nehta

Detailed Clinical Model Specification

Body Measurement
Version 1.0

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Approved for External Use

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Document Information

Document owner

Document Owner
The National Clinical Terminology and Information Service

Change history

Version	Date	Comments
1.0	4 Sep 2013	Initial public release.

Related documents

Name	Version/Release Date
NEHTA Acronyms, Abbreviations & Glossary of Terms	Version 1.2, Issued 25 May 2005
Participation Data Specification	Version 3.2, Issued 20 July 2011

Included Detailed Clinical Models

This specification contains the following Detailed Clinical Models:

1. Body Height/Length, version 3.0
2. Body Mass Index, version 1.0
3. Body Part Circumference, version 1.0
4. Body Weight, version 3.0

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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 *clinicalinformation@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.

Whilst 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 [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® [2]) 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 *terminologies@nehta.gov.au*.

[2] SNOMED CT® is a registered trademark of the International Health Terminology Standards Development Organisation.

2 Body Height/Length Detailed Clinical Model

This chapter describes version 3.0 of the Body Height/Length Detailed Clinical Model.

2.1 Purpose

To record the body height or length of a person, from crown of head to sole of foot, in a standing or recumbent position. Body height or length can be measured as actual or approximate.

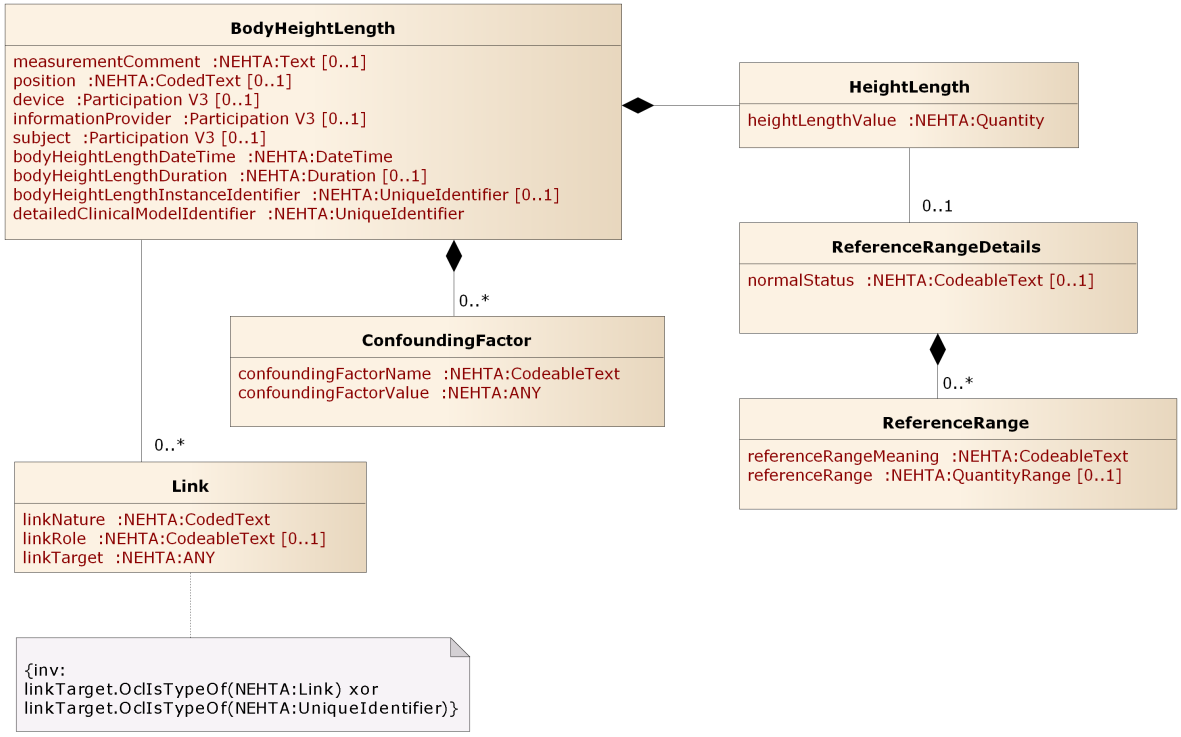
2.2 Use

To be used for recording the body height or length of a person.

2.3 Misuse

Not to be used to record the length of an object or specific body part.

2.4 UML Class Diagram



The figure represents the data hierarchy of the Detailed Clinical Model as 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 names are represented as association role names. Association role names are only displayed if they differ from the associated class name. The diagram shows the data hierarchy excluding the details of participation. The default multiplicity is 1..1.

2.5 BODY HEIGHT/LENGTH

Identification

Label	BODY HEIGHT/LENGTH
Metadata Type	Data Group
Identifier	DG-16123
OID	1.2.36.1.2001.1001.101.102.16123

Definition

Definition	Details pertinent to the physical measurement of the height or length of a person.
Definition Source	NEHTA
Synonymous Names	Body Height Body Length Stature
Notes	Body height, or length, is measured from crown of head to sole of foot. Body height is measured with the person in a standing position and body length in a recumbent position. The height, together with the weight, of a subject of care enables derivation of body mass index (BMI) and body surface area (BSA) which are key observations.

Data Hierarchy

BODY HEIGHT/LENGTH						
	HEIGHT/LENGTH					1..1
		Height/Length Value				1..1
		Height/Length Reference Ranges (REFERENCE RANGE DETAILS)				0..1
			Normal Status			0..1
			REFERENCE RANGE			0..*
				Reference Range Meaning		1..1
				Reference Range		0..1
	Comment (Measurement Comment)					0..1
	Position					0..1

		CONFOUNDING FACTOR		0..*
			Confounding Factor Name	1..1
			Confounding Factor Value	1..1
		DEVICE		0..1
		INFORMATION PROVIDER		0..1
		SUBJECT		0..1
		Body Height/Length DateTime		1..1
		Body Height/Length Duration		0..1
		Body Height/Length Instance Identifier		0..1
		LINK		0..*
			Link Nature	1..1
			Link Role	0..1
			Link Target	1..1
		Detailed Clinical Model Identifier		1..1

2.6 HEIGHT/LENGTH

Identification

Label	HEIGHT/LENGTH
Metadata Type	Data Group
Identifier	DG-16120
OID	1.2.36.1.2001.1001.101.102.16120

Definition

Definition	The length of the body from crown of head to sole of foot, with reference range information.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY HEIGHT/LENGTH	1..1

Children

Data Type	Name	Occurrences
	Height/Length Value	1..1
	Height/Length Reference Ranges (REFERENCE RANGE DETAILS)	0..1

2.7 Height/Length Value

Identification

Label	Height/Length Value
Metadata Type	Data Element
Identifier	DE-16120
OID	1.2.36.1.2001.1001.101.103.16120

Definition

Definition	The length of the body from crown of head to sole of foot.
Definition Source	NEHTA
Synonymous Names	
Data Type	Quantity

Usage

Conditions of Use	The unit of measurement **SHALL** be centimetres.
Conditions of Use Source	NEHTA
Examples	1. 54.3 cm 2. 172 cm

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	HEIGHT/LENGTH	1..1

2.8 REFERENCE RANGE DETAILS

Identification

Label	Height/Length Reference Ranges
Metadata Type	Data Group
Identifier	DG-16325
OID	1.2.36.1.2001.1001.101.102.16325

Definition

Definition	One or more reference ranges applicable to *Height/Length Value*.
Definition Source	NEHTA
Synonymous Names	
Notes	A reference range is particular to the patient and context, e.g. sex, age, and any other factor that affects ranges. May be used to represent normal, therapeutic, dangerous, critical and other such clinical ranges.

Usage

Conditions of Use	At least one child of this data group **SHALL** be instantiated.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	HEIGHT/LENGTH	0..1

Children

Data Type	Name	Occurrences
	Normal Status	0..1
	REFERENCE RANGE	0..*

2.9 Normal Status

Identification

Label	Normal Status
Metadata Type	Data Element
Identifier	DE-11028
OID	1.2.36.1.2001.1001.101.103.11028

Definition

Definition	An indication of the degree of diagnostically significant abnormality of the value, based on available clinical information (including but not limited to the reference range).
Definition Source	NEHTA
Synonymous Names	
Notes	The term “normal” is **not** statistical normality, but rather what would normally be considered healthy for the individual concerned. As such, this data element represents the health risk for the individual, which is indicated by the observation or measurement and the nature and criticality of that health risk.
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	1. Below normal 2. Above normal 3. Critically low 4. Critically high

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Height/Length Reference Ranges (REFERENCE RANGE DETAILS)	0..1

2.10 REFERENCE RANGE

Identification

Label	REFERENCE RANGE
Metadata Type	Data Group
Identifier	DG-11024
OID	1.2.36.1.2001.1001.101.102.11024

Definition

Definition	A named range to be associated with any quantity datum.
Definition Source	NEHTA
Synonymous Names	
Notes	The obligations on this data group imply that if this data group occurs only once, the *Reference Range* `data element` is optional, otherwise it is essential.

Usage

Conditions of Use	If this data group occurs only once, its contents **SHALL** span the observed value. If this data group occurs more than once, its contents **SHOULD** include all of the ranges in a single set. If this data group occurs more than once, the *Reference Range* `data element` is **ESSENTIAL**. All reference ranges **SHALL** come from the one set of reference ranges.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Height/Length Reference Ranges (REFERENCE RANGE DETAILS)	0..*

Children

Data Type	Name	Occurrences
	Reference Range Meaning	1..1

Data Type	Name	Occurrences
	Reference Range	0..1

2.11 Reference Range Meaning

Identification

Label	Reference Range Meaning
Metadata Type	Data Element
Identifier	DE-16574
OID	1.2.36.1.2001.1001.101.103.16574

Definition

Definition	Term whose value indicates the meaning of this range.
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*[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. Normal 2. Critical 3. Therapeutic

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	REFERENCE RANGE	1..1

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

2.12 Reference Range

Identification

Label	Reference Range
Metadata Type	Data Element
Identifier	DE-11024
OID	1.2.36.1.2001.1001.101.103.11024

Definition

Definition	The data range for the associated *Reference Range Meaning* `data element`.
Definition Source	NEHTA
Synonymous Names	
Data Type	QuantityRange

Usage

Examples	1. 15 - 58 g/L 2. < 15 mmol/L 3. 2.5 - 3.5 kg 4. 23 - 45 cm

Relationships

Parents

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

2.13 Measurement Comment

Identification

Label	Comment
Metadata Type	Data Element
Identifier	DE-15600
OID	1.2.36.1.2001.1001.101.103.15600

Definition

Definition	Additional comments relevant to the observation.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY HEIGHT/LENGTH	0..1

2.14 Position

Identification

Label	Position
Metadata Type	Data Element
Identifier	DE-16051
OID	1.2.36.1.2001.1001.101.103.16051

Definition

Definition	Position of the person when measured.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodedText
Value Domain	Position Values

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY HEIGHT/LENGTH	0..1

2.15 Position Values

Identification

Label	Position Values
Metadata Type	Value Domain
Identifier	VD-16051
OID	1.2.36.1.2001.1001.101.104.16051

Definition

Definition	The set of values of *Position*.
Definition Source	NEHTA

Value Domain

Source	OpenEHR	
Permissible Values	1, Standing	Height is measured standing on both feet with weight distributed evenly, heels together and both buttocks and heels in contact with a vertical back board.
	2, Lying	Length is measured in a fully extended, recumbent position with the legs extended and feet flexed.

