures (e.g. "never had a surgical procedure") or specific procedures ("no history of appendectomy") within the health record.

5.2 Use

Use to record the positive non-performance or exclusion of general groups of procedures (e.g. "never had a surgical procedure") or specific procedures ("no history of appendectomy") within the health record. This Detailed Clinical Model (DCM) avoids the need to use terminology to express negation about any item within the health record.

5.3 UML Class Diagrams

The following figure represents the data hierarchy using a UML 2.0 class diagram. The diagram displays data groups and data elements, together with their names, data types and multiplicities. Data elements are displayed as attributes; data groups 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. When a data element has a choice of data types, the data type of the attribute that represents it is an abstract interface class generalised from the individual data types. The diagram shows the data hierarchy excluding the details of participation. The default multiplicity is 1..1.

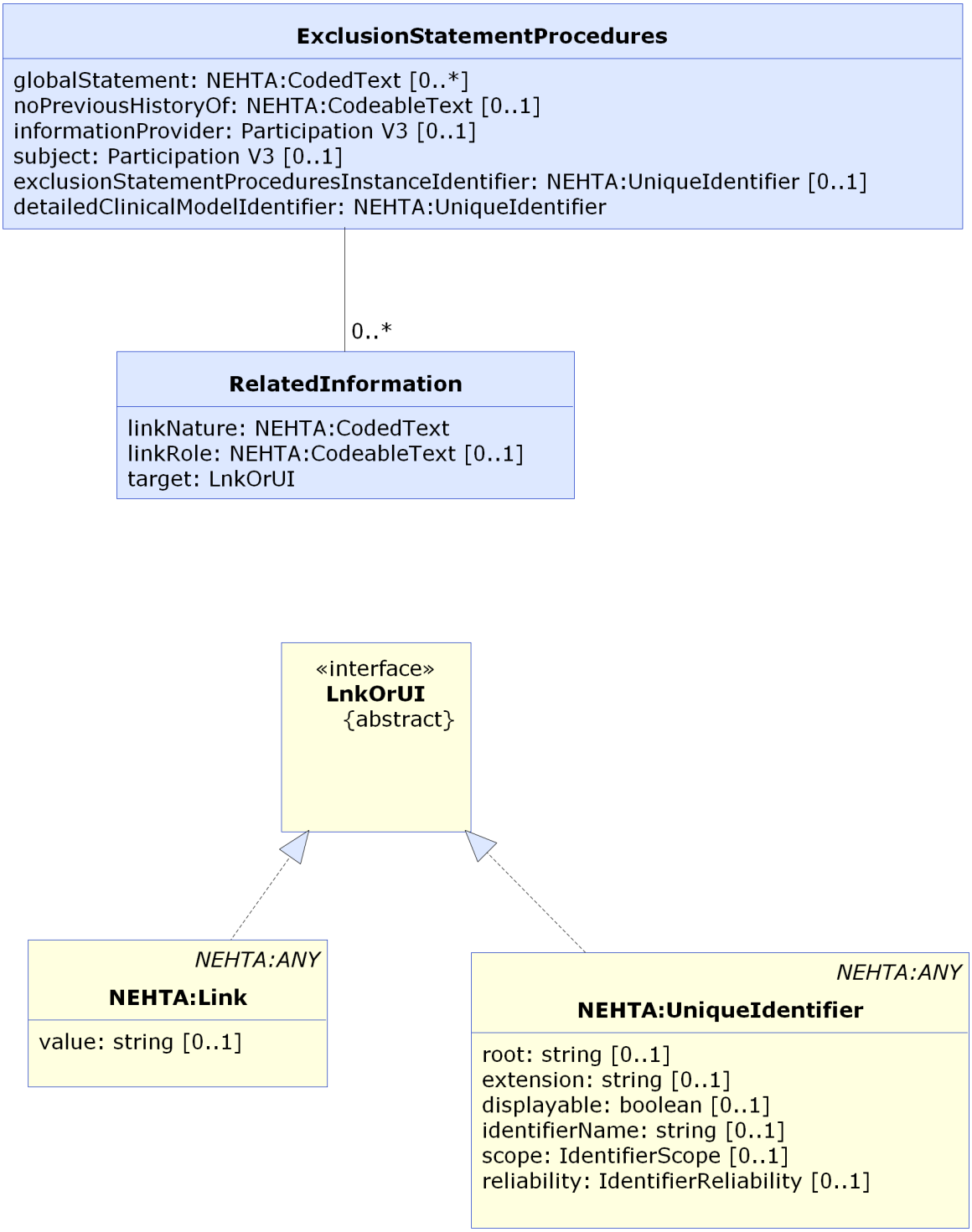

Figure 5.1. Exclusion Statement for Procedure

5.4 EXCLUSION STATEMENT - PROCEDURES

Identification

Label	EXCLUSION STATEMENT - PROCEDURES
Metadata Type	Data Group
Identifier	DG-16603
OID	1.2.36.1.2001.1001.101.102.16603

Definition

Definition	Statements to positively assert that a certain procedure has not been performed on the patient.
Definition Source	NEHTA
Synonymous Names	

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. Typically, such identifiers will be generated internally by systems and not displayed to users since they rarely have clinical significance.

	EXCLUSION STATEMENT - PROCEDURES			
		Global Statement		0..*
		No Previous History of		0..1
		INFORMATION PROVIDER		0..1
		SUBJECT		0..1
		Exclusion Statement - Procedures Instance Identifier		0..1
		RELATED INFORMATION		0..*
			Link Nature	1..1
			Link Role	0..1

			Target	1..1
			Detailed Clinical Model Identifier	1..1

5.5 Global Statement

Identification

Label	Global Statement
Metadata Type	Data Element
Identifier	DE-16302
OID	1.2.36.1.2001.1001.101.103.16302

Definition

Definition	The statement about the absence or exclusion of procedure performed on the patient.
Definition Source	openEHR Foundation
Synonymous Names	
Context	This can be used to capture any information that is needed to be explicitly recorded within the record as being absent or excluded.
Context Source	openEHR Foundation
Data Type	CodedText
Value Domain	Global Statement Values

Usage

Conditions of Use	The value **SHALL NOT** be 02 (“Not asked”).
Conditions of Use Source	NEHTA
Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for CodedText.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	EXCLUSION STATEMENT - PROCEDURES	0..*

5.6 Global Statement Values

Identification

Label	Global Statement Values
Metadata Type	Value Domain
Identifier	VD-16299
OID	1.2.36.1.2001.1001.101.104.16299

Definition

Definition	The set of values for the statement about the absence or exclusion.
Definition Source	openEHR Foundation

Value Domain

Source	NEHTA	
Permissible Values	01, None known	No information about past procedures is known.
	02, Not asked	No information about past procedures is available because the patient was not asked or not able to be asked.
	03, None supplied	No information about past procedures is supplied.
	Please see Appendix A, *Known Issues*.	

