nehta

Pathology Test Result

Detailed Clinical Model Specification

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Document Information

Document owner

Document Owner
The National Clinical Terminology and Information Service

Change history

Version	Date	Comments
1.0	29 May 2007	Initial public release
2.0	23 Aug 2011	New version created in accordance with the archetype from *NEHTA Clinical Knowledge Manager*[1].

Related documents

Name	Version/Release Date
NEHTA Acronyms, Abbreviations & Glossary of Terms	Version 1.2, Issued 25 May 2005
Data Types in NEHTA Specifications: A Profile of the ISO 21090 Specification	Version 1.0, Issued September 2010
Participation Data Specification	Version 3.2, Issued 20 July 2011

[1] http://dcm.nehta.org.au/ckm

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- Standards Australia;
- Members of the Australian DataTypes Project;
- Australian Institute of Health & Welfare; and
- Ocean Informatics.

Table of Contents

1 Introduction

1.1 Purpose and Scope

This data group specification forms part of a suite of data specifications that 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 generally agreed to be of high priority to standardise in order to achieve the benefits brought about by Level 4 (semantic) interoperability in the Australian health care 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 ICT managers, clinicians involved in Clinical Information System specifications, software architects and developers, and implementers of Clinical Information Systems in various health care 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 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 Personally Controlled Electronic Health Record (PCEHR) is referred to in these documents the implementation of the PCEHR is not dealt with here.

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 Systematised Nomenclature of Medicine - Clinical Terms® (SNOMED CT® [1]) 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 IHTSDO (International Health Terminology Standards Development Organisation) 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 and 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/connecting-australia/terminology-and-information* and direct your questions or feedback to *terminologies@nehta.gov.au*.

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

2 Pathology Test Result Data Group

2.1 Purpose

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

2.2 Use

Use to record any pathology test result, including the result of a test on a specimen taken as part of a composite procedure or operation. Multi-analyte panels can be represented using templates or specialised DCMs. More complex tests such as histopathology or microbiology should be represented using specialised DCMs where additional report content is required. Will normally be reported back to the requesting clinician as one component within the context of an overall COMPOSITION-based report.

2.3 Misuse

Not to be used for reporting on non-pathology test results e.g. diagnostic imaging, ECG or respiratory function tests. Not to be used to represent an entire cumulative report. This Pathology test result DCM represents only one of the result sets that is usually viewed as a vertical in a cumulative test report. A cumulative report is a view that is constructed from the results represented by multiple DCMs. This DCM is suitable for representation of general pathology test results, but not intended to cover full synoptic reports. For these, additional specialising DCMs are required to represent the data.

2.4 PATHOLOGY TEST RESULT

Identification

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

Definition

Definition	Record the findings and interpretation of pathology tests performed on tissues and body fluids.
Definition Source	NEHTA
Synonymous Names	Lab test Pathology Biochemistry Haematology Microbiology Immunology
Notes	This data group may be used to record a single valued test, but will often be specialised or templated to represent multiple value or 'panel' tests. This DCM also acts as the parent for specialisations appropriate for more specific laboratory tests, e.g. microbiology, histopathology.

Data Hierarchy

PATHOLOGY TEST RESULT						
	Test Result Name (Pathology Test Result Name)					1..1
	Diagnostic Service					0..1
	Test Specimen Detail (PATHOLOGY TEST SPECIMEN DETAIL)					0..*
		Specimen Tissue Type				0..1
		Collection Procedure				0..1
		Anatomical Site (ANATOMICAL LOCATION)				0..*
			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..*
			Physical Details (PHYSICAL PROPERTIES OF AN OBJECT)			0..*
				Name (Physical Object Name)		0..1
				Weight		0..1
				DIMENSIONS		0..1
					Diameter	0..1
					Circumference	0..1
					Length	0..1
					Breadth	0..1
					Depth	0..1
					Area	0..1
					Volume	0..1
				Description (Object Description)		0..1
				Image		0..1
			NEEDLE BIOPSY CORE DETAILS			0..1