Relationships

Parents

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

2.16 CONFOUNDING FACTOR

Identification

Label	CONFOUNDING FACTOR
Metadata Type	Data Group
Identifier	DG-16051
OID	1.2.36.1.2001.1001.101.102.16051

Definition

Definition	An issue or factor of note that may have impacted on the measurement made during the examination.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY HEIGHT/LENGTH	0..*

Children

Data Type	Name	Occurrences
	Confounding Factor Name	1..1
	Confounding Factor Value	1..1

2.17 Confounding Factor Name

Identification

Label	Confounding Factor Name
Metadata Type	Data Element
Identifier	DE-16950
OID	1.2.36.1.2001.1001.101.103.16950

Definition

Definition	The name of a confounding factor of an observation.
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	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	CONFOUNDING FACTOR	1..1

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

2.18 Confounding Factor Value

Identification

Label	Confounding Factor Value
Metadata Type	Data Element
Identifier	DE-16955
OID	1.2.36.1.2001.1001.101.103.16955

Definition

Definition	The value of a confounding factor of an observation.
Definition Source	NEHTA
Synonymous Names	
Notes	Typically values will be codes, measurements or text. Other types of value are possible.
Data Type	

Usage

Examples	1. Subject of care agitated and restless

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	CONFOUNDING FACTOR	1..1

2.19 DEVICE

Identification

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

Definition

Definition	Description of the device used to measure body height or length.
Definition Source	NEHTA
Synonymous Names	
Notes	Typically this will be a machine used by the information provider.

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*. Additional obligation and occurrence constraints: • Participation Period is **PROHIBITED**. • LOCATION OF PARTICIPATION is **PROHIBITED**. • ADDRESS is **PROHIBITED**. • ELECTRONIC COMMUNICATION DETAIL is **PROHIBITED**. • ENTITLEMENT is **PROHIBITED**. • Qualifications is **PROHIBITED**. Other additional constraints: • Participation Type **SHALL** have an implementation-specific value equivalent to “Device”. • Role **SHALL** have an implementation-specific value equivalent to “Not Applicable”. • 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)
	BODY HEIGHT/LENGTH	0..1

2.20 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 body height/length information.
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. If a device makes the measurement and creates the observation record, the device is the information provider. If a person makes the measurement using a device and the person creates the observation record, the person is the information provider.

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*. **Constraints applicable when the information provider is a person NOT acting as a healthcare provider.** Additional obligation and occurrence constraints: • LOCATION OF PARTICIPATION is **PROHIBITED**. • EMPLOYMENT DETAIL is **PROHIBITED**.

- DEMOGRAPHIC DATA is **PROHIBITED**.
- ENTITLEMENT is **PROHIBITED**.
- Qualifications is **PROHIBITED**.

Other additional constraints:

- Participation Type **SHALL** have an implementation-specific value equivalent to “Information Provider”.
- Role **SHOULD** have an implementation-specific value equivalent to “Authorised Representative” or “Nominated Representative”. However, other similar values **MAY** be appropriate.
- PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as PERSON.

Constraints applicable when the information provider is a person acting as a healthcare provider.

Additional obligation and occurrence constraints:

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

Other additional constraints:

- Participation Type **SHALL** have an implementation-specific value equivalent to “Information Provider”.
- Role **SHOULD** have a value chosen from 1220.0 - ANZSCO - Australian and New Zealand Standard Classification of Occupations, First Edition, Revision 1 [ABS2009]. However, if a suitable value in this set cannot be found, then any code set that is both registered with HL7 and is publicly available **MAY** be used.
- PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as PERSON.

Constraints applicable when the information provider is a device.

Additional obligation and occurrence constraints:

- LOCATION OF PARTICIPATION is **PROHIBITED**.
- ADDRESS is **PROHIBITED**.
- ELECTRONIC COMMUNICATION DETAIL is **PROHIBITED**.
- ENTITLEMENT is **PROHIBITED**.
- Qualifications is **PROHIBITED**.

Other additional constraints:

- Participation Type **SHALL** have an implementation-specific value equivalent to “Information Provider”.

	• Role **SHALL** have an implementation-specific value equivalent to “Not Applicable”. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as DEVICE. • ENTITLEMENT is **PROHIBITED**. • Qualifications is **PROHIBITED**.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	BODY HEIGHT/LENGTH	0..1

2.21 SUBJECT

Identification

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

Definition

Definition	The person about whom the body height/length 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)
	BODY HEIGHT/LENGTH	0..1

2.22 Body Height/Length DateTime

Identification

Label	Body Height/Length DateTime
Metadata Type	Data Element
Identifier	DE-16730
OID	1.2.36.1.2001.1001.101.103.16730

Definition

Definition	The date and, optionally, time of the *Body Height/Length* observation.
Definition Source	NEHTA
Synonymous Names	
Data Type	DateTime

Usage

Conditions of Use	If the *Body Height/Length Duration* is non-zero, it **SHALL** be the time at which the *Body Height/Length* observation was completed, i.e. the date (and time) of the trailing edge of the *Body Height/Length Duration*.
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 or time (or both).

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY HEIGHT/LENGTH	1..1

2.23 Body Height/Length Duration

Identification

Label	Body Height/Length Duration
Metadata Type	Data Element
Identifier	DE-16731
OID	1.2.36.1.2001.1001.101.103.16731

Definition

Definition	The duration over which the *Body Height/Length* observation was taken.
Definition Source	NEHTA
Synonymous Names	
Data Type	Duration

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY HEIGHT/LENGTH	0..1

2.24 Body Height/Length Instance Identifier

Identification

Label	Body Height/Length Instance Identifier
Metadata Type	Data Element
Identifier	DE-16732
OID	1.2.36.1.2001.1001.101.103.16732

Definition

Definition	A globally unique identifier for each instance of a *Body Height/Length* observation.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY HEIGHT/LENGTH	0..1

2.25 LINK

Identification

Label	LINK
Metadata Type	Data Group
Identifier	DG-16692
OID	1.2.36.1.2001.1001.101.102.16692

Definition

Definition	A link to an instance of another Detailed Clinical Model (DCM) or a document containing an instance of another DCM.
Definition Source	NEHTA
Synonymous Names	
Notes	Links may be to structures inside the enclosing document or inside other documents.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY HEIGHT/LENGTH	0..*

Children

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

2.26 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 DCM, i.e. the source, and the target DCM instance or target document.
Definition Source	NEHTA
Synonymous Names	
Notes	This is one of two attributes which together communicate the semantics of the relationship between the source and target DCMs 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)
	LINK	1..1

2.27 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

Definition

Definition	The 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

2.28 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 which 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)
	LINK	0..1

2.29 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

Definition

Definition	The 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 values from *Link Role*. They provide greater specificity and may be selected more for human readership than for interoperable automated processing.
Context Source	NEHTA

Value Domain

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

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

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

Usage

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

Relationships

Parents

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

2.30 Link Target

Identification

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

Definition

Definition	The logical “to” object in the link relation, as per the linguistic sense of the *Link Nature* `data element` (and, if present, the *Link Role* `data element`).
Definition Source	NEHTA
Synonymous Names	
Data Type	Link UniqueIdentifier

Usage

Examples	

Relationships

Parents

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

2.31 Detailed Clinical Model Identifier

Identification

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

Definition

Definition	The NEHTA OID for the *Body Height/Length* concept represented by this DCM.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Examples	
Default Value	1.2.36.1.2001.1001.101.102.16123
Default Value Conditions of Use	The value of this item is fixed and **SHALL** be the default value.

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	BODY HEIGHT/LENGTH	1..1

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3 Body Weight Detailed Clinical Model

This chapter describes version 3.0 of the Body Weight Detailed Clinical Model.

3.1 Purpose

To record the body weight of a person. Body weight can be measured as actual or approximate.

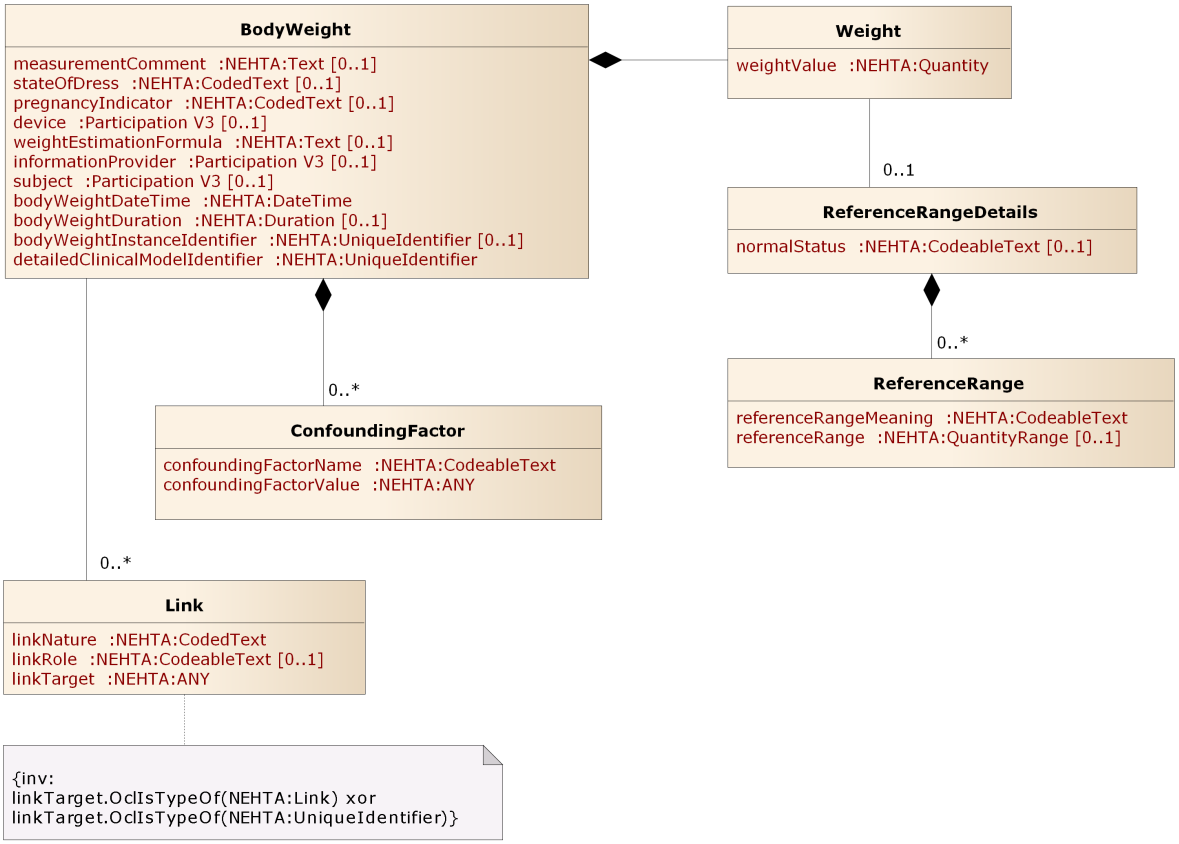
3.2 Use

To be used for recording the body weight of a person. This DCM is used to record the whole weight of the body regardless of the physical incompleteness of the body, for example when an individual is missing a body part.