Relationships

Parents

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

5.7 No Previous History of

Identification

Label	No Previous History of
Metadata Type	Data Element
Identifier	DE-16303
OID	1.2.36.1.2001.1001.101.103.16303

Definition

Definition	Positive statements about a procedure that are explicitly known to have not been identified at the time of recording.
Definition Source	openEHR Foundation
Synonymous Names	
Data Type	CodeableText
Value Domain	*Not specified.* 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[1] 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.

Usage

Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for CodeableText.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	EXCLUSION STATEMENT - PROCEDURES	0..1

[1] http://www.hl7.org/oid/index.cfm

5.8 INFORMATION PROVIDER

Identification

Label	INFORMATION PROVIDER
Metadata Type	Data Group
Identifier	DG-10296
OID	1.2.36.1.2001.1001.101.102.10296

Definition

Definition	The party who was the source of the information.
Definition Source	NEHTA
Synonymous Names	
Scope	Generally only used when the recorder needs to make it explicit. Otherwise, the author of the enclosing Structured Document is assumed.
Scope Source	NEHTA
Notes	This does not have to be a person and, in particular, does not have to be a healthcare provider. Types of sources include: • the subject of care; • a subject of care agent, e.g. parent, guardian; • the clinician; and • a device or software.

Usage

Conditions of Use	This **SHALL NOT** be used unless the provider of the information is not the *Composer/Author* of the enclosing Structured Document. 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 B, *Specification Guide for Use*. • Participation Type **SHALL** have an implementation-specific value equivalent to “Information Provider”. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a PERSON or as a DEVICE.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	EXCLUSION STATEMENT - PROCEDURES	0..1

5.9 SUBJECT

Identification

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

Definition

Definition	The individual about whom the procedure information is being recorded.
Definition Source	NEHTA
Synonymous Names	
Scope	Generally only used when the recorder needs to make it explicit. Otherwise, the subject of the enclosing Structured Document is assumed.
Scope Source	NEHTA

Usage

Conditions of Use	This **SHALL NOT** be used unless the subject of the information is not the *Subject of Care* of the enclosing Structured Document. 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 B, *Specification Guide for Use*. • Participation Type **SHALL** have an implementation-specific value equivalent to “Subject”. • 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)
	EXCLUSION STATEMENT - PROCEDURES	0..1

5.10 Exclusion Statement - Procedures Instance Identifier

Identification

Label	Exclusion Statement - Procedures Instance Identifier
Metadata Type	Data Element
Identifier	DE-16711
OID	1.2.36.1.2001.1001.101.103.16711

Definition

Definition	A globally unique object identifier for each instance of an *Exclusion Statement - Procedures* evaluation.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	EXCLUSION STATEMENT - PROCEDURES	0..1

5.11 RELATED INFORMATION

Identification

Label	RELATED INFORMATION
Metadata Type	Data Group
Identifier	DG-16692
OID	1.2.36.1.2001.1001.101.102.16692

Definition

Definition	Information held elsewhere that is relevant to this instance of data component.
Definition Source	NEHTA
Synonymous Names	
Notes	Items of related information include, but are not limited to, documents, parts of documents, images and web pages. “Elsewhere” includes elsewhere in the same document. 1:1 and 1:N relationships between instances of DCMs can be expressed by using one, or more than one, respectively, links. Chains of links can be used to see problem threads or other logical groupings of items. Links are only to be used between instances of DCMs or documents, i.e. between objects representing complete domain concepts. This is because relationships between sub-elements of whole concepts are not necessarily meaningful and may be confusing. When the item of related information is a complete document (including images) or a web page (or part thereof) an appropriate specialisation of the *Related Information* `data group` should be used. The document or other data component instance containing the *Related Information* `data group` is called the *source*. The related information is called the *target*.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	EXCLUSION STATEMENT - PROCEDURES	0..*

Children

Data Type	Name	Occurrences
	Link Nature	1..1

Data Type	Name	Occurrences
	Link Role	0..1
	Target	1..1

5.12 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 that together communicate the semantics of the relationship between the source and target DCMs or document. 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

Examples	1) is related to 2) is confirmed by or authorised by 3) is related to the same problem or health issue

Relationships

Parents

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

5.13 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 or DCM and document], 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 of the 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

5.14 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 DCMs. This attribute provides for a specific description of the actual role played by the target in relation to the source. This attribute may be populated from any suitable terminology, and therefore might support human readership better than interoperable automated processing.
Data Type	CodeableText
Value Domain	Link Role Values

Usage

Examples	1) unspecified link 2) suggests 3) endorses 4) evidence for 5) outcome 6) is documented by 7) excerpts

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	RELATED INFORMATION	0..1

5.15 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 subcategory of a corresponding term in *Link Nature Values*, where that correspondence is indicated by the first letter after the code string “LINK-”. For example 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

5.16 Target

Identification

Label	Target
Metadata Type	Data Element
Identifier	DE-16700
OID	1.2.36.1.2001.1001.101.103.16700

Definition

Definition	The “linked to” or identified information.
Definition Source	NEHTA
Synonymous Names	
Data Type	Link UniqueIdentifier

Usage

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

Relationships

Parents

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

5.17 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	A globally unique identifier for this Detailed Clinical Model.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Conditions of Use	The value of this item **SHALL** be either the default value or a semantically equivalent value from an appropriate code system.
Conditions of Use Source	NEHTA
Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for UniqueIdentifier.
Default Value	1.2.36.1.2001.1001.101.102.16603

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	EXCLUSION STATEMENT - PROCEDURES	1..1

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6 Uncategorised Medical History Item Detailed Clinical Model

This chapter describes version 2.0 of the *Uncategorised Medical History Item* Detailed Clinical Model (DCM).

6.1 Purpose

To record an entry in a medical history when it cannot be determined whether the entry is a *Procedure* or is a *Problem/Diagnosis*.

6.2 Use

Use to record an item that is known to be a Procedure or a Problem/Diagnosis but that cannot be explicitly categorised as one or the other. This covers cases where the source system cannot automatically classify an entry as a Problem/Diagnosis or a Procedure, including cases where:

- the coding system used for medical history item cannot structurally support adequate concept classification; and
- the medical history item is maintained as free text and thus has never been classified.

Since it is not known whether an *Uncategorised Medical History Item* entry is conceptually a procedure or a problem/diagnosis, exclusion statements cannot be used when an *Uncategorised Medical History Item* entry is present, as the entry may, in fact, be a procedure or a problem/diagnosis.

6.3 Misuse

Misuses of this DCM include:

- using it when the item is known to be neither a Procedure nor a Problem/Diagnosis; and
- using it when the item can be identified as either a Procedure or a Problem/Diagnosis.

6.4 UML Class Diagrams

The following figure represents the data hierarchy using a UML 2.0 class diagram. The diagram displays data groups and data elements, together with their names, data types and multiplicities. Data elements are displayed as attributes; data groups 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. When a data element has a choice of data types, the data type of the attribute that represents it is an abstract interface class generalised from the individual data types. The diagram shows the data hierarchy excluding the details of participation. The default multiplicity is 1..1.