				Biopsy Core Needle Gauge	0..1
				Maximum Biopsy Core Length	0..1
				Number of Cores Received	0..1
			COLLECTION AND HANDLING		0..1
				Potential Risk / Biohazard	0..1
				Sampling Preconditions	0..1
				Number of Containers	0..1
				Collection Procedure Details	0..1
				Transport Medium	0..1
				Testing Method	0..1
				DEVICE	0..*
			HANDLING AND PROCESSING		0..1
				Date and Time of Collection (Collection DateTime)	0..1
				Collection Setting	0..1
				Date and Time of Receipt (DateTime Received)	0..1
				Date and Time Processed (DateTime Processed)	0..1
			SPECIMEN QUALITY		0..1
				Specimen Received Issues	0..*
				Laboratory Handling Issues	0..*
				Adequacy for Testing	0..1
				Comment (Specimen Quality Comment)	0..1
			IDENTIFIERS		0..1
				Specimen Identifier	0..1
				Parent Specimen Identifier	0..1

				Container Identifier		0..1
				Specimen Collector Identifier		0..1
				SPECIMEN COLLECTOR DETAILS		0..*
		Overall Test Result Status (Overall Pathology Test Result Status)				1..1
		Clinical Information Provided				0..1
		Result Group (PATHOLOGY TEST RESULT GROUP)				0..*
			Result Group Name (Pathology Test Result Group Name)			1..1
			Result (INDIVIDUAL PATHOLOGY TEST RESULT)			1..*
				Result Name (Individual Pathology Test Result Name)		1..1
				Result Value		0..1
				Result Value Normal Status		0..1
				RESULT VALUE REFERENCE RANGE DETAILS		0..*
					Result Value Reference Range Meaning	1..1
					Result Value Reference Range	1..1
				Result Comment		0..*
				Reference Range Guidance		0..1
				Result Status (Individual Pathology Test Result Status)		0..1
			Result Specimen Detail (RESULT GROUP SPECIMEN DETAIL)			0..1
				Specimen Tissue Type		0..1
				Collection Procedure		0..1
				Anatomical Site (ANATOMICAL LOCATION)		0..*
					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..*
				Physical Details (PHYSICAL PROPERTIES OF AN OBJECT)			0..*
					Name (Physical Object Name)		0..1
					Weight		0..1
					DIMENSIONS		0..1
						Diameter	0..1
						Circumference	0..1
						Length	0..1
						Breadth	0..1
						Depth	0..1
						Area	0..1
						Volume	0..1
					Description (Object Description)		0..1
					Image		0..1
				NEEDLE BIOPSY CORE DETAILS			0..1

					Biopsy Core Needle Gauge	0..1
					Maximum Biopsy Core Length	0..1
					Number of Cores Received	0..1
				COLLECTION AND HANDLING		0..1
					Potential Risk / Biohazard	0..1
					Sampling Preconditions	0..1
					Number of Containers	0..1
					Collection Procedure Details	0..1
					Transport Medium	0..1
					Testing Method	0..1
					DEVICE	0..*
				HANDLING AND PROCESSING		0..1
					Date and Time of Collection (Collection DateTime)	0..1
					Collection Setting	0..1
					Date and Time of Receipt (DateTime Received)	0..1
					Date and Time Processed (DateTime Processed)	0..1
				SPECIMEN QUALITY		0..1
					Specimen Received Issues	0..*
					Laboratory Handling Issues	0..*
					Adequacy for Testing	0..1
					Comment (Specimen Quality Comment)	0..1
				IDENTIFIERS		0..1
					Specimen Identifier	0..1
					Parent Specimen Identifier	0..1

					Container Identifier	0..1
					Specimen Collector Identifier	0..1
					SPECIMEN COLLECTOR DETAILS	0..*
		Pathological Diagnosis				0..*
		Conclusion (Pathology Test Conclusion)				0..1
		Test Result Representation				0..*
		Test Comment				0..1
		RECEIVING LABORATORY				0..*
		TEST REQUEST DETAILS				0..*
			Requester Order Identifier			0..1
			Test Requested Name			0..*
			REQUESTER			0..*
			Receiver Order Identifier			0..1
			Laboratory Test Result Identifier			0..1
		Test Procedure				0..*
		INFORMATION PROVIDER				0..1
		SUBJECT				0..1
		Pathology Test Result DateTime				1..1
		Pathology Test Result Duration				0..1

2.5 Pathology Test Result Name

Identification

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

Definition

Definition	Identification of the pathology test performed, sometimes including specimen type.
Definition Source	NEHTA
Notes	The test name can refer to a single test (e.g. HbA1c) or to a test group such as electrolytes, FBC or coagulation tests.
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	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	PATHOLOGY TEST RESULT	1..1	

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

2.6 Diagnostic Service

Identification

Label	Diagnostic Service
Metadata Type	Data Element
Identifier	DE-16149
OID	1.2.36.1.2001.1001.101.103.16149

Definition

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

Usage

Examples	1. Microbiology. 2. Haematology.