3.3 Misuse

Not to be used to record the weight of an object or body part.

3.4 UML Class Diagram



The figure represents the data hierarchy of the Detailed Clinical Model as 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 names are represented as association role names. Association role names are only displayed if they differ from the associated class name. The diagram shows the data hierarchy excluding the details of participation. The default multiplicity is 1..1.

3.5 BODY WEIGHT

Identification

Label	BODY WEIGHT
Metadata Type	Data Group
Identifier	DG-16124
OID	1.2.36.1.2001.1001.101.102.16124

Definition

Definition	Details pertinent to the physical measurement of the weight (mass) of a person.
Definition Source	NEHTA
Synonymous Names	
Notes	The height, together with the weight, of a subject of care enables derivation of body mass index (BMI) and body surface area (BSA) which are key observations.

Usage

Conditions of Use	In prescriptions: For children 12 years old or younger, a body weight **SHALL** be recorded.
Conditions of Use Source	NEHTA

Data Hierarchy

BODY WEIGHT						
	WEIGHT					1..1
		Weight Value				1..1
		Weight Reference Ranges (REFERENCE RANGE DETAILS)				0..1
			Normal Status			0..1
			REFERENCE RANGE			0..*
				Reference Range Meaning		1..1
				Reference Range		0..1
	Comment (Measurement Comment)					0..1

		State of Dress		0..1
		Pregnancy Indicator		0..1
		CONFOUNDING FACTOR		0..*
			Confounding Factor Name	1..1
			Confounding Factor Value	1..1
		DEVICE		0..1
		Weight Estimation Formula		0..1
		INFORMATION PROVIDER		0..1
		SUBJECT		0..1
		Body Weight DateTime		1..1
		Body Weight Duration		0..1
		Body Weight Instance Identifier		0..1
		LINK		0..*
			Link Nature	1..1
			Link Role	0..1
			Link Target	1..1
		Detailed Clinical Model Identifier		1..1

3.6 WEIGHT

Identification

Label	WEIGHT
Metadata Type	Data Group
Identifier	DG-16125
OID	1.2.36.1.2001.1001.101.102.16125

Definition

Definition	The weight of the person, with reference range information.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY WEIGHT	1..1

Children

Data Type	Name	Occurrences
	Weight Value	1..1
	Weight Reference Ranges (REFERENCE RANGE DETAILS)	0..1

3.7 Weight Value

Identification

Label	Weight Value
Metadata Type	Data Element
Identifier	DE-16327
OID	1.2.36.1.2001.1001.101.103.16327

Definition

Definition	The weight of the person.
Definition Source	NEHTA
Synonymous Names	Person Weight
Data Type	Quantity

Usage

Conditions of Use	The unit of measurement **SHALL** be kilograms.
Conditions of Use Source	NEHTA
Examples	1. 73 kg 2. 0.89 kg

Relationships

Parents

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

3.8 REFERENCE RANGE DETAILS

Identification

Label	Weight Reference Ranges
Metadata Type	Data Group
Identifier	DG-16325
OID	1.2.36.1.2001.1001.101.102.16325

Definition

Definition	One or more reference ranges applicable to the *Weight Value*.
Definition Source	NEHTA
Synonymous Names	
Notes	A reference range is particular to the patient and context, e.g. sex, age, and any other factor that affects ranges. May be used to represent normal, therapeutic, dangerous, critical and other such clinical ranges.

Usage

Conditions of Use	At least one child of this data group **SHALL** be instantiated.
Conditions of Use Source	NEHTA

Relationships

Parents

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

Children

Data Type	Name	Occurrences
	Normal Status	0..1
	REFERENCE RANGE	0..*

3.9 Normal Status

Identification

Label	Normal Status
Metadata Type	Data Element
Identifier	DE-11028
OID	1.2.36.1.2001.1001.101.103.11028

Definition

Definition	An indication of the degree of diagnostically significant abnormality of the value, based on available clinical information (including but not limited to the reference range).
Definition Source	NEHTA
Synonymous Names	
Notes	The term “normal” is **not** statistical normality, but rather what would normally be considered healthy for the individual concerned. As such, this data element represents the health risk for the individual, which is indicated by the observation or measurement and the nature and criticality of that health risk.
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	1. Below normal 2. Above normal 3. Critically low 4. Critically high

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Weight Reference Ranges (REFERENCE RANGE DETAILS)	0..1

3.10 REFERENCE RANGE

Identification

Label	REFERENCE RANGE
Metadata Type	Data Group
Identifier	DG-11024
OID	1.2.36.1.2001.1001.101.102.11024

Definition

Definition	A named range to be associated with any quantity datum.
Definition Source	NEHTA
Synonymous Names	
Notes	The obligations on this data group imply that if this data group occurs only once, the *Reference Range* `data element` is optional, otherwise it is essential.

Usage

Conditions of Use	If this data group occurs only once, its contents **SHALL** span the observed value. If this data group occurs more than once, its contents **SHOULD** include all of the ranges in a single set. If this data group occurs more than once, the *Reference Range* `data element` is **ESSENTIAL**. All reference ranges **SHALL** come from the one set of reference ranges.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Weight Reference Ranges (REFERENCE RANGE DETAILS)	0..*

Children

Data Type	Name	Occurrences
	Reference Range Meaning	1..1

Data Type	Name	Occurrences
	Reference Range	0..1

3.11 Reference Range Meaning

Identification

Label	Reference Range Meaning
Metadata Type	Data Element
Identifier	DE-16574
OID	1.2.36.1.2001.1001.101.103.16574

Definition

Definition	Term whose value indicates the meaning of this range.
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*[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. Normal 2. Critical 3. Therapeutic

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	REFERENCE RANGE	1..1

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

3.12 Reference Range

Identification

Label	Reference Range
Metadata Type	Data Element
Identifier	DE-11024
OID	1.2.36.1.2001.1001.101.103.11024

Definition

Definition	The data range for the associated *Reference Range Meaning* `data element`.
Definition Source	NEHTA
Synonymous Names	
Data Type	QuantityRange

Usage

Examples	1. 15 - 58 g/L 2. < 15 mmol/L 3. 2.5 - 3.5 kg 4. 23 - 45 cm

Relationships

Parents

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

3.13 Measurement Comment

Identification

Label	Comment
Metadata Type	Data Element
Identifier	DE-15600
OID	1.2.36.1.2001.1001.101.103.15600

Definition

Definition	Additional comments relevant to the observation.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

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

3.14 State of Dress

Identification

Label	State of Dress
Metadata Type	Data Element
Identifier	DE-16845
OID	1.2.36.1.2001.1001.101.103.16845

Definition

Definition	Description of the state of dress of the person at the time of weighing.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodedText
Value Domain	State of Dress Values

Usage

Examples	

Relationships

Parents

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

3.15 State of Dress Values

Identification

Label	State of Dress Values
Metadata Type	Value Domain
Identifier	VD-16844
OID	1.2.36.1.2001.1001.101.104.16844

Definition

Definition	The set of values of *State of Dress*.
Definition Source	NEHTA

Value Domain

Source	NEHTA	
Permissible Values	1, Lightly clothed/underwear	Clothing which will not add to weight significantly.
	2, Naked	Without any clothes.
	3, Fully clothed, including shoes	Clothing which may add significantly to weight, including shoes.
	4, Nappy/diaper	Wearing only a nappy - can add significant weight.

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	State of Dress	1..1

3.16 Pregnancy Indicator

Identification

Label	Pregnancy Indicator
Metadata Type	Data Element
Identifier	DE-16846
OID	1.2.36.1.2001.1001.101.103.16846
External Identifier	METeOR data element concept identifier: 303957

Definition

Definition	Whether or not the person is pregnant at the time of the observation.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodedText
Value Domain	Pregnancy Indicator Values

Usage

Examples	

Relationships

Parents

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

3.17 Pregnancy Indicator Values

Identification

Label	Pregnancy Indicator Values
Metadata Type	Value Domain
Identifier	VD-16917
OID	1.2.36.1.2001.1001.101.104.16917

Definition

Definition	The set of values of *Pregnancy Indicator*.
Definition Source	NEHTA

Value Domain

Source	SNOMED CT-AU
Permissible Values	77386006 Patient currently pregnant (finding) 60001007 Not pregnant (finding)

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Pregnancy Indicator	1..1

3.18 CONFOUNDING FACTOR

Identification

Label	CONFOUNDING FACTOR
Metadata Type	Data Group
Identifier	DG-16051
OID	1.2.36.1.2001.1001.101.102.16051

Definition

Definition	An issue or factor of note that may have impacted on the measurement made during the examination.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

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

Children

Data Type	Name	Occurrences
	Confounding Factor Name	1..1
	Confounding Factor Value	1..1

3.19 Confounding Factor Name

Identification

Label	Confounding Factor Name
Metadata Type	Data Element
Identifier	DE-16950
OID	1.2.36.1.2001.1001.101.103.16950

Definition

Definition	The name of a confounding factor of an observation.
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	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	CONFOUNDING FACTOR	1..1

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

3.20 Confounding Factor Value

Identification

Label	Confounding Factor Value
Metadata Type	Data Element
Identifier	DE-16955
OID	1.2.36.1.2001.1001.101.103.16955

Definition

Definition	The value of a confounding factor of an observation.
Definition Source	NEHTA
Synonymous Names	
Notes	Typically values will be codes, measurements or text. Other types of value are possible.
Data Type	

Usage

Examples	1. Subject of care agitated and restless

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	CONFOUNDING FACTOR	1..1

3.21 DEVICE

Identification

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

Definition

Definition	Description of the device used to measure the body weight.
Definition Source	NEHTA
Synonymous Names	
Notes	Typically this will be a machine used by the information provider.