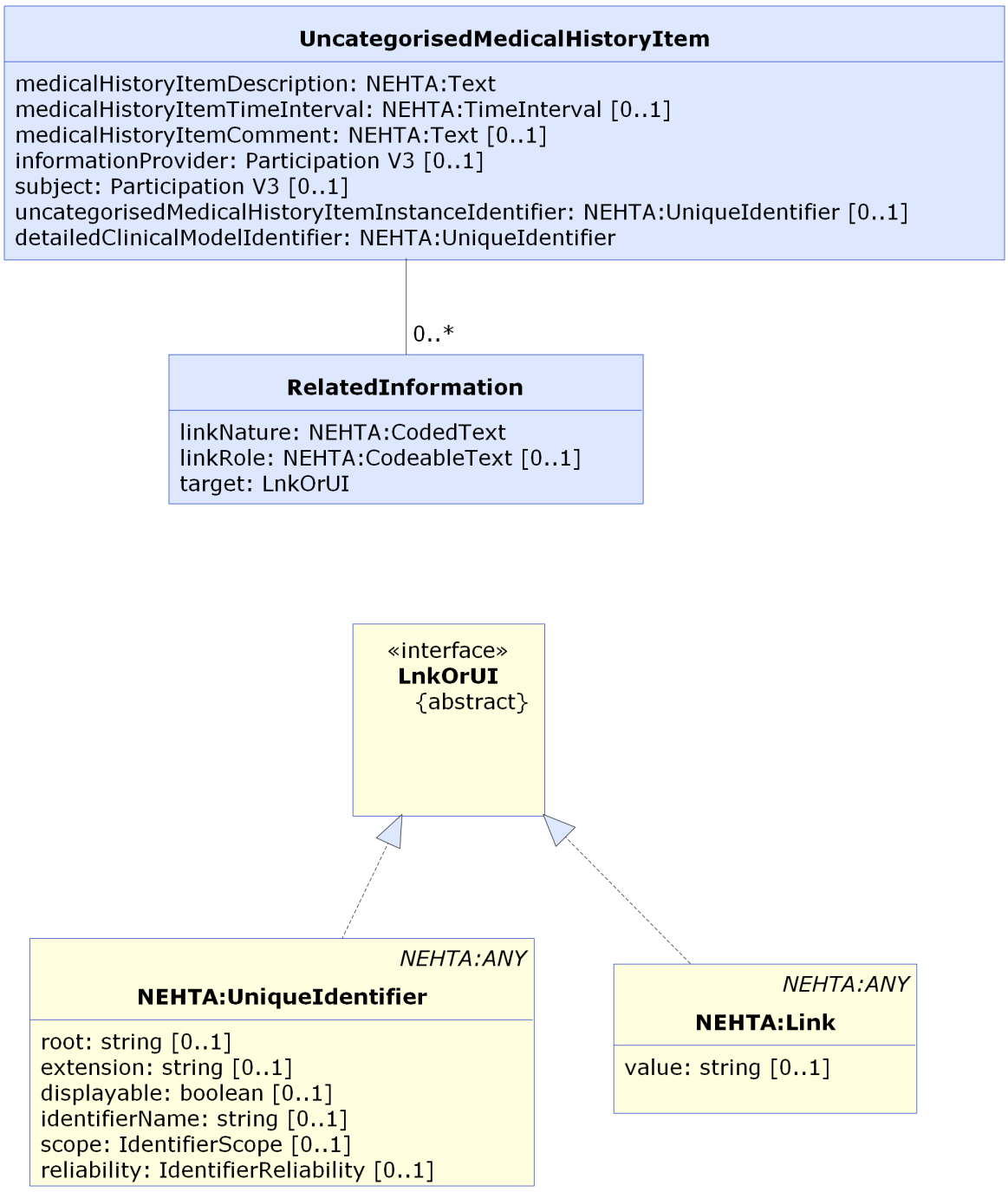

Figure 6.1. Uncategorised Medical History Item

6.5 UNCATEGORISED MEDICAL HISTORY ITEM

Identification

Label	UNCATEGORISED MEDICAL HISTORY ITEM
Metadata Type	Data Group
Identifier	DG-16627
OID	1.2.36.1.2001.1001.101.102.16627

Definition

Definition	A medical history entry that has not been categorised as either *Procedure* or *Problem/Diagnosis*.
Definition Source	NEHTA
Synonymous Names	
Scope	For exchanging medical history items from clinical information systems that do not separate problem/diagnosis and procedure data in their data store.
Scope Source	NEHTA
Assumptions	Every entry in a person's medical history is either a procedure or a problem/diagnosis.
Assumptions Source	NEHTA

Usage

Misuse	Misuses of this data group include: • using it when the item is known to be neither a Procedure nor a Problem/Diagnosis; and • using it when the item can be identified as either a Procedure or a Problem/Diagnosis.

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. Typically, such identifiers will be generated internally by systems and not displayed to users since they rarely have clinical significance.

	UNCATEGORISED MEDICAL HISTORY ITEM		
		Medical History Item Description	1..1

		Medical History Item TimeInterval		0..1
		Medical History Item Comment		0..1
		INFORMATION PROVIDER		0..1
		SUBJECT		0..1
		Uncategorised Medical History Item Instance Identifier		0..1
		RELATED INFORMATION		0..*
			Link Nature	1..1
			Link Role	0..1
			Target	1..1
		Detailed Clinical Model Identifier		1..1

6.6 Medical History Item Description

Identification

Label	Medical History Item Description
Metadata Type	Data Element
Identifier	DE-16628
OID	1.2.36.1.2001.1001.101.103.16628

Definition

Definition	A description of the problem, diagnosis or procedure as a medical history item.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	1) Hypercholesterolaemia 2) Left total knee replacement 3) RLL pneumonia

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	UNCATEGORISED MEDICAL HISTORY ITEM	1..1

6.7 Medical History Item TimeInterval

Identification

Label	Medical History Item TimeInterval
Metadata Type	Data Element
Identifier	DE-16629
OID	1.2.36.1.2001.1001.101.103.16629

Definition

Definition	The date range during which the problem or diagnosis applied or the procedure occurred.
Definition Source	NEHTA
Synonymous Names	
Data Type	TimeInterval

Usage

Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for TimeInterval.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	UNCATEGORISED MEDICAL HISTORY ITEM	0..1

6.8 Medical History Item Comment

Identification

Label	Medical History Item Comment
Metadata Type	Data Element
Identifier	DE-16630
OID	1.2.36.1.2001.1001.101.103.16630

Definition

Definition	Additional narrative about the problem, diagnosis or procedure.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	UNCATEGORISED MEDICAL HISTORY ITEM	0..1

6.9 INFORMATION PROVIDER

Identification

Label	INFORMATION PROVIDER
Metadata Type	Data Group
Identifier	DG-10296
OID	1.2.36.1.2001.1001.101.102.10296

Definition

Definition	The party who was the source of the information.
Definition Source	NEHTA
Synonymous Names	
Scope	Generally only used when the recorder needs to make it explicit. Otherwise, the author of the enclosing Structured Document is assumed.
Scope Source	NEHTA
Notes	This does not have to be a person and, in particular, does not have to be a healthcare provider. Types of sources include: • the subject of care; • a subject of care agent, e.g. parent, guardian; • the clinician; and • a device or software.