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	PATHOLOGY TEST RESULT	0..1	

2.7 Diagnostic Service Values

Identification

Label	Diagnostic Service Values
Metadata Type	Value Domain
Identifier	VD-16148
OID	1.2.36.1.2001.1001.101.104.16148
External Identifier	HL7 table 0074 - Diagnostic service section ID

Definition

Definition	The set of values for the type of high-level diagnostic service, e.g. biochemistry, haematology.
Definition Source	NEHTA

Value Domain

Source	HL7

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Diagnostic Service	1..1	

2.8 PATHOLOGY TEST SPECIMEN DETAIL

Identification

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

Definition

Definition	Details of a laboratory specimen.
Definition Source	NEHTA
Synonymous Names	collection laboratory specimen sample

Usage

Conditions of Use	This **SHOULD** be used where there is a single specimen for the entire pathology test.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	PATHOLOGY TEST RESULT	0..*	

Children

Data Type	Name	Occur-rences	Condi-tion
	Specimen Tissue Type	0..1	
	Collection Procedure	0..1	
	Anatomical Site (ANATOMICAL LOCATION)	0..*	
	Physical Details (PHYSICAL PROPERTIES OF AN OBJECT)	0..*	

Data Type	Name	Occur-rences	Condi-tion
	NEEDLE BIOPSY CORE DETAILS	0..1	
	COLLECTION AND HANDLING	0..1	
	HANDLING AND PROCESSING	0..1	
	SPECIMEN QUALITY	0..1	
	IDENTIFIERS	0..1	

2.9 Overall Pathology Test Result Status

Identification

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

Definition

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

Usage

Examples	1. Interim 2. Final

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	PATHOLOGY TEST RESULT	1..1	

2.10 Pathology Test Result Status Values

Identification

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

Definition

Definition	The set of values for the pathology test result status.
Definition Source	NEHTA

Value Domain

Source	NEHTA (outsourced from HL7 table 0085 - Observation result status codes interpretation, HL7 table 0123 - Result status and other sources).	
Permissible Values	at0008, Registered	No result yet available.
	at0009, Interim	This is an initial or interim result: data may be missing or verification not been performed.
	at0010, Final	The result is complete and verified by the responsible pathologist.
	at0011, Amended	The result has been modified subsequent to being Final, and is complete and verified by the responsible pathologist.
	at0012, Cancelled/Aborted	The result is unavailable because the test was not started or not completed.

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Overall Test Result Status (Overall Pathology Test Result Status)	1..1	

2.11 Clinical Information Provided

Identification

Label	Clinical Information Provided
Metadata Type	Data Element
Identifier	DE-16397
OID	1.2.36.1.2001.1001.101.103.16397

Definition

Definition	Description of clinical information available at the time of interpretation of results, or a link to the original clinical information provided in the test request.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	PATHOLOGY TEST RESULT	0..1	

2.12 PATHOLOGY TEST RESULT GROUP

Identification

Label	Result Group
Metadata Type	Data Group
Identifier	DG-16469
OID	1.2.36.1.2001.1001.101.102.16469

Definition

Definition	A group of results.
Definition Source	NEHTA
Synonymous Names	
Notes	Results may be grouped by specimen, or by some other name or code to describe what binds all the results together.

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	PATHOLOGY TEST RESULT	0..*	

Children

Data Type	Name	Occur-rences	Condi-tion
	Result Group Name (Pathology Test Result Group Name)	1..1	
	Result (INDIVIDUAL PATHOLOGY TEST RESULT)	1..*	
	Result Specimen Detail (RESULT GROUP SPECIMEN DETAIL)	0..1	

2.13 Pathology Test Result Group Name

Identification

Label	Result Group Name
Metadata Type	Data Element
Identifier	DE-16428
OID	1.2.36.1.2001.1001.101.103.16428

Definition

Definition	The name of a group of pathology test results.
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	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Result Group (PATHOLOGY TEST RESULT GROUP)	1..1	