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*. Additional obligation and occurrence constraints: • Participation Period is **PROHIBITED**. • LOCATION OF PARTICIPATION is **PROHIBITED**. • ADDRESS is **PROHIBITED**. • ELECTRONIC COMMUNICATION DETAIL is **PROHIBITED**. • ENTITLEMENT is **PROHIBITED**. • Qualifications is **PROHIBITED**. Other additional constraints: • Participation Type **SHALL** have an implementation-specific value equivalent to “Device”. • Role **SHALL** have an implementation-specific value equivalent to “Not Applicable”. • 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)
	BODY WEIGHT	0..1

3.22 Weight Estimation Formula

Identification

Label	Weight Estimation Formula
Metadata Type	Data Element
Identifier	DE-16847
OID	1.2.36.1.2001.1001.101.103.16847

Definition

Definition	Formula used to calculate the estimated weight.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

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

3.23 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 body weight information.
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. If a device makes the measurement and creates the observation record, the device is the information provider. If a person makes the measurement using a device and the person creates the observation record, the person is the information provider.

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*. **Constraints applicable when the information provider is a person NOT acting as a healthcare provider.** Additional obligation and occurrence constraints: • LOCATION OF PARTICIPATION is **PROHIBITED**. • EMPLOYMENT DETAIL is **PROHIBITED**.

- DEMOGRAPHIC DATA is **PROHIBITED**.
- ENTITLEMENT is **PROHIBITED**.
- Qualifications is **PROHIBITED**.

Other additional constraints:

- Participation Type **SHALL** have an implementation-specific value equivalent to “Information Provider”.
- Role **SHOULD** have an implementation-specific value equivalent to “Authorised Representative” or “Nominated Representative”. However, other similar values **MAY** be appropriate.
- PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as PERSON.

Constraints applicable when the information provider is a person acting as a healthcare provider.

Additional obligation and occurrence constraints:

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

Other additional constraints:

- Participation Type **SHALL** have an implementation-specific value equivalent to “Information Provider”.
- Role **SHOULD** have a value chosen from 1220.0 - ANZSCO - Australian and New Zealand Standard Classification of Occupations, First Edition, Revision 1 [ABS2009]. However, if a suitable value in this set cannot be found, then any code set that is both registered with HL7 and is publicly available **MAY** be used.
- PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as PERSON.

Constraints applicable when the information provider is a device.

Additional obligation and occurrence constraints:

- LOCATION OF PARTICIPATION is **PROHIBITED**.
- ADDRESS is **PROHIBITED**.
- ELECTRONIC COMMUNICATION DETAIL is **PROHIBITED**.
- ENTITLEMENT is **PROHIBITED**.
- Qualifications is **PROHIBITED**.

Other additional constraints:

- Participation Type **SHALL** have an implementation-specific value equivalent to “Information Provider”.

	• Role **SHALL** have an implementation-specific value equivalent to “Not Applicable”. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as DEVICE. • ENTITLEMENT is **PROHIBITED**. • Qualifications is **PROHIBITED**.
Conditions of Use Source	NEHTA

Relationships

Parents

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

3.24 SUBJECT

Identification

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

Definition

Definition	The person about whom the body weight 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)
	BODY WEIGHT	0..1

3.25 Body Weight DateTime

Identification

Label	Body Weight DateTime
Metadata Type	Data Element
Identifier	DE-16733
OID	1.2.36.1.2001.1001.101.103.16733

Definition

Definition	The date and, optionally, time of the *Body Weight* observation.
Definition Source	NEHTA
Synonymous Names	
Data Type	DateTime

Usage

Conditions of Use	If the *Body Weight Duration* is non-zero, it **SHALL** be the time at which the *Body Weight* observation was completed, i.e. the date (and time) of the trailing edge of the *Body Weight Duration*.
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 or time (or both).

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY WEIGHT	1..1

3.26 Body Weight Duration

Identification

Label	Body Weight Duration
Metadata Type	Data Element
Identifier	DE-16734
OID	1.2.36.1.2001.1001.101.103.16734

Definition

Definition	The duration over which the *Body Weight* observation was taken.
Definition Source	NEHTA
Synonymous Names	
Data Type	Duration

Usage

Examples	

Relationships

Parents

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

3.27 Body Weight Instance Identifier

Identification

Label	Body Weight Instance Identifier
Metadata Type	Data Element
Identifier	DE-16735
OID	1.2.36.1.2001.1001.101.103.16735

Definition

Definition	A globally unique identifier for each instance of a *Body Weight* observation.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Examples	

Relationships

Parents

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

3.28 LINK

Identification

Label	LINK
Metadata Type	Data Group
Identifier	DG-16692
OID	1.2.36.1.2001.1001.101.102.16692

Definition

Definition	A link to an instance of another Detailed Clinical Model (DCM) or a document containing an instance of another DCM.
Definition Source	NEHTA
Synonymous Names	
Notes	Links may be to structures inside the enclosing document or inside other documents.

Relationships

Parents

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

Children

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

3.29 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 DCM, i.e. the source, and the target DCM instance or target document.
Definition Source	NEHTA
Synonymous Names	
Notes	This is one of two attributes which together communicate the semantics of the relationship between the source and target DCMs 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)
	LINK	1..1

3.30 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

Definition

Definition	The 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

3.31 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 which 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)
	LINK	0..1

3.32 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

Definition

Definition	The 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 values from *Link Role*. They provide greater specificity and may be selected more for human readership than for interoperable automated processing.
Context Source	NEHTA

Value Domain

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

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

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

Usage

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

Relationships

Parents

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

3.33 Link Target

Identification

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

Definition

Definition	The logical “to” object in the link relation, as per the linguistic sense of the *Link Nature* `data element` (and, if present, the *Link Role* `data element`).
Definition Source	NEHTA
Synonymous Names	
Data Type	Link UniqueIdentifier

Usage

Examples	

Relationships

Parents

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

3.34 Detailed Clinical Model Identifier

Identification

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

Definition

Definition	The NEHTA OID for the *Body Weight* concept represented by this DCM.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Examples	
Default Value	1.2.36.1.2001.1001.101.102.16124
Default Value Conditions of Use	The value of this item is fixed and **SHALL** be the default value.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY WEIGHT	1..1

4 Body Part Circumference Detailed Clinical Model

This chapter describes version 1.0 of the Body Part Circumference Detailed Clinical Model.

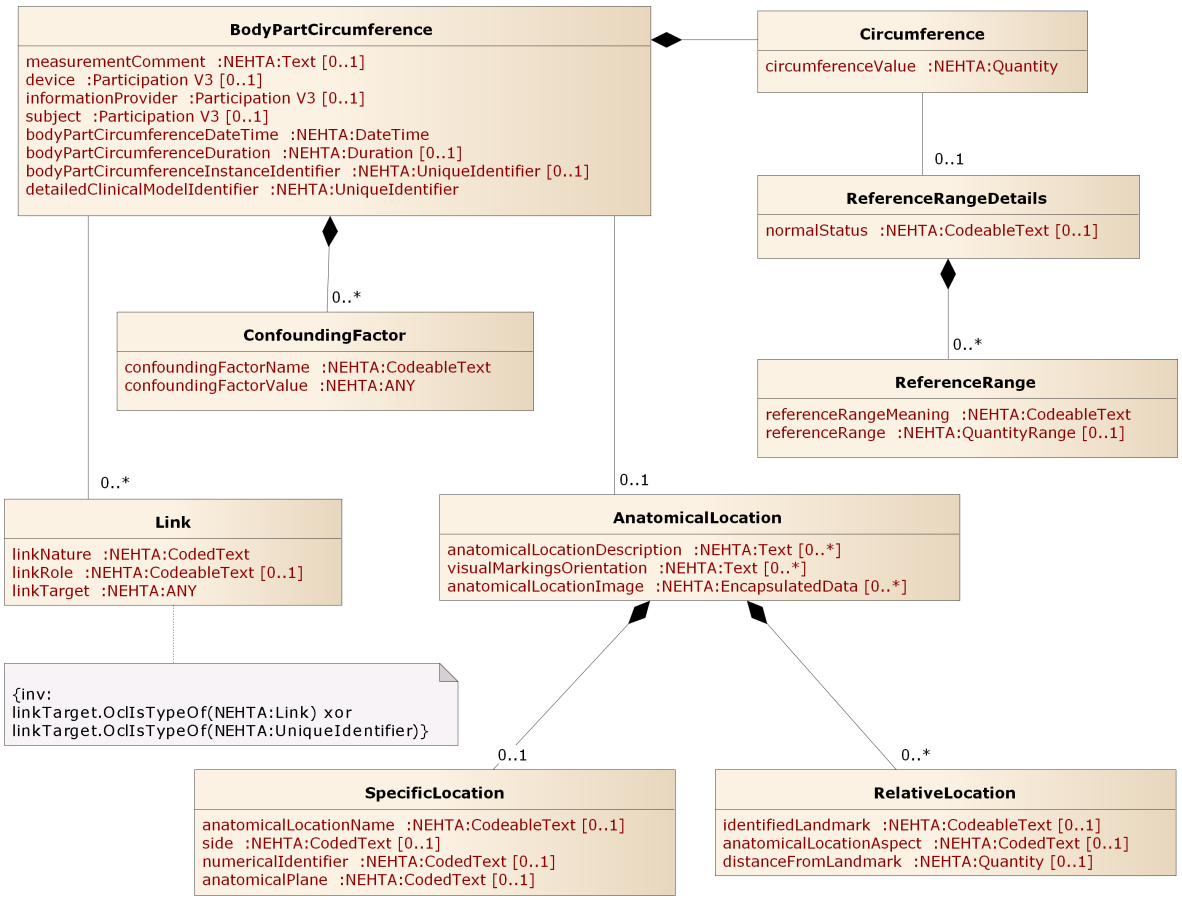
4.1 Purpose

To record the circumference of a specified body part of a person.

4.2 Use

To be used for recording the measurement of the circumference of a body part. This DCM can be used for typical circumference measurement, for example, by a fitness instructor in a gymnasium; self-measurement by a person at home; or a clinical measurement by a clinician in a clinic or hospital.

4.3 UML Class Diagram



The figure represents the data hierarchy of the Detailed Clinical Model as 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 names are represented as association role names. Association role names are only displayed if they differ from the associated class name. The diagram shows the data hierarchy excluding the details of participation. The default multiplicity is 1..1.

4.4 BODY PART CIRCUMFERENCE

Identification

Label	BODY PART CIRCUMFERENCE
Metadata Type	Data Group
Identifier	DG-16808
OID	1.2.36.1.2001.1001.101.102.16808

Definition

Definition	Details pertinent to the physical measurement of the circumference of a specified body part of a person.
Definition Source	NEHTA
Synonymous Names	
Notes	Examples of body parts include the head, a limb or the waist.