Usage

Conditions of Use	This **SHALL NOT** be used unless the provider of the information is not the *Composer/Author* of the enclosing Structured Document. 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 B, *Specification Guide for Use*. • Participation Type **SHALL** have an implementation-specific value equivalent to “Information Provider”. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a PERSON or as a DEVICE.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	UNCATEGORISED MEDICAL HISTORY ITEM	0..1

6.10 SUBJECT

Identification

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

Definition

Definition	The individual about whom the medical history information is being recorded.
Definition Source	NEHTA
Synonymous Names	
Scope	Generally only used when the recorder needs to make it explicit. Otherwise, the subject of the enclosing Structured Document is assumed.
Scope Source	NEHTA

Usage

Conditions of Use	This **SHALL NOT** be used unless the subject of the information is not the *Subject of Care* of the enclosing Structured Document. 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 B, *Specification Guide for Use*. • Participation Type **SHALL** have an implementation-specific value equivalent to “Subject”. • 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)
	UNCATEGORISED MEDICAL HISTORY ITEM	0..1

6.11 Uncategorised Medical History Item Instance Identifier

Identification

Label	Uncategorised Medical History Item Instance Identifier
Metadata Type	Data Element
Identifier	DE-16479
OID	1.2.36.1.2001.1001.101.103.16479

Definition

Definition	A globally unique identifier for each instance of an Uncategorised Medical History Item evaluation.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	UNCATEGORISED MEDICAL HISTORY ITEM	0..1

6.12 RELATED INFORMATION

Identification

Label	RELATED INFORMATION
Metadata Type	Data Group
Identifier	DG-16692
OID	1.2.36.1.2001.1001.101.102.16692

Definition

Definition	Information held elsewhere that is relevant to this instance of Uncategorised Medical History Item.
Definition Source	NEHTA
Synonymous Names	
Notes	Items of related information include, but are not limited to, documents, parts of documents, images and web pages. “Elsewhere” includes elsewhere in the same document. 1:1 and 1:N relationships between instances of DCMs can be expressed by using one, or more than one, respectively, links. Chains of links can be used to see problem threads or other logical groupings of items. Links are only to be used between instances of DCMs or documents, i.e. between objects representing complete domain concepts. This is because relationships between sub-elements of whole concepts are not necessarily meaningful and may be confusing. When the item of related information is a complete document (including images) or a web page (or part thereof) an appropriate specialisation of the *Related Information* `data group` should be used. The document or other data component instance containing the *Related Information* `data group` is called the *source*. The related information is called the *target*.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	UNCATEGORISED MEDICAL HISTORY ITEM	0..*

Children

Data Type	Name	Occurrences
	Link Nature	1..1

Data Type	Name	Occurrences
	Link Role	0..1
	Target	1..1

6.13 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 that together communicate the semantics of the relationship between the source and target DCMs or document. 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

Examples	1) is related to 2) is confirmed by or authorised by 3) is related to the same problem or health issue

Relationships

Parents

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

6.14 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 or DCM and document], 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 of the 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

6.15 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 DCMs. This attribute provides for a specific description of the actual role played by the target in relation to the source. This attribute may be populated from any suitable terminology, and therefore might support human readership better than interoperable automated processing.
Data Type	CodeableText
Value Domain	Link Role Values

Usage

Examples	1) unspecified link 2) suggests 3) endorses 4) evidence for 5) outcome 6) is documented by 7) excerpts

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	RELATED INFORMATION	0..1

6.16 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 subcategory of a corresponding term in *Link Nature Values*, where that correspondence is indicated by the first letter after the code string “LINK-”. For example 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

6.17 Target

Identification

Label	Target
Metadata Type	Data Element
Identifier	DE-16700
OID	1.2.36.1.2001.1001.101.103.16700

Definition

Definition	The “linked to” or identified information.
Definition Source	NEHTA
Synonymous Names	
Data Type	Link UniqueIdentifier

Usage

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

Relationships

Parents

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

6.18 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	A globally unique identifier for this Detailed Clinical Model.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Conditions of Use	The value of this item **SHALL** be either the default value or a semantically equivalent value from an appropriate code system.
Conditions of Use Source	NEHTA
Examples	Please see Appendix B, *Specification Guide for Use* for examples and usage information for UniqueIdentifier.
Default Value	1.2.36.1.2001.1001.101.102.16627

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	UNCATEGORISED MEDICAL HISTORY ITEM	1..1

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Appendix A. Known Issues

This appendix lists known issues with this specification at the time of publishing. NEHTA is working on solutions to these issues, and we encourage comments to further assist with the development of these solutions.

Reference	Description
Links to external resources	If a link (usually in references section) spans several lines, certain combinations of PDF reader and web browser have problems opening it.
Continuous Improvement	In the Detailed Clinical Models (DCM) defined in this document only those data components that are currently used in NEHTA Structure Content Specifications (SCS) have been reviewed and revised for this publication. A more extensive review will be undertaken in the future.
Data Hierarchy	Only the parts of these DCMs required for current Structured Content Specifications have been mapped to HL7 CDA. Mapping the remaining parts to CDA may reveal inconsistencies in the data hierarchies, requiring normative change.
UML Class Diagrams	The representation of data component names and labels with stereotypes and names is not good UML practice. It will be changed when a diagramming tool that supports an appropriate representation is adopted by NEHTA.
Severity	The data element is a candidate for terminology. In the future its data type is to be changed to *Codeable Text*.
Link to Supporting Clinical Evidence	It has been suggested that cardinality should be 0..*, not 0..1. It is currently under review.
Global Statement Values Data Element	The list of permissible values is a sample set to initiate discussion and collaboration to develop the correct set of values.
Exclusion Statement	The Exclusion Statement DCMs are the subject of ongoing development and review and may well change in the future.
Undefined Value Domains	The following data elements lack a defined value domain: *Numerical Identifier*, *Anatomical Plane*, *Identified Landmark*, *Anatomical Location Aspect*, *Item Relationship Type*, *No Previous History of*, and *No Evidence of*. NEHTA is in the process of developing national code sets for these items. In the meantime, you are free to use your own code set(s), providing any code set used **SHALL** be registered, i.e. registered through the HL7 code set registration procedure with an appropriate object identifier (OID), and **SHALL** be publicly available. Note that when national standard code set(s) do become available, they **SHALL** be used and the non-standard code sets **SHALL** be deprecated.
Undefined Data Structures	The following data components lack a defined data structure: *Diagnostic Criteria*, *Clinical Stage/Grade*, *Status* and *Procedure Detail*. A free text data element is currently used as an interim solution.

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Appendix B. Specification Guide for Use

B.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 the compliance, conformance, and declaration process. 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 describes a template of a Structured Document. It 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.