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

2.14 INDIVIDUAL PATHOLOGY TEST RESULT

Identification

Label	Result
Metadata Type	Data Group
Identifier	DG-16489
OID	1.2.36.1.2001.1001.101.102.16489

Definition

Definition	Specific detailed result, including both the value of the result item, and additional information that may be useful for clinical interpretation.
Definition Source	NEHTA
Synonymous Names	
Notes	Results include whatever specific data items pathology labs report as part of the clinical service; it is not confined to measurements. The result is identified by *Individual Pathology Test Result Name.*

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Result Group (PATHOLOGY TEST RESULT GROUP)	1..*	

Children

Data Type	Name	Occur-rences	Condi-tion
	Result Name (Individual Pathology Test Result Name)	1..1	
	Result Value	0..1	
	Result Value Normal Status	0..1	
	RESULT VALUE REFERENCE RANGE DETAILS	0..*	
	Result Comment	0..*	

Data Type	Name	Occur-rences	Condi-tion
	Reference Range Guidance	0..1	
	Result Status (Individual Pathology Test Result Status)	0..1	

2.15 Individual Pathology Test Result Name

Identification

Label	Result Name
Metadata Type	Data Element
Identifier	DE-16571
OID	1.2.36.1.2001.1001.101.103.16571

Definition

Definition	The name of an individual pathology test result.
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*[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	1. Glucose. 2. Haemoglobin. 3. Phenotype. 4. Titre. 5. Scatterplot image.

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Result (INDIVIDUAL PATHOLOGY TEST RESULT)	1..1	

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

2.16 Result Value

Identification

Label	Result Value
Metadata Type	Data Element
Identifier	DE-11023
OID	1.2.36.1.2001.1001.101.103.11023

Definition

Definition	Actual value of the result.
Definition Source	NEHTA
Synonymous Names	
Notes	Most result values will be numerical measurements, but others may be coded concepts, free text, or multimedia images.
Data Type	CodeableText QuantityRange Quantity
Value Domain	Result Value Values

Usage

Examples	1. 140. 2. ++. 3. Neg.

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Result (INDIVIDUAL PATHOLOGY TEST RESULT)	0..1	

2.17 Result Value Values

Identification

Label	Result Value Values
Metadata Type	Value Domain
Identifier	VD-11023
OID	1.2.36.1.2001.1001.101.104.11023

Definition

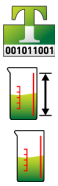
Definition	The set of values for the measured level/magnitude of the test result component.
Definition Source	NEHTA

Value Domain

Source	NEHTA

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Result Value	1..1	

2.18 Result Value Normal Status

Identification

Label	Result Value Normal Status
Metadata Type	Data Element
Identifier	DE-16572
OID	1.2.36.1.2001.1001.101.103.16572

Definition

Definition	Optional normal status indicator of value with respect to normal range for this value.
Definition Source	NEHTA
Synonymous Names	
Notes	Often included by lab, even if the normal range itself is not included.
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*[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	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Result (INDIVIDUAL PATHOLOGY TEST RESULT)	0..1	

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

2.19 RESULT VALUE REFERENCE RANGE DETAILS

Identification

Label	RESULT VALUE REFERENCE RANGE DETAILS
Metadata Type	Data Group
Identifier	DG-16325
OID	1.2.36.1.2001.1001.101.102.16325

Definition

Definition	Tagged reference ranges for this value in its particular measurement context.
Definition Source	NEHTA
Synonymous Names	
Notes	Defines a range to be associated with any Quantity datum. Each such range is particular to the patient and context, e.g. sex, age, and any other factor which affects ranges.

Usage

Conditions of Use	May be used to represent normal, therapeutic, dangerous, critical etc ranges.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Result (INDIVIDUAL PATHOLOGY TEST RESULT)	0..*	

Children

Data Type	Name	Occur-rences	Condi-tion
	Result Value Reference Range Meaning	1..1	
	Result Value Reference Range	1..1	

2.20 Result Value Reference Range Meaning

Identification

Label	Result Value 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	
Notes	Default value is "normal".
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. "Normal". 2. "Critical". 3. "Therapeutic".