Data Hierarchy

BODY PART CIRCUMFERENCE					
	Body Part (ANATOMICAL LOCATION)				0..1
		SPECIFIC LOCATION			0..1
			Name of Location (Anatomical Location Name)		0..1
			Side		0..1
			Numerical Identifier		0..1
			Anatomical Plane		0..1
		RELATIVE LOCATION			0..*
			Identified Landmark		0..1
			Aspect (Anatomical Location Aspect)		0..1
			Distance From Landmark		0..1
		Description (Anatomical Location Description)			0..*

			Visual Markings/Orientation			0..*
			Image (Anatomical Location Image)			0..*
		CIRCUMFERENCE				1..1
			Circumference Value			1..1
			Circumference Reference Ranges (REFERENCE RANGE DETAILS)			0..1
				Normal Status		0..1
				REFERENCE RANGE		0..*
					Reference Range Meaning	1..1
					Reference Range	0..1
		Comment (Measurement Comment)				0..1
		CONFOUNDING FACTOR				0..*
			Confounding Factor Name			1..1
			Confounding Factor Value			1..1
		DEVICE				0..1
		INFORMATION PROVIDER				0..1
		SUBJECT				0..1
		Body Part Circumference DateTime				1..1
		Body Part Circumference Duration				0..1
		Body Part Circumference Instance Identifier				0..1
		LINK				0..*
			Link Nature			1..1
			Link Role			0..1
			Link Target			1..1

		Detailed Clinical Model Identifier	1..1

4.5 ANATOMICAL LOCATION

Identification

Label	Body Part
Metadata Type	Data Group
Identifier	DG-16150
OID	1.2.36.1.2001.1001.101.102.16150

Definition

Definition	The anatomical site whose circumference is measured.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY PART CIRCUMFERENCE	0..1

Children

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

4.6 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)
	Body Part (ANATOMICAL LOCATION)	0..1

Children

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

4.7 Anatomical Location Name

Identification

Label	Name of Location
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	

Relationships

Parents

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

4.8 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)
	Name of Location (Anatomical Location Name)	1..1

4.9 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

4.10 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

4.11 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'.

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

Relationships

Parents

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

4.12 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

4.13 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)
	Body Part (ANATOMICAL LOCATION)	0..*

Children

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

4.14 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	

Relationships

Parents

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

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

4.15 Anatomical Location Aspect

Identification

Label	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.

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

12 Superomedial to: Relative location superior and medial to the landmark.

Relationships

Parents

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

4.16 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	

Relationships

Parents

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

4.17 Anatomical Location Description

Identification

Label	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	

Relationships

Parents

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

4.18 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)
	Body Part (ANATOMICAL LOCATION)	0..*

4.19 Anatomical Location Image

Identification

Label	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	

Relationships

Parents

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

4.20 CIRCUMFERENCE

Identification

Label	CIRCUMFERENCE
Metadata Type	Data Group
Identifier	DG-16330
OID	1.2.36.1.2001.1001.101.102.16330

Definition

Definition	The circumference of the specified body part, with reference range information.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY PART CIRCUMFERENCE	1..1

Children

Data Type	Name	Occurrences
	Circumference Value	1..1
	Circumference Reference Ranges (REFERENCE RANGE DETAILS)	0..1

4.21 Circumference Value

Identification

Label	Circumference Value
Metadata Type	Data Element
Identifier	DE-16330
OID	1.2.36.1.2001.1001.101.103.16330

Definition

Definition	The circumference of the body part.
Definition Source	NEHTA
Synonymous Names	
Data Type	Quantity

Usage

Examples	

Relationships

Parents

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

4.22 REFERENCE RANGE DETAILS

Identification

Label	Circumference Reference Ranges
Metadata Type	Data Group
Identifier	DG-16325
OID	1.2.36.1.2001.1001.101.102.16325

Definition

Definition	One or more reference ranges applicable to the *Circumference Value*.
Definition Source	NEHTA
Synonymous Names	
Notes	A reference range is particular to the patient and context, e.g. sex, age, and any other factor that affects ranges. May be used to represent normal, therapeutic, dangerous, critical and other such clinical ranges.

Usage

Conditions of Use	At least one child of this data group **SHALL** be instantiated.
Conditions of Use Source	NEHTA

Relationships

Parents

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

Children

Data Type	Name	Occurrences
	Normal Status	0..1
	REFERENCE RANGE	0..*

4.23 Normal Status

Identification

Label	Normal Status
Metadata Type	Data Element
Identifier	DE-11028
OID	1.2.36.1.2001.1001.101.103.11028

Definition

Definition	An indication of the degree of diagnostically significant abnormality of the value, based on available clinical information (including but not limited to the reference range).
Definition Source	NEHTA
Synonymous Names	
Notes	The term “normal” is **not** statistical normality, but rather what would normally be considered healthy for the individual concerned. As such, this data element represents the health risk for the individual, which is indicated by the observation or measurement and the nature and criticality of that health risk.
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*[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. Below normal 2. Above normal 3. Critically low 4. Critically high

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Circumference Reference Ranges (REFERENCE RANGE DETAILS)	0..1

4.24 REFERENCE RANGE

Identification

Label	REFERENCE RANGE
Metadata Type	Data Group
Identifier	DG-11024
OID	1.2.36.1.2001.1001.101.102.11024

Definition

Definition	A named range to be associated with any quantity datum.
Definition Source	NEHTA
Synonymous Names	
Notes	The obligations on this data group imply that if this data group occurs only once, the *Reference Range* `data element` is optional, otherwise it is essential.

Usage

Conditions of Use	If this data group occurs only once, its contents **SHALL** span the observed value. If this data group occurs more than once, its contents **SHOULD** include all of the ranges in a single set. If this data group occurs more than once, the *Reference Range* `data element` is **ESSENTIAL**. All reference ranges **SHALL** come from the one set of reference ranges.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Circumference Reference Ranges (REFERENCE RANGE DETAILS)	0..*

Children

Data Type	Name	Occurrences
	Reference Range Meaning	1..1

Data Type	Name	Occurrences
	Reference Range	0..1

4.25 Reference Range Meaning

Identification

Label	Reference Range Meaning
Metadata Type	Data Element
Identifier	DE-16574
OID	1.2.36.1.2001.1001.101.103.16574

Definition

Definition	Term whose value indicates the meaning of this range.
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*[6] 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. Normal 2. Critical 3. Therapeutic

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	REFERENCE RANGE	1..1

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

4.26 Reference Range

Identification

Label	Reference Range
Metadata Type	Data Element
Identifier	DE-11024
OID	1.2.36.1.2001.1001.101.103.11024

Definition

Definition	The data range for the associated *Reference Range Meaning* `data element`.
Definition Source	NEHTA
Synonymous Names	
Data Type	QuantityRange

Usage

Examples	1. 15 - 58 g/L 2. < 15 mmol/L 3. 2.5 - 3.5 kg 4. 23 - 45 cm

Relationships

Parents

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

4.27 Measurement Comment

Identification

Label	Comment
Metadata Type	Data Element
Identifier	DE-15600
OID	1.2.36.1.2001.1001.101.103.15600

Definition

Definition	Additional comments relevant to the observation.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	BODY PART CIRCUMFERENCE	0..1

4.28 CONFOUNDING FACTOR

Identification

Label	CONFOUNDING FACTOR
Metadata Type	Data Group
Identifier	DG-16051
OID	1.2.36.1.2001.1001.101.102.16051

Definition

Definition	An issue or factor of note that may have impacted on the measurement made during the examination.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY PART CIRCUMFERENCE	0..*

Children

Data Type	Name	Occurrences
	Confounding Factor Name	1..1
	Confounding Factor Value	1..1

4.29 Confounding Factor Name

Identification

Label	Confounding Factor Name
Metadata Type	Data Element
Identifier	DE-16950
OID	1.2.36.1.2001.1001.101.103.16950

Definition

Definition	The name of a confounding factor of an observation.
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*[7] 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	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	CONFOUNDING FACTOR	1..1

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

4.30 Confounding Factor Value

Identification

Label	Confounding Factor Value
Metadata Type	Data Element
Identifier	DE-16955
OID	1.2.36.1.2001.1001.101.103.16955

Definition

Definition	The value of a confounding factor of an observation.
Definition Source	NEHTA
Synonymous Names	
Notes	Typically values will be codes, measurements or text. Other types of value are possible.
Data Type	

Usage

Examples	1. Subject of care agitated and restless

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	CONFOUNDING FACTOR	1..1

4.31 DEVICE

Identification

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

Definition

Definition	Description of the device used to measure the circumference of the body part.
Definition Source	NEHTA
Synonymous Names	
Notes	Typically this will be a machine used by the information provider.

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*. Additional obligation and occurrence constraints: • Participation Period is **PROHIBITED**. • LOCATION OF PARTICIPATION is **PROHIBITED**. • ADDRESS is **PROHIBITED**. • ELECTRONIC COMMUNICATION DETAIL is **PROHIBITED**. • ENTITLEMENT is **PROHIBITED**. • Qualifications is **PROHIBITED**. Other additional constraints: • Participation Type **SHALL** have an implementation-specific value equivalent to “Device”. • Role **SHALL** have an implementation-specific value equivalent to “Not Applicable”. • 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)
	BODY PART CIRCUMFERENCE	0..1

4.32 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 body part circumference information.
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. If a device makes the measurement and creates the observation record, the device is the information provider. If a person makes the measurement using a device and the person creates the observation record, the person is the information provider.

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*. **Constraints applicable when the information provider is a person NOT acting as a healthcare provider.** Additional obligation and occurrence constraints: • LOCATION OF PARTICIPATION is **PROHIBITED**. • EMPLOYMENT DETAIL is **PROHIBITED**.

- DEMOGRAPHIC DATA is **PROHIBITED**.
- ENTITLEMENT is **PROHIBITED**.
- Qualifications is **PROHIBITED**.

Other additional constraints:

- Participation Type **SHALL** have an implementation-specific value equivalent to “Information Provider”.
- Role **SHOULD** have an implementation-specific value equivalent to “Authorised Representative” or “Nominated Representative”. However, other similar values **MAY** be appropriate.
- PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as PERSON.

Constraints applicable when the information provider is a person acting as a healthcare provider.

Additional obligation and occurrence constraints:

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

Other additional constraints:

- Participation Type **SHALL** have an implementation-specific value equivalent to “Information Provider”.
- Role **SHOULD** have a value chosen from 1220.0 - ANZSCO - Australian and New Zealand Standard Classification of Occupations, First Edition, Revision 1 [ABS2009]. However, if a suitable value in this set cannot be found, then any code set that is both registered with HL7 and is publicly available **MAY** be used.
- PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as PERSON.

Constraints applicable when the information provider is a device.

Additional obligation and occurrence constraints:

- LOCATION OF PARTICIPATION is **PROHIBITED**.
- ADDRESS is **PROHIBITED**.
- ELECTRONIC COMMUNICATION DETAIL is **PROHIBITED**.
- ENTITLEMENT is **PROHIBITED**.
- Qualifications is **PROHIBITED**.