B.2 The Structured Content Specification Metamodel

The NEHTA metamodel for sructured content specifications (see Figure 1) is used to specify the overall structure of a structured content specification. The structure is a tree, so every item in the tree, other than the root node, has a parent node. For an SCS, the root node is a Structured Document. For a DCM, the root node is a Data Group.

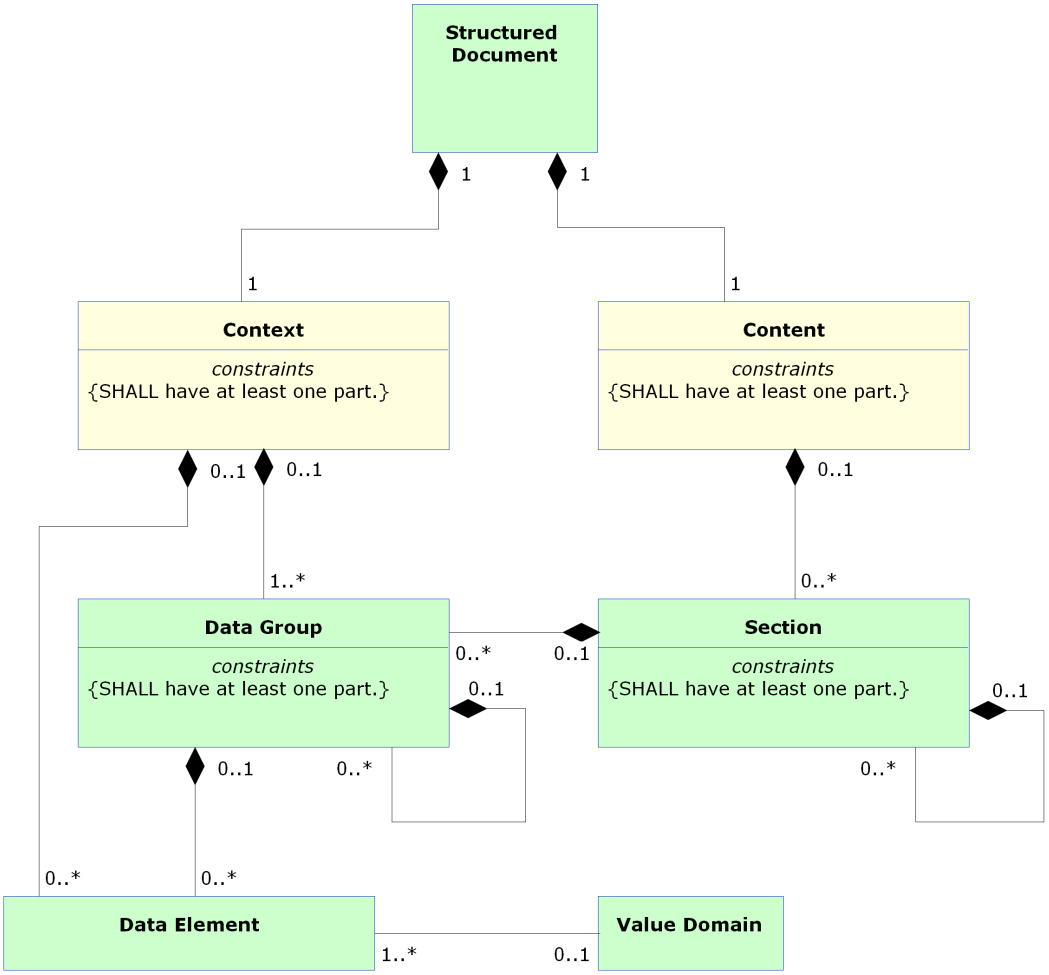

Figure 1: SCS Metamodel

There are two main items 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 in Figure 1, and consists of the following data components:

- Section
- Data Group
- Data Element
- Value Domain

These data components are described in more detail below.

Structured Document

A structured document is a collection of health information about a subject of care that is relevant to the ongoing care of that person. They are composed of one or more data groups and data elements that are organised into

sections. Examples of structured documents are *Discharge Summary*, *Shared Health Summary*, and *Advance Care Directive Custodian Record*.

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. A section organises information in a manner suitable for the primary purpose for which it is collected and provides 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, 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 NEHTA's *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.

NEHTA's *Participation Data Specification [NEHT2011v]* defines the full Participation specification.

Choice

Choice represents a selection, to be made at run-time, of a single member from a set of data groups, where the set is 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 items, therefore the same value domain can be referred to by different data elements in different contexts. Value domains are often specified with reference to a *reference set*. A reference set is a constrained list of SNOMED CT-AU concepts that are appropriate to a particular context or use. Since 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 either by specifying a lower or upper bound (or both) on the range of permissible values or 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 or 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>Standards Australia AS 4846 (2006) – Health Care Provider Identification [SA2006a] and Standards Australia AS 5017 (2006) – Health Care Client Identification [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>

B.3 Icon Legend

These legends describe all icons that are used in NEHTA's DCMs and SCSs.

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 *Data Types in NEHTA Specifications: A Profile of the ISO 21090 Specification [NEHT2010c]*.

Table 3: Data Types Legend

Icon	Data type	Explanation
	Any (ISO 21090: ANY)	Use of this icon indicates that 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. This is an abstract data type that is the basis for all data types and **SHOULD NOT** be used in an actual implementation.
	Boolean (ISO 21090: BL)	A data type, sometimes called the logical data type, having one of the 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; supports various ways of holding text, both free text and coded text.

Often 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 useful when it is not possible to define an entire value domain for a complex concept (e.g. *Diagnosis*) and when there are 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

- The Australian Institute of Health and Welfare (AIHW) defines a data element concept *Episode of admitted patient care-separation mode* (the status at separation of a subject of care and the place to which they are released). An early adopter could 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 data elements 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

Standards Australia AS 5017 (2006) – Health Care Client Identification [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)

A single date, optionally with a time of day.

Has the ability to indicate a level of precision, but not whether the date or time is estimated. Cannot represent a time alone.

String representations of known dates **SHALL** conform to the format within the **ISO 21090-2011** standard without the use of extensions, 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 10 hours ahead of Coordinated Universal Time (UTC): 19990531132000+1000.