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	RESULT VALUE REFERENCE RANGE DETAILS	1..1	

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

2.21 Result Value Reference Range

Identification

Label	Result Value Reference Range
Metadata Type	Data Element
Identifier	DE-16566
OID	1.2.36.1.2001.1001.101.103.16566

Definition

Definition	The data range for the associated meaning.
Definition Source	NEHTA
Synonymous Names	
Data Type	QuantityRange

Usage

Examples	1. 60-400 U/L (male) 2. 40-150 U/L (female)

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	RESULT VALUE REFERENCE RANGE DETAILS	1..1	

2.22 Result Comment

Identification

Label	Result Comment
Metadata Type	Data Element
Identifier	DE-16466
OID	1.2.36.1.2001.1001.101.103.16466

Definition

Definition	Comments that may include statements about significant, unexpected or unreliable values, or information about the source of the value where this may be relevant to the interpretation of the result.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Result (INDIVIDUAL PATHOLOGY TEST RESULT)	0..*	

2.23 Reference Range Guidance

Identification

Label	Reference Range Guidance
Metadata Type	Data Element
Identifier	DE-16467
OID	1.2.36.1.2001.1001.101.103.16467

Definition

Definition	Additional advice on the applicability of the reference range.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Result (INDIVIDUAL PATHOLOGY TEST RESULT)	0..1	

2.24 Individual Pathology Test Result Status

Identification

Label	Result Status
Metadata Type	Data Element
Identifier	DE-11029
OID	1.2.36.1.2001.1001.101.103.11029

Definition

Definition	The status of the result value.
Definition Source	NEHTA
Synonymous Names	
Notes	Allows a report with more than one result to be issued and for each result to have a different status associated with it. The status of a result is included within the report to inform the requester or receiver whether it is final or there is more to expect, or if amendments have been made. This indicates whether the results are able to be acted upon by the clinician.
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*[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. Corrected/Amended 2. Final 3. Interim 4. Preliminary 5. Supplementary

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

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Result (INDIVIDUAL PATHOLOGY TEST RESULT)	0..1	

2.25 RESULT GROUP SPECIMEN DETAIL

Identification

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

Definition

Definition	Details about the individual specimen to which these 'Result group' test results refer, where testing of multiple specimens is required.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Result Group (PATHOLOGY TEST RESULT GROUP)	0..1	

Children

Data Type	Name	Occur-rences	Condi-tion
	Specimen Tissue Type	0..1	
	Collection Procedure	0..1	
	Anatomical Site (ANATOMICAL LOCATION)	0..*	
	Physical Details (PHYSICAL PROPERTIES OF AN OBJECT)	0..*	
	NEEDLE BIOPSY CORE DETAILS	0..1	
	COLLECTION AND HANDLING	0..1	
	HANDLING AND PROCESSING	0..1	
	SPECIMEN QUALITY	0..1	

Data Type	Name	Occur-rences	Condi-tion
	IDENTIFIERS	0..1	

2.26 Pathological Diagnosis

Identification

Label	Pathological Diagnosis
Metadata Type	Data Element
Identifier	DE-16402
OID	1.2.36.1.2001.1001.101.103.16402

Definition

Definition	Single word, phrase or brief description representing the diagnostic statement as asserted by the reporting pathologist.
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	Occur-rences	Condi-tion
	PATHOLOGY TEST RESULT	0..*	

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

2.27 Pathology Test Conclusion

Identification

Label	Conclusion
Metadata Type	Data Element
Identifier	DE-16403
OID	1.2.36.1.2001.1001.101.103.16403

Definition

Definition	Concise and clinically contextualised narrative interpretation of the pathology test results.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	PATHOLOGY TEST RESULT	0..1	

2.28 Test Result Representation

Identification

Label	Test Result Representation
Metadata Type	Data Element
Identifier	DE-16159
OID	1.2.36.1.2001.1001.101.103.16159

Definition

Definition	Rich text representation of the entire result as issued by the diagnostic service. Multiple formats are allowed but they must be semantically equivalent.
Definition Source	NEHTA
Synonymous Names	
Notes	The report is a verbatim copy of the report as issued. The results reported may also, or instead, be supplied in a machine-readable structured form. As some structured pathology information is unable to be stored and displayed correctly by receiving systems at this time, some structured pathology information (such as microbiology results) are sent in the same way as free text or images. Resistance to structured formatting has been expressed in some quarters. These concerns may be due to the perceived difficulty in ensuring the results are maintained in their entirety as intended by the reporting provider. The nature and intent of DCMs to constrain information and provide context may help to alleviate this problem. In the meantime the NEHTA pathology data group has chosen to represent the non numerical pathology results as a single test result report data element. This is similar to the approach taken by NEHTA Pathology Result Report Structured Document Template [NEHT2009s], which is HL7 based.
Data Type	EncapsulatedData