Other additional constraints:

- Participation Type **SHALL** have an implementation-specific value equivalent to “Information Provider”.

	• Role **SHALL** have an implementation-specific value equivalent to “Not Applicable”. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as DEVICE. • ENTITLEMENT is **PROHIBITED**. • Qualifications is **PROHIBITED**.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	BODY PART CIRCUMFERENCE	0..1

4.33 SUBJECT

Identification

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

Definition

Definition	The person about whom the body part circumference 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)
	BODY PART CIRCUMFERENCE	0..1

4.34 Body Part Circumference DateTime

Identification

Label	Body Part Circumference DateTime
Metadata Type	Data Element
Identifier	DE-16809
OID	1.2.36.1.2001.1001.101.103.16809

Definition

Definition	The date and, optionally, time of the *Body Part Circumference* observation.
Definition Source	NEHTA
Synonymous Names	
Data Type	DateTime

Usage

Conditions of Use	If the *Body Part Circumference Duration* is non-zero, it **SHALL** be the time at which the *Body Part Circumference* observation was completed, i.e. the date (and time) of the trailing edge of the *Body Part Circumference Duration*.
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 or time (or both).

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY PART CIRCUMFERENCE	1..1

4.35 Body Part Circumference Duration

Identification

Label	Body Part Circumference Duration
Metadata Type	Data Element
Identifier	DE-16810
OID	1.2.36.1.2001.1001.101.103.16810

Definition

Definition	The duration over which the *Body Part Circumference* observation was taken.
Definition Source	NEHTA
Synonymous Names	
Data Type	Duration

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY PART CIRCUMFERENCE	0..1

4.36 Body Part Circumference Instance Identifier

Identification

Label	Body Part Circumference Instance Identifier
Metadata Type	Data Element
Identifier	DE-16811
OID	1.2.36.1.2001.1001.101.103.16811

Definition

Definition	A globally unique identifier for each instance of a *Body Part Circumference* observation.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY PART CIRCUMFERENCE	0..1

4.37 LINK

Identification

Label	LINK
Metadata Type	Data Group
Identifier	DG-16692
OID	1.2.36.1.2001.1001.101.102.16692

Definition

Definition	A link to an instance of another Detailed Clinical Model (DCM) or a document containing an instance of another DCM.
Definition Source	NEHTA
Synonymous Names	
Notes	Links may be to structures inside the enclosing document or inside other documents.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY PART CIRCUMFERENCE	0..*

Children

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

4.38 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 DCM, i.e. the source, and the target DCM instance or target document.
Definition Source	NEHTA
Synonymous Names	
Notes	This is one of two attributes which together communicate the semantics of the relationship between the source and target DCMs 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)
	LINK	1..1

4.39 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

Definition

Definition	The 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

	LINK-E0, is a related documentation	two might be defining the same care plan, act or episode, or both might be related milestones. 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

4.40 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 which 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)
	LINK	0..1

4.41 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

Definition

Definition	The 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 values from *Link Role*. They provide greater specificity and may be selected more for human readership than for interoperable automated processing.
Context Source	NEHTA

Value Domain

Source	ISO 13606-3:2009
Permissible Values	Values **SHOULD** be from Termlist LINK_ROLE in ISO 13606-3:2009 [ISO2009a]. Values **MAY** be from any suitable terminology. Some values from Termlist LINK_ROLE in ISO 13606-3:2009 Health informatics - Electronic health record communication - Part 3: Reference archetypes and term lists [ISO2009a] are: LINK-A1, unspecified link — The term is used when no semantic information is available for this Link in the EHR system from which the EXTRACT has been created. LINK-A2, suggests — The interpretation expressed in the target component is a possible cause or outcome of the findings documented in the source component. LINK-B1, endorses — The interpretation expressed in the source component provides confirmatory evidence or a confirmatory opinion of the interpretation expressed in the target component. LINK-C3, evidence for — The observation or interpretation documented in the source component provides confirmatory evidence of the interpretation expressed in the target component. LINK-D1, outcome — The clinical situation documented in the target component is the direct outcome of the situation documented in the source component.

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

Usage

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

Relationships

Parents

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

4.42 Link Target

Identification

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

Definition

Definition	The logical “to” object in the link relation, as per the linguistic sense of the *Link Nature* `data element` (and, if present, the *Link Role* `data element`).
Definition Source	NEHTA
Synonymous Names	
Data Type	Link UniqueIdentifier

Usage

Examples	

Relationships

Parents

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

4.43 Detailed Clinical Model Identifier

Identification

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

Definition

Definition	The NEHTA OID for the *Body Part Circumference* concept represented by this Detailed Clinical Model.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Examples	
Default Value	1.2.36.1.2001.1001.101.102.16808
Default Value Conditions of Use	The value of this item is fixed and **SHALL** be the default value.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY PART CIRCUMFERENCE	1..1

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5 Body Mass Index Detailed Clinical Model

This chapter describes version 1.0 of the Body Mass Index Detailed Clinical Model.

5.1 Purpose

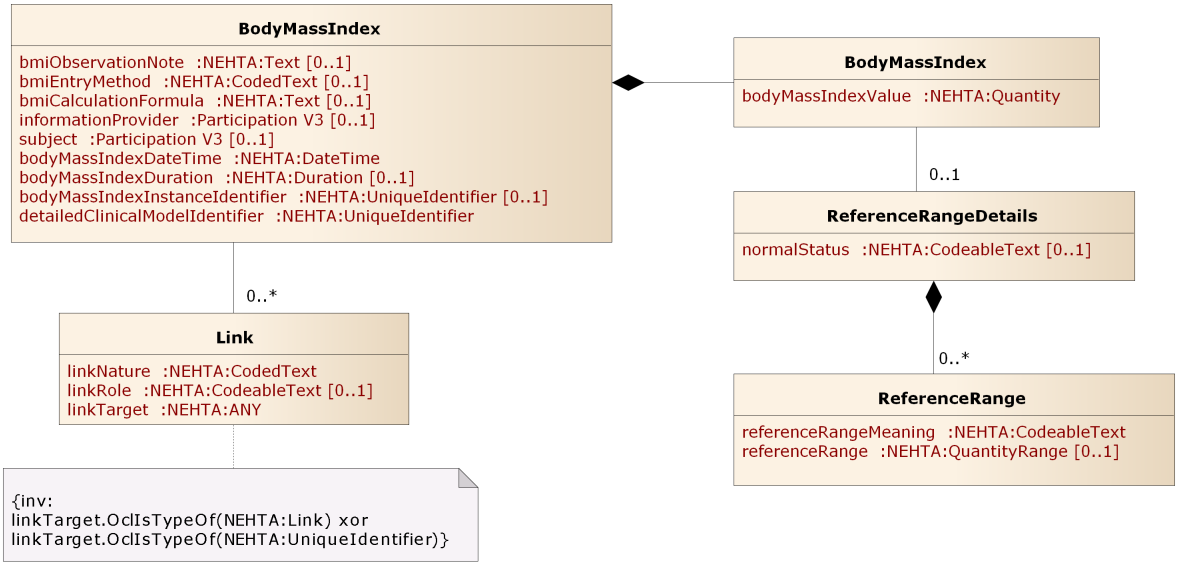
To record the body mass index (BMI) of a person. Body mass index is a calculated ratio describing how a person's body weight relates to the weight that is regarded as normal, or desirable, for the person's height.

5.2 Use

To be used for recording the BMI of adults and children.

To be used when entering BMI manually (i.e. calculated and directly entered by the clinician) or automatically (i.e. calculation and entry is performed, automatically, by the software application, based on separate height and weight measurements).

5.3 UML Class Diagram



The figure represents the data hierarchy of the Detailed Clinical Model as 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 names are represented as association role names. Association role names are only displayed if they differ from the associated class name. The diagram shows the data hierarchy excluding the details of participation. The default multiplicity is 1..1.

5.4 BODY MASS INDEX

Identification

Label	BODY MASS INDEX
Metadata Type	Data Group
Identifier	DG-16856
OID	1.2.36.1.2001.1001.101.102.16856

Definition

Definition	Details pertinent to the physical measurement of the body mass index (BMI) of a person.
Definition Source	NEHTA
Synonymous Names	

Data Hierarchy

BODY MASS INDEX						
	BODY MASS INDEX					1..1
		Body Mass Index Value				1..1
		Body Mass Index Reference Ranges (REFERENCE RANGE DETAILS)				0..1
			Normal Status			0..1
			REFERENCE RANGE			0..*
				Reference Range Meaning		1..1
				Reference Range		0..1
	Comment (BMI Observation Note)					0..1
	Method (BMI Entry Method)					0..1
	Formula (BMI Calculation Formula)					0..1
	INFORMATION PROVIDER					0..1
	SUBJECT					0..1

		Body Mass Index DateTime		1..1
		Body Mass Index Duration		0..1
		Body Mass Index Instance Identifier		0..1
		LINK		0..*
			Link Nature	1..1
			Link Role	0..1
			Link Target	1..1
		Detailed Clinical Model Identifier		1..1

5.5 BODY MASS INDEX

Identification

Label	BODY MASS INDEX
Metadata Type	Data Group
Identifier	DG-16857
OID	1.2.36.1.2001.1001.101.102.16857

Definition

Definition	The body mass index of the person, with reference range information.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY MASS INDEX	1..1

Children

Data Type	Name	Occurrences
	Body Mass Index Value	1..1
	Body Mass Index Reference Ranges (REFERENCE RANGE DETAILS)	0..1

5.6 Body Mass Index Value

Identification

Label	Body Mass Index Value
Metadata Type	Data Element
Identifier	DE-16857
OID	1.2.36.1.2001.1001.101.103.16857

Definition

Definition	The body mass index of the person.
Definition Source	NEHTA
Synonymous Names	BMI
Data Type	Quantity

Usage

Examples	

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	BODY MASS INDEX	1..1

5.7 REFERENCE RANGE DETAILS

Identification

Label	Body Mass Index Reference Ranges
Metadata Type	Data Group
Identifier	DG-16325
OID	1.2.36.1.2001.1001.101.102.16325

Definition

Definition	One or more reference ranges applicable to the *Body Mass Index Value*.
Definition Source	NEHTA
Synonymous Names	
Notes	A reference range is particular to the patient and context, e.g. sex, age, and any other factor that affects ranges. May be used to represent normal, therapeutic, dangerous, critical and other such clinical ranges.