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
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. **Usage/Examples** • 1 • -50 • 125
Link (ISO 21090: TEL)	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)	A magnitude value with a unit of measurement. This is used for recording many real world measurements and observations. As the default unit of measure is 1, even counts of items can be recorded with *Quantity*. **Usage/Examples** • 100 centimetres • 25.5 grams

 QuantityRange (ISO 21090: IVL)	A range of *Quantity* values. It may be identified using a combination of an optional minimum *Quantity* and an optional maximum *Quantity* (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 identified by not including a minimum or a maximum *Quantity* value. **Usage/Examples** • -20 to 100 Celsius • 30-50 mg • >10 kg
 QuantityRatio (ISO 21090: RTO)	A relative magnitude of two *Quantity* values. Usually recorded as numerator and denominator. **Usage/Examples** • 25 mg / 500 ml • 200 mmol per litre
 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)	A character string (with optional language) containing any combination of alpha, numeric, or symbols from the Unicode character set. Also 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:IVL)	An interval in time. It is identified using a combination of an optional start *DateTime*, an optional end *DateTime*, and an optional *Duration*. **Usage/Examples** • 20080101+1000 - 20081231+1000 • 200801010130+1000 - 200801011800+1000 • 200801010130+1000, duration=16.5 hours

	UniqueIdentifier (ISO 21090: II)	A unique value used 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) – Health Care Provider Identification [SA2006a]* and *AS 5017 (2006) – Health Care Client Identification [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** Australian health identifiers (e.g. IHI, HPI-I and HPI-O) and patient hospital medical record numbers are examples of identifiers that may be carried by data elements of 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 *Key words for use in RFCs to Indicate Requirement Levels [RFC2119]*. NEHTA specifications use the terms **SHALL** in place of “MUST” and **SHALL NOT** in place of “MUST NOT”. The key word definitions in RFC 2119, adjusted to remove the key words not used in NEHTA specifications, are presented in the following table.

Table 4: Keywords Legend

Keyword	Definition
SHALL	This word means that the statement is an absolute requirement of the specification.
SHOULD	This word means that there may exist valid reasons in particular circumstances to ignore a particular data component, but the full implications must be understood and carefully weighed before choosing a different course.

MAY	This word means that a data component is truly optional. One implementer may choose to include the data component because a particular implementation requires it, or because the implementer determines that it enhances the implementation, while another implementer may omit the same data 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 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

In DCMs and SCSs obligations on a data component specify whether or not it **SHALL** be populated in the logical record architecture of a message. NEHTA intends that all data components that are not **PROHIBITED** will be implemented.

Obligations in statements about values specify whether or not certain values are permitted.

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 item of information and **SHALL** be populated. **Usage/Examples:** The Participant data 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 item of information and **MAY** be populated. **Usage/Examples:** Such data components will be implemented, only inclusion and population are optional. 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	On a data component this indicates that the data component is considered a forbidden item of information and **SHALL NOT** be included. In a statement about values this indicates that the use of the specified values is considered forbidden and they **SHALL NOT** be used. **Usage/Examples:** Within a Participation data group depicting a Subject of Care, the Participation Healthcare Role **SHALL NOT** be populated.

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 included.

Obligations follow the usual scope rules: where **ESSENTIAL** child data components are contained within **OPTIONAL** parent data components, the child data components **SHALL NOT** be included when the parent is not included.

B.4 Abnormal and Absent Values

Occasionally a data element will have an abnormal value (i.e. the value cannot be described using the expected set of values) or an absent value (i.e. no value is provided).

The commonly used implementation specifications ISO 21090 and HL7 CDA R2 use *nullFlavor* to manage absent and abnormal values.

The following table provides a classification of nullFlavor values as absent or abnormal.

Table 6: Classification of ISO 21090 nullFlavor values as Absent or Abnormal

Level	Code	Term	Absent	Abnormal
1	NI	No information	Absent	
2	INV	Invalid		Abnormal
3	OTH	Other		Abnormal
4	PINF	Positive infinity		Abnormal
4	NINF	Negative infinity		Abnormal
3	UNC	Unencoded		Abnormal
3	DER	Derived		Abnormal
2	UNK	Unknown	Absent	
3	ASKU	Asked but unknown	Absent	
4	NAV	Temporarily unavailable	Absent	
3	NASK	Not asked	Absent	
3	QS	Sufficient quantity		Abnormal
3	TRC	Trace		Abnormal
2	MSK	Masked	Absent	
2	NA	Not applicable	Absent	

B.5 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 DCMs and SCSs, and identifies when each part is applicable.

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 7: Identification Section Legend

Label	A suggested display name for the data component.
Metadata Type	The type of the data component, e.g. section, data group or data element.
Identifier	A NEHTA-assigned internal identifier of the data component. Note that if one data component is used twice (e.g. *Therapeutic Good Identification* is used in both *Medication Instruction* and *Medication Action*), both uses of the data component will have the same identifier. A data component identifier identifies a data component, not a **use** of a data component.
OID	An object identifier equivalent to the data component identifier.
External Identifier	An identifier of the concept represented by the data component that is assigned by an organisation other than NEHTA.

Definition Section Legend

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

Table 8: Definition Section Legend

Definition	The meaning, description or explanation of the data component. 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. Implementers may prefer to use synonymous names to refer to the data component in specific contexts.
Scope	Situations in which the data component may be used, including the Scope circumstances where specified data are required or recommended. For example, Medication Instruction (data group) has a scope that includes all prescribable therapeutic goods, both medicines and non-medicines.

	This item is not relevant to data elements or value domains.
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. This item is applicable only to data elements.
Assumptions	Suppositions and notions used in defining the data component.
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.
Notes Source	The authoritative source for the Notes statement.
Data Type	The data type (or data types) of the data element, e.g. DateTime or Text. The valid data types are specified in the Data Types Legend. This item is applicable only to data elements.
Value Domain	The name of the Value Domain used to define the range of values of the data element, or a statement describing what values to use in the absence of a defined value domain for the related data element. The statement is: 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. This item is applicable only to data elements with data type CodedText or CodeableText.

Data Hierarchy

The top-level data components (a Structured Document in an SCS or Data Groups in a DCM) contain a data hierarchy. Each row contains information about a single data component. The entries are nested to represent inclusion of one data 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 of the data 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.

If a row is shaded grey, this indicates that the data component **SHOULD NOT** be used. This will be because analysis of requirements either did not find reasons to use it or found reasons to not use it.

If the text in a row is in a ~~strike through~~ font and the multiplicity is 0..0, this indicates that the data component **SHALL NOT** be used. This will be because analysis of requirements found reasons to prohibit the use of it.

In some documents the right-hand side of the data hierarchy contains 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 data components **SHALL** be implemented.

Sample SCS 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. Typically, such identifiers will be generated internally by systems and not displayed to users since they rarely have clinical significance.

Items below with a grey background are data components that are included in the relevant detailed clinical model specification, but whose use is discouraged in this particular scenario.

	SPECIALIST LETTER			
CONTEXT				
		SUBJECT OF CARE		1..1
		DOCUMENT AUTHOR		1..1
		ENCOUNTER		1..1
			DateTime Subject of Care Seen (DateTime Health Event Started)	1..1
			DateTime Health Event Ended	0..0
			HEALTHCARE FACILITY	0..0
		Document Instance Identifier		0..1
		RELATED INFORMATION		0..0
		Document Type		1..1
CONTENT				
		RESPONSE DETAILS		1..1
			Diagnosis (PROBLEM/DIAGNOSIS)	0..*
			Diagnosis Name (Problem/Diagnosis Identification)	1..1
			Clinical Description	0..0
	and more			

Value Domain Section Legend

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

Table 9: 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	A specification of the permissible values in the value domain. This may be a list of codes. (Each code is typically presented as a triple with code values, text equivalent, and description; e.g. 1, Registered, No result yet available.) This may be a conformance statement (e.g. "The permissible values are the members of the following seven AMT reference sets: ...").