Usage

Conditions of Use	Used for results unable to be sent and or received as structured information.
Conditions of Use Source	NEHTA
Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	PATHOLOGY TEST RESULT	0..*	

2.29 Test Comment

Identification

Label	Test Comment
Metadata Type	Data Element
Identifier	DE-16468
OID	1.2.36.1.2001.1001.101.103.16468

Definition

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

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	PATHOLOGY TEST RESULT	0..1	

2.30 RECEIVING LABORATORY

Identification

Label	RECEIVING LABORATORY
Metadata Type	Data Group
Identifier	DG-10296
OID	1.2.36.1.2001.1001.101.102.10296

Definition

Definition	Details of the laboratory with responsibility for the pathology test.
Definition Source	NEHTA
Synonymous Names	
Notes	Details of secondary laboratories may also be included. This does not necessarily have to be a person and, in particular, not a healthcare provider. Types of sources include: • the clinician; and • a device or software

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*. • Participation Type **SHALL** have a fixed value of “Receiving Laboratory”. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a PERSON or DEVICE.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	PATHOLOGY TEST RESULT	0..*	

2.31 TEST REQUEST DETAILS

Identification

Label	TEST REQUEST DETAILS
Metadata Type	Data Group
Identifier	DG-16160
OID	1.2.36.1.2001.1001.101.102.16160

Definition

Definition	Details concerning a single pathology test requested.
Definition Source	NEHTA
Synonymous Names	
Notes	Usually there is one test request for each result, however, in some circumstances multiple test requests may be represented using a single Pathology test result.

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	PATHOLOGY TEST RESULT	0..*	

Children

Data Type	Name	Occur-rences	Condi-tion
	Requester Order Identifier	0..1	
	Test Requested Name	0..*	
	REQUESTER	0..*	
	Receiver Order Identifier	0..1	
	Laboratory Test Result Identifier	0..1	

2.32 Requester Order Identifier

Identification

Label	Requester Order Identifier
Metadata Type	Data Element
Identifier	DE-11006
OID	1.2.36.1.2001.1001.101.103.11006

Definition

Definition	The local ID assigned to the order by the order requester.
Definition Source	NEHTA
Synonymous Names	Request Order Number Order Number Request Number (Requester)
Notes	The assigning of an identifier to a request by the clinical information system enables tracking progress of the request and enables linking results to requests. It also provides a reference to assist with enquiries. Request Order Identifier is equivalent to the Placer Order Identifier.
Data Type	UniqueIdentifier

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	TEST REQUEST DETAILS	0..1	

2.33 Test Requested Name

Identification

Label	Test Requested Name
Metadata Type	Data Element
Identifier	DE-16404
OID	1.2.36.1.2001.1001.101.103.16404

Definition

Definition	Identification of pathology test requested, where the test requested differs from the test actually performed.
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*[8] 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	Occur-rences	Condi-tion
	TEST REQUEST DETAILS	0..*	

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

2.34 REQUESTER

Identification

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

Definition

Definition	Details of the clinician or organisation requesting the laboratory test.
Definition Source	NEHTA
Synonymous Names	
Scope	Generally only used when the recorder needs to make it explicit. Otherwise, composer/author/organisation of the enclosing Structured Document is assumed.
Scope Source	NEHTA
Notes	This can be a person or an organisation. Types of sources include: • the clinician; and • a healthcare provider or organisation

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*. • Participation Type **SHALL** have a fixed value of “Requester”. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a PERSON or ORGANISATION.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	TEST REQUEST DETAILS	0..*	

2.35 Receiver Order Identifier

Identification

Label	Receiver Order Identifier
Metadata Type	Data Element
Identifier	DE-11007
OID	1.2.36.1.2001.1001.101.103.11007

Definition

Definition	The local ID assigned to the test order by the order filler, usually by the Laboratory Information System (LIS).
Definition Source	NEHTA
Synonymous Names	Request Number (Laboratory)
Context	The assigning of an identifier to a request by the laboratory Information system enables tracking progress of the request and enables linking results to requests. It also provides a reference to assist with enquiries.
Context Source	NEHTA
Assumptions	The laboratory Information system has functionality to assign an identifier to each request upon receipt. Receiver