Usage

Conditions of Use	At least one child of this data group **SHALL** be instantiated.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY MASS INDEX	0..1

Children

Data Type	Name	Occurrences
	Normal Status	0..1
	REFERENCE RANGE	0..*

5.8 Normal Status

Identification

Label	Normal Status
Metadata Type	Data Element
Identifier	DE-11028
OID	1.2.36.1.2001.1001.101.103.11028

Definition

Definition	An indication of the degree of diagnostically significant abnormality of the value, based on available clinical information (including but not limited to the reference range).
Definition Source	NEHTA
Synonymous Names	
Notes	The term “normal” is **not** statistical normality, but rather what would normally be considered healthy for the individual concerned. As such, this data element represents the health risk for the individual, which is indicated by the observation or measurement and the nature and criticality of that health risk.
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	1. Below normal 2. Above normal 3. Critically low 4. Critically high

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Body Mass Index Reference Ranges (REFERENCE RANGE DETAILS)	0..1

5.9 REFERENCE RANGE

Identification

Label	REFERENCE RANGE
Metadata Type	Data Group
Identifier	DG-11024
OID	1.2.36.1.2001.1001.101.102.11024

Definition

Definition	A named range to be associated with any quantity datum.
Definition Source	NEHTA
Synonymous Names	
Notes	The obligations on this data group imply that if this data group occurs only once, the *Reference Range* `data element` is optional, otherwise it is essential.

Usage

Conditions of Use	If this data group occurs only once, its contents **SHALL** span the observed value. If this data group occurs more than once, its contents **SHOULD** include all of the ranges in a single set. If this data group occurs more than once, the *Reference Range* `data element` is **ESSENTIAL**. All reference ranges **SHALL** come from the one set of reference ranges.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Body Mass Index Reference Ranges (REFERENCE RANGE DETAILS)	0..*

Children

Data Type	Name	Occurrences
	Reference Range Meaning	1..1

Data Type	Name	Occurrences
	Reference Range	0..1

5.10 Reference Range Meaning

Identification

Label	Reference Range Meaning
Metadata Type	Data Element
Identifier	DE-16574
OID	1.2.36.1.2001.1001.101.103.16574

Definition

Definition	Term whose value indicates the meaning of this range.
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*[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. Normal 2. Critical 3. Therapeutic

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	REFERENCE RANGE	1..1

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

5.11 Reference Range

Identification

Label	Reference Range
Metadata Type	Data Element
Identifier	DE-11024
OID	1.2.36.1.2001.1001.101.103.11024

Definition

Definition	The data range for the associated *Reference Range Meaning* `data element`.
Definition Source	NEHTA
Synonymous Names	
Data Type	QuantityRange

Usage

Examples	1. 15 - 58 g/L 2. < 15 mmol/L 3. 2.5 - 3.5 kg 4. 23 - 45 cm

Relationships

Parents

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

5.12 BMI Observation Note

Identification

Label	Comment
Metadata Type	Data Element
Identifier	DE-15600
OID	1.2.36.1.2001.1001.101.103.15600

Definition

Definition	Additional comments relevant to the observation.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	BODY MASS INDEX	0..1

5.13 BMI Entry Method

Identification

Label	Method
Metadata Type	Data Element
Identifier	DE-16859
OID	1.2.36.1.2001.1001.101.103.16859

Definition

Definition	The method of entering the body mass index.
Definition Source	NEHTA
Synonymous Names	
Notes	This records whether the value was calculated and entered automatically without user intervention or was calculated and entered directly by user.
Data Type	CodedText
Value Domain	BMI Entry Method Values

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY MASS INDEX	0..1

5.14 BMI Entry Method Values

Identification

Label	BMI Entry Method Values
Metadata Type	Value Domain
Identifier	VD-16858
OID	1.2.36.1.2001.1001.101.104.16858

Definition

Definition	The set of values of *BMI Entry Method*.
Definition Source	NEHTA

Value Domain

Source	OpenEHR	
Permissible Values	1, Automatic entry	Body mass index calculated and entered automatically without user intervention.
	2, Direct entry	Body mass index calculated and entered directly by user.

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	Method (BMI Entry Method)	1..1

5.15 BMI Calculation Formula

Identification

Label	Formula
Metadata Type	Data Element
Identifier	DE-16860
OID	1.2.36.1.2001.1001.101.103.16860

Definition

Definition	The formula used to calculate the body mass index.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	1. Body mass index is commonly calculated as weight (kg) / [height (m) squared].

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY MASS INDEX	0..1

5.16 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 body mass index information.
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*. **Constraints applicable when the information provider is a person NOT acting as a healthcare provider.** Additional obligation and occurrence constraints: • LOCATION OF PARTICIPATION is **PROHIBITED**. • EMPLOYMENT DETAIL is **PROHIBITED**. • DEMOGRAPHIC DATA is **PROHIBITED**. • ENTITLEMENT is **PROHIBITED**.

- Qualifications is **PROHIBITED**.

Other additional constraints:

- Participation Type **SHALL** have an implementation-specific value equivalent to “Information Provider”.
- Role **SHOULD** have an implementation-specific value equivalent to “Authorised Representative” or “Nominated Representative”. However, other similar values **MAY** be appropriate.
- PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as PERSON.

Constraints applicable when the information provider is a person acting as a healthcare provider.

Additional obligation and occurrence constraints:

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

Other additional constraints:

- Participation Type **SHALL** have an implementation-specific value equivalent to “Information Provider”.
- Role **SHOULD** have a value chosen from 1220.0 - ANZSCO - Australian and New Zealand Standard Classification of Occupations, First Edition, Revision 1 [ABS2009]. However, if a suitable value in this set cannot be found, then any code set that is both registered with HL7 and is publicly available **MAY** be used.
- PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as PERSON.

Constraints applicable when the information provider is a device.

Additional obligation and occurrence constraints:

- LOCATION OF PARTICIPATION is **PROHIBITED**.
- ADDRESS is **PROHIBITED**.
- ELECTRONIC COMMUNICATION DETAIL is **PROHIBITED**.
- ENTITLEMENT is **PROHIBITED**.
- Qualifications is **PROHIBITED**.

Other additional constraints:

- Participation Type **SHALL** have an implementation-specific value equivalent to “Information Provider”.
- Role **SHALL** have an implementation-specific value equivalent to “Not Applicable”.
- PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as DEVICE.

Conditions of Use Source	• ENTITLEMENT is **PROHIBITED**. • Qualifications is **PROHIBITED**. NEHTA

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	BODY MASS INDEX	0..1

5.17 SUBJECT

Identification

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

Definition

Definition	The person about whom the body mass index 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)
	BODY MASS INDEX	0..1

5.18 Body Mass Index DateTime

Identification

Label	Body Mass Index DateTime
Metadata Type	Data Element
Identifier	DE-16861
OID	1.2.36.1.2001.1001.101.103.16861

Definition

Definition	The date and, optionally, time of the *Body Mass Index* observation.
Definition Source	NEHTA
Synonymous Names	
Data Type	DateTime

Usage

Conditions of Use	If the *Body Mass Index Duration* is non-zero, it **SHALL** be the time at which the *Body Mass Index* observation was completed, i.e. the date (and time) of the trailing edge of the *Body Mass Index Duration*.
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 or time (or both).

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY MASS INDEX	1..1

5.19 Body Mass Index Duration

Identification

Label	Body Mass Index Duration
Metadata Type	Data Element
Identifier	DE-16862
OID	1.2.36.1.2001.1001.101.103.16862

Definition

Definition	The duration over which the *Body Mass Index* observation was taken.
Definition Source	NEHTA
Synonymous Names	
Data Type	Duration

Usage

Examples	

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	BODY MASS INDEX	0..1

5.20 Body Mass Index Instance Identifier

Identification

Label	Body Mass Index Instance Identifier
Metadata Type	Data Element
Identifier	DE-16863
OID	1.2.36.1.2001.1001.101.103.16863

Definition

Definition	A globally unique identifier for each instance of a *Body Mass Index* observation.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY MASS INDEX	0..1

5.21 LINK

Identification

Label	LINK
Metadata Type	Data Group
Identifier	DG-16692
OID	1.2.36.1.2001.1001.101.102.16692

Definition

Definition	A link to an instance of another Detailed Clinical Model (DCM) or a document containing an instance of another DCM.
Definition Source	NEHTA
Synonymous Names	
Notes	Links may be to structures inside the enclosing document or inside other documents.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	BODY MASS INDEX	0..*

Children

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

5.22 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 DCM, i.e. the source, and the target DCM instance or target document.
Definition Source	NEHTA
Synonymous Names	
Notes	This is one of two attributes which together communicate the semantics of the relationship between the source and target DCMs 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)
	LINK	1..1

5.23 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

Definition

Definition	The 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

5.24 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 which 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)
	LINK	0..1

5.25 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

Definition

Definition	The 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 values from *Link Role*. They provide greater specificity and may be selected more for human readership than for interoperable automated processing.
Context Source	NEHTA

Value Domain

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

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

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

Usage

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

Relationships

Parents

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

5.26 Link Target

Identification

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

Definition

Definition	The logical “to” object in the link relation, as per the linguistic sense of the *Link Nature* `data element` (and, if present, the *Link Role* `data element`).
Definition Source	NEHTA
Synonymous Names	
Data Type	Link UniqueIdentifier

Usage

Examples	

Relationships

Parents

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

5.27 Detailed Clinical Model Identifier

Identification

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

Definition

Definition	The NEHTA OID for the *Body Mass Index* concept represented by this DCM.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Examples	
Default Value	1.2.36.1.2001.1001.101.102.16856
Default Value Conditions of Use	The value of this item is fixed and **SHALL** be the default value.

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	BODY MASS INDEX	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
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.
Approximate value indicator for measurements	No method is provided to indicate that a measurement, such as *Circumference Value*, has an approximate value although the data type *Quantity* does allow an uncertainty to be included.
Reference Range Details data components	There is no method provided to group reference ranges, nor is one provided to identify the source of a reference range. For example, if both WHO (World Health Organization) and RACGP (Royal Australian College of General Practitioners) percentile ranges are included, there is no good way to separate the entries for the different ranges.
Undefined Value Domains	The following data elements lack a defined value domain: *Normal Status*, *Reference Range Meaning*, *Confounding Factor Name*, *Numerical Identifier*, *Anatomical Plane*, *Identified Landmark*, and *Anatomical Location Aspect*. 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.

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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 conformance, compliance and accreditation testing of implemented systems. NEHTA's CDA implementation guides are guides to the implementation of HL7 CDA R2 messages based upon these DCMs and SCSs.