Usage Section Legend

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

Table 10: Usage Section Legend

Examples	Sample values for the data element, with or without notes about sample values. 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, indicative examples are provided. Implementation guides may contain specific examples of how data elements may be populated and how they relate to each other. This item is applicable only to data elements.
Conditions of Use	Prerequisites, provisos or restrictions for use of the data component.
Conditions of Use Source	The authoritative source for the Conditions of Use statement.
Misuse	Incorrect, inappropriate or wrong uses of the data component.
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 data component.
Absent and Abnormal Values	A statement of limitations on the use of abnormal values and absent values. Unless otherwise specified, all data elements are permitted to have abnormal or absent values. Some abnormal values are only relevant to data elements of certain data types (e.g. positive infinity is relevant to numbers but not Booleans). Representative examples of conditions of use statements involving value annotations: • Absent values are **PROHIBITED**. • Abnormal values are **PROHIBITED**. • Abnormal and absent values are **PROHIBITED**. This item is applicable only to data elements.

Relationships Section Legend

The Relationships section specifies the cardinality between parent and child data components.

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

Table 11: Parent Legend

Data Type	Name	Occurrences (child within parent)
The icon illustrating the metadata type or data type.	Parent Data Component Name	The minimum and maximum number of instances of the data component described on this page that **SHALL** occur.

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

Table 12: Children Legend

Data Type	Name	Occurrences
The icon illustrating the metadata type or data type.	Child Data Component Name	The minimum and maximum number of instances of the data component described on this page that **SHALL** occur.

Appendix C. Change History

A summary of changes from one DCM version to the next.

C.1 Changes to Problem/Diagnosis Detailed Clinical Model

The last version of this DCM was v5.1. It was published in *Problem/Diagnosis Detailed Clinical Model Specification [NEHT2011az]*.

2.2 Use has been updated through editorial review.

2.4 UML Class Diagram, the diagram has been updated and the explanatory text reworded and moved above the diagram.

2.5 PROBLEM/DIAGNOSIS, definition has been reworded.

In 2.5 Data Hierarchy, the following data elements have had their labels changed to match their names:

- *PROBLEM/DIAGNOSIS > Problem/Diagnosis Identification*;
- *PROBLEM/DIAGNOSIS > ANATOMICAL LOCATION > SPECIFIC LOCATION > Anatomical Location Name*;
- *PROBLEM/DIAGNOSIS > ANATOMICAL LOCATION > RELATIVE LOCATION > Anatomical Location Aspect*;
- *PROBLEM/DIAGNOSIS > ANATOMICAL LOCATION > Anatomical Location Description*;
- *PROBLEM/DIAGNOSIS > ANATOMICAL LOCATION > Anatomical Location Image*;
- *PROBLEM/DIAGNOSIS > Occurrence Summary > Problem/Diagnosis Occurrence Count*;
- *PROBLEM/DIAGNOSIS > Occurrence Summary > Problem/Diagnosis Occurrence Frequency*;
- *PROBLEM/DIAGNOSIS > Occurrence Summary > Problem/Diagnosis Latest Occurrence*;
- *PROBLEM/DIAGNOSIS > Occurrence Summary > Problem/Diagnosis Occurrence Description*;
- *PROBLEM/DIAGNOSIS > Occurrence Summary > Link to Occurrence Details*;
- *PROBLEM/DIAGNOSIS > RELATED ITEMS > Item Relationship Type*; and
- *PROBLEM/DIAGNOSIS > Problem/Diagnosis Comment*.

In 2.5 Data Hierarchy, *LINK* data component has been replaced with *RELATED INFORMATION*.

In 2.6 Problem/Diagnosis Identification, the label has changed to match the name.

In 2.7 Problem/Diagnosis Reference Set, External Identifier has been updated to add the reference set name.

In 2.10 Date of Onset, definition has been reworded.

In 2.14 Anatomical Location Name, the label has changed to match the name.

In 2.22 Anatomical Location Aspect, the label has changed to match the name.

In 2.24 Anatomical Location Description, the label has changed to match the name.

In 2.26 Anatomical Location Image, the label has changed to match the name.

In 2.14 Problem/Diagnosis Occurrence Count, the label has changed to match the name.

In 2.14 Problem/Diagnosis Occurrence Frequency, the label has changed to match the name.

In 2.30 Problem/Diagnosis Latest Occurrence, the label has changed to match the name.

In 2.14 Problem/Diagnosis Occurrence Description, the label has changed to match the name.

In 2.35 Related Item Values, Notes has been updated to update the reference to Australian Medicines Terminology Editorial Rules v3 model.

In 2.36 Relationship Item Type, the label has changed to match the name.

In 2.37 Date of Resolution/Remission:

- definition has been reworded;
- Conditions of Use has been removed; and
- Conditions of Use Source has been removed.

In 2.41 Problem/Diagnosis Comment, the label has changed to match the name.

In 2.46 Problem/Diagnosis Instance Identifier, Notes has been added.

2.47 RELATED INFORMATION has a new Name, Label, Definition and Notes. The Identifier is the same as the meaning has not changed.

In 2.48 Link Nature, Definition has been reworded.

In 2.49 Link Nature Values:

- External Identifier has been added; and
- Definition has been reworded.

In 2.50 Link Role, Notes has been reworded.

In 2.51 Link Role Values:

- External Identifier has been added;
- Definition has been reworded; and
- Context has been reworded.

In 2.52 Target:

- label has changed to match the name; and
- Definition has been reworded.

In 2.53 Detailed Clinical Model Identifier:

- Definition has been reworded;
- Conditions of Use has been added;
- Conditions of Use Source has been added; and
- Default Value Conditions of Use has been deleted.

C.2 Chapter 3 Exclusion Statement - Problems and Diagnoses Detailed Clinical Model

The last version of this DCM was v1.2. It was published in *Problem/Diagnosis Detailed Clinical Model Specification [NEHT2011az]*.

3.2 Use has been updated through editorial review.

3.3 UML Class Diagram, the diagram has been updated and the explanatory text reworded and moved above the diagram.

3.4 EXCLUSION STATEMENT - PROBLEMS AND DIAGNOSES, Conditions of Use has been reworded.

In 3.4 Data Hierarchy, *LINK* data component has been replaced with *RELATED INFORMATION*.

In 3.5 Global Statement:

- Context has been reworded;
- Conditions of Use has been added; and
- Conditions of Use Source has been added.

In 3.6 Global Statement Values, the Permissible Values have been changed.

In 3.9 INFORMATION PROVIDER:

- Definition has been reworded; and
- Scope and Scope Source have been added.

3.12 RELATED INFORMATION has a new Name, Label, Definition and Notes. The Identifier is the same as the meaning has not changed.

In 3.13 Link Nature, Definition has been reworded.

In 3.14 Link Nature Values:

- External Identifier has been added; and
- Definition has been reworded.

In 3.15 Link Role, Notes has been reworded.

In 3.16 Link Role Values:

- External Identifier has been added;
- Definition has been reworded; and
- Context has been reworded.

In 3.17 Target:

- label has changed to match the name; and
- Definition has been reworded.

In 3.18 Detailed Clinical Model Identifier:

- Definition has been reworded;

- Conditions of Use has been added;
- Conditions of Use Source has been added; and
- Default Value Conditions of Use has been deleted.

C.3 Chapter 4 Procedure Detailed Clinical Model

The last version of this DCM was v4.1. It was published in *Procedure Detailed Clinical Model Specification [NEHT2011ba]*.

4.2 Use has been updated through editorial review.

2.4 UML Class Diagram, the diagram has been updated and the explanatory text reworded and moved above the diagram.

In 4.5 Data Hierarchy, the following data components were added, deleted or substituted:

- *PROCEDURE* > *Procedure Duration* has been deleted;
- *PROCEDURE* > *Start Date/Time (DateTime Started)* has been deleted; and
- *PROCEDURE* > *LINK* data component has been replaced with *RELATED INFORMATION*.

In 4.5 Data Hierarchy, *PROCEDURE* > *Procedure DateTime* data component, the data type has been changed.

In 4.5 Data Hierarchy, the following data elements have had their labels changed to match their names:

- *PROCEDURE* > *Procedure Description*;
- *PROCEDURE* > *Procedure Reason*;
- *PROCEDURE* > *ANATOMICAL LOCATION* > *SPECIFIC LOCATION* > *Anatomical Location Name*;
- *PROCEDURE* > *ANATOMICAL LOCATION* > *RELATIVE LOCATION* > *Anatomical Location Aspect*;
- *PROCEDURE* > *ANATOMICAL LOCATION* > *Anatomical Location Description*;
- *PROCEDURE* > *ANATOMICAL LOCATION* > *Anatomical Location Image*; and
- *PROCEDURE* > *Procedure Comment*.

In 4.7 Procedure Foundation Reference Set, External Identifier has been updated to add the reference set name.

In 4.8 Procedure Description, the label has changed to match the name.

In 4.9 Procedure Reason, the label has changed to match the name.

In 4.12 Anatomical Location Name, the label has changed to match the name.

In 4.20 Anatomical Location Aspect, the label has changed to match the name.

In 4.22 Anatomical Location Description, the label has changed to match the name.

2.26 Procedure Duration has been deleted.

In 4.27 Procedure Comment, the label has changed to match the name.

2.29 DateTime Started has been deleted.

In 4.31 Procedure DateTime:

- Definition has been reworded;
- Notes has been added;
- Data type has been changed.

4.33 RELATED INFORMATION has a new Name, Label, Definition and Notes. The Identifier is the same as the meaning has not changed.

In 4.34 Link Nature, Definition has been reworded.

In 4.35 Link Nature Values:

- External Identifier has been added; and
- Definition has been reworded.

In 4.36 Link Role, Notes has been reworded.

In 4.37 Link Role Values:

- External Identifier has been added;
- Definition has been reworded; and
- Context has been reworded.

In 4.38 Target:

- label has changed to match the name; and
- Definition has been reworded.

In 4.39 Detailed Clinical Model Identifier:

- Definition has been reworded;
- Conditions of Use has been added;
- Conditions of Use Source has been added; and
- Default Value Conditions of Use has been deleted.

C.4 Chapter 5 Exclusion Statement - Procedures Detailed Clinical Model

The last version of this DCM was v1.1. It was published in It was published in *Procedure Detailed Clinical Model Specification [NEHT2011ba]*.

5.2 Use has been updated through editorial review.

5.3 UML Class Diagram, the diagram has been updated and the explanatory text reworded and moved above the diagram.

In 5.4 Data Hierarchy, *LINK* data component has been replaced with *RELATED INFORMATION*.

In 5.5 Global Statement:

- Context has been reworded;

- Conditions of Use has been added; and
- Conditions of Use Source has been added.

In 5.6 Global Statement Values, the Permissible Values have been changed.

In 5.8 INFORMATION PROVIDER:

- Definition has been reworded; and
- Scope and Scope Source have been added.

5.11 RELATED INFORMATION has a new Name, Label, Definition and Notes. The Identifier is the same as the meaning has not changed.

In 5.12 Link Nature, Definition has been reworded.

In 5.13 Link Nature Values:

- External Identifier has been added; and
- Definition has been reworded.

In 5.14 Link Role, Notes has been reworded.

In 5.15 Link Role Values:

- External Identifier has been added;
- Definition has been reworded; and
- Context has been reworded.

In 5.16 Target:

- label has changed to match the name; and
- Definition has been reworded.

In 5.17 Detailed Clinical Model Identifier:

- Definition has been reworded;
- Conditions of Use has been added;
- Conditions of Use Source has been added; and
- Default Value Conditions of Use has been deleted.

C.5 Chapter 6 Uncategorised Medical History Item Detailed Clinical Model

The last version of this DCM was v1.1. It was published in *Miscellaneous Detailed Clinical Model Specification [NEHT2012d]* as Medical History Item Detailed Clinical Model.

6.1 Purpose and 6.3 Misuse have been updated through editorial review.

6.2 Use has been added.

6.4 UML Class Diagram, the diagram has been updated and the explanatory text reworded and moved above the diagram.

6.5 UNCATEGORISED MEDICAL HISTORY ITEM has a new Name, Label, Definition and Usage. The Identifier is the same as the meaning has not changed.

UNCATEGORISED MEDICAL HISTORY ITEM > LINK data component has been replaced with *RELATED INFORMATION*.

In 6.5 Data Hierarchy, the following data elements have been renamed:

- *UNCATEGORISED MEDICAL HISTORY ITEM > Medical History Item Timeinterval*; and
- *UNCATEGORISED MEDICAL HISTORY ITEM > Uncategorised Medical History Item Instance Identifier*.

In 6.6 Medical History Item Description, definition has been reworded.

In 6.7 Medical History TimeInterval:

- Name has been updated; and
- Definition has been reworded.

In 6.8 Medical History Item Comment, definition has been reworded.

6.9 INFORMATION PROVIDER

- Definition has been reworded; and
- Scope and Scope Source have been added.

In 6.10 SUBJECT, Conditions of Use have been updated to display in a different order.

In 6.11 Uncategorised Medical History Item Instance Identifier:

- Name has been updated; and
- Definition has been reworded.

6.12 RELATED INFORMATION has a new Name, Label, Definition and Notes. The Identifier is the same as the meaning has not changed.

In 6.13 Link Nature, Definition has been reworded.

In 6.14 Link Nature Values:

- External Identifier has been added; and
- Definition has been reworded.

In 6.15 Link Role, Notes has been reworded.

In 6.16 Link Role Values:

- External Identifier has been added;
- Definition has been reworded; and
- Context has been reworded.

In 6.17 Target:

- label has changed to match the name; and
- Definition has been reworded.

In 6.18 Detailed Clinical Model Identifier:

- Definition has been reworded;
- Conditions of Use has been added;
- Conditions of Use Source has been added; and
- Default Value Conditions of Use has been deleted.

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