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

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

B.2 The Structured Content Specification Metamodel

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

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

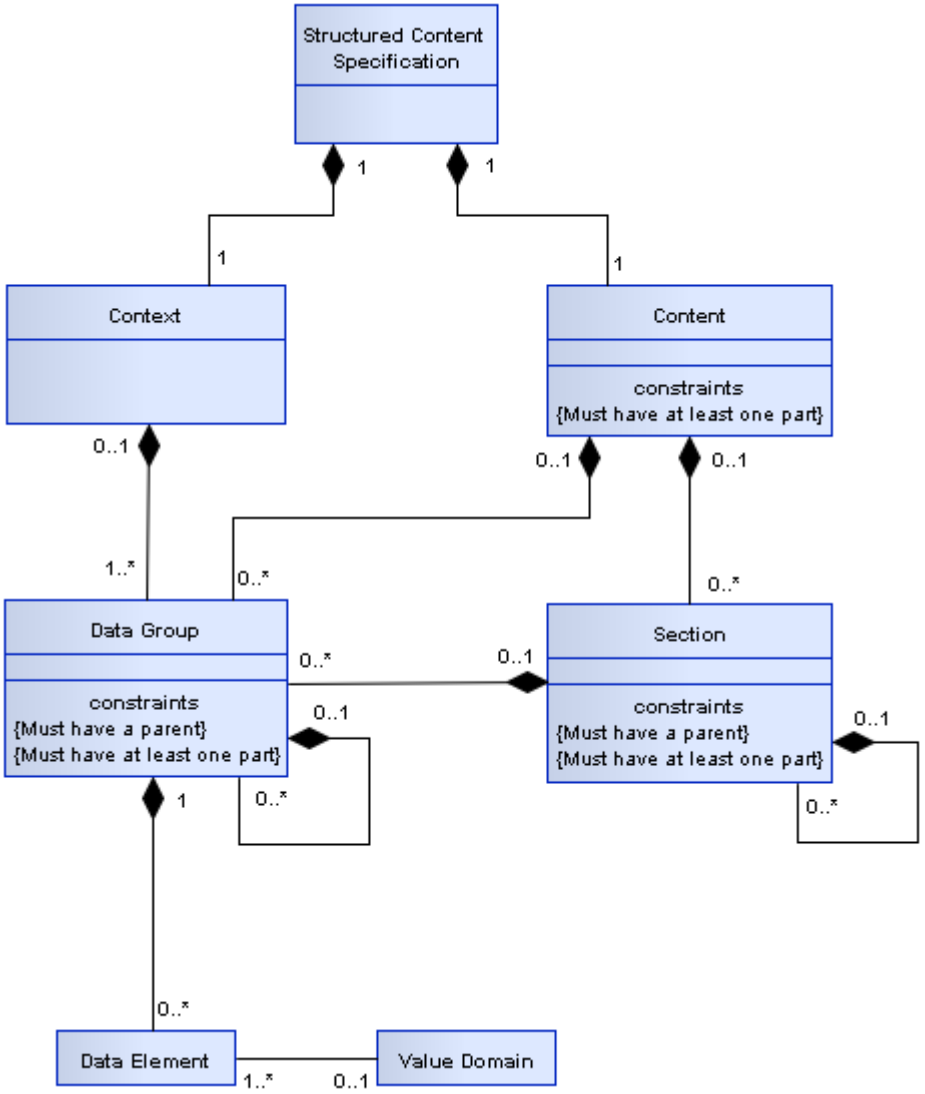

Figure 1: SCS Metamodel

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

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

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

- Section
- Data Group
- Data Element
- Value Domain

These components are described in more detail below.

Context

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

Content

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

Section

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

Data Group

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

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

Participation

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

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

[NEHT2011v] defines the full Participation specification.

Choice

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

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

Data Element

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

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

Value Domain

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

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

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

Table 1: Value Domain Examples

<table>
<tr><th>Data Element</th><th>Data Type</th><th>Example of Value Domain</th></tr>
<tr><td>Sex</td><td>CodedText</td><td>[SA2006a] and [SA2006b] derive their values from METeOR 270263 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 within the various NEHTA information specifications.

Metadata Types Legend

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

Table 2: Metadata Types Legend

Icon	Metadata Types
	Structured Document
	Section
	Data Group
	Participation
	Choice

Data Types Legend

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

Table 3: Data Types Legend

Icon	Data type	Explanation
	Boolean (ISO 21090: BL)	A primitive data type, sometimes called the logical data type, having one of two values: *true* and *false*. Many systems represent true as *non-zero* (often 1, or -1) and false as *zero*. **Usage/Examples** • An actual value entered by a user might be “yes” or could be chosen by a mouse click on an icon such as ☑.

CodeableText

(ISO 21090: CD)

Coded text *with* exceptions; a flexible data type to support various ways of holding text, both free text and coded text. Commonly used to support compliance for early adopters of the Structured Content Specifications. While it is recommended that the values in this data type come from the bound value domain, it allows other value domains to also be used (with or without translations to the bound value domain) or free text alternatives. This is a recognition that it may not be possible to define an entire value domain for a complex concept (e.g. *Diagnosis*) or that there may be competing code sets in existence. Note that within exchange specifications or message profiles this data type **MAY** be constrained to mandate compliance with the bound value domain.

Usage/Examples

- AIHW Separation Mode specifies the status at separation of a person from an organisation. An early adopter **MAY** have a similar concept (coded or otherwise) that maps to this data element but does not strictly comply with the AIHW values.
- A SNOMED CT-AU coded/complex expression that embodies single or multiple concepts. The SNOMED CT-AU concepts behind these CodeableText components are specified in the Structured Content Specification value domains.

CodedText

(ISO 21090: CD)

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

Usage/Examples

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

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

DateTime

(ISO 21090: TS)

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

Usage/Examples

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

	Duration (ISO 21090: PQ.TIME)	The period of time during which something continues. Consists of a value and a unit which represents the time value, e.g. hours, months. Compound durations are not allowed, e.g. 10 days 3 weeks 5 hours. **Usage/Examples** • 3 hours • 6 months • 1 year
	Any (ISO 21090: ANY)	Represents a data element where the data type to be used is conditional on another data component. The values that can be required will vary considerably depending on the context. Note that this is an abstract data type that is the basis for all data types and **SHOULD NOT** be used in an actual implementation.
	EncapsulatedData (ISO 21090: ED)	Data that is primarily intended for human interpretation or for further machine processing outside the scope of this specification. This includes unformatted or formatted written language, multimedia data, or structured information as defined by a different standard (e.g. XML signatures). **Usage/Examples** • JPEG images • HTML documents • [RFC1521] MIME types
	Integer (ISO 21090: INT)	The mathematical data type comprising the exact integral values (according to [NEHT2010c]). **Usage/Examples** • 1 • -50 • 125
	Link (ISO 21090: TEL)	This is a general link, reference or pointer to an object, data or application that exists logically or is stored electronically in a computer system. **Usage/Examples** • URL (Uniform Resource Locator) – the World Wide Web address of a site on the internet, such as the URL for the Google internet search engine – *http://www.google.com*. • An absolute or relative path within a file or directory structure – e.g. in the Windows® operating system, the “link” or absolute path to a particular letter could be *C:\Documents and Settings\GuestUser\MyDocuments\letter.doc*

 Quantity (ISO 21090: PQ)	Used for recording many real world measurements and observations. Includes the magnitude value and the units. **Usage/Examples** • 100 centimetres • 25.5 grams
 QuantityRatio (ISO 21090: RTO)	The relative magnitudes of two *Quantity* values (usually expressed as a quotient). **Usage/Examples** • 25 mg/500 ml • 200 mmol per litre
 QuantityRange (ISO 21090: IVL)	Two *Quantity* values that define the minimum and maximum values, i.e. lower and upper bounds. This is typically used for defining the valid range of values for a particular measurement or observation. Unbounded quantity ranges can be defined by not including a minimum and/or a maximum quantity value. **Usage/Examples** • -20 to 100 Celsius • 30-50 mg • >10 kg
 Real (ISO 21090: REAL)	A computational approximation to the standard mathematical concept of real numbers. These are often called floating-point numbers. **Usage/Examples** • 1.075 • -325.1 • 3.14157
 Text (ISO 21090: ST)	Character strings (with optional language). Unless otherwise constrained by an implementation, can be any combination of alpha, numeric or symbols from the Unicode character set. This is sometimes referred to as free text. **Usage/Examples** “The patient is a 37 year old man who was referred for cardiac evaluation after complaining of occasional palpitations, racing heart beats and occasional dizziness.”
 TimeInterval (ISO 21090:TS)	An interval in time, with (optionally) a start date/time and (optionally) an end date/time and/or a duration/width. **Usage/Examples** • 01/01/2008 – 31/12/2008 • 1:30 a.m. – 6:00 p.m., duration/width = 16.5 hours

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

Keywords Legend

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

The following table defines these keywords.

Table 4: Keywords Legend

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

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

Obligation Legend

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

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

The following table defines the obligations.

Table 5: Obligations Legend

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

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

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

B.4 Information Model Specification Parts Legends

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

Data Hierarchy

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

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

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

Chapter Name

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

Identification Section Legend

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

Table 6: Identification Section Legend

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

Definition Section Legend

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

Table 7: Definition Section Legend

Definition	The meaning, description or explanation of the data component. (Source NEHTA.) For data groups used in a particular context, the definition **MAY** be a refinement of the generic data group definition.
Definition Source	The authoritative source for the Definition statement.
Synonymous Names	A list of any names the data component **MAY** also be known as. (Source NEHTA.) Implementers **MAY** prefer to use synonymous names to refer to the component in specific contexts.
Scope	Situations in which the data component may be used, i.e. the extent and capacity within which this data component may be used, including the circumstances under which the collection of specified data is required or recommended. For example, Medication Instruction (data group) has a scope which includes all prescribable therapeutic goods, both medicines and non-medicines. This attribute is not relevant to data elements or value domains. (Source NEHTA.)
Scope Source	The authoritative source for the Scope statement.
Context	The environment in which the data component is meaningful, i.e. the circumstance, purpose and perspective under which this data component is defined or used.

	For example, Street Name has a context of Address. (Source NEHTA.)
Assumptions	Suppositions and notions used in defining the data component. (Source NEHTA.)
Assumptions Source	The authoritative source for the Assumptions statement.
Notes	Informative text that further describes the data component, or assists in the understanding of how the data component can be used. (Source NEHTA.)
Notes Source	The authoritative source for the Notes statement.
Data Type	The data type of the data element, e.g. DateTime or Text. (Source NEHTA.) The data type is applicable only to data elements. The valid data types are specified in the Data Types Legend.
Value Domain	The name and identifier of the terminologies, code sets and classifications to define the data element value range, or a statement describing what values to use in the absence of a defined value domain for the related data element. In the absence of national standard code sets, the code sets used **SHALL** be registered code sets, i.e. registered through the HL7 code set registration procedure with an appropriate object identifier (OID), and **SHALL** be publicly available. When national standard code sets become available, they **SHALL** be used and the non-standard code sets **SHALL** be deprecated. (Source NEHTA.) The Value Domain is applicable only to CodedText and CodeableText data elements.

Value Domain Section Legend

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

Table 8: Value Domain Section Legend

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

Usage Section Legend

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

Table 9: Usage Section Legend

Examples	One or more demonstrations of the data that is catered for by the data element. (Source NEHTA.)

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

Relationships Section Legend

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

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

Table 10: Parent Legend

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

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

Table 11: Children Legend

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

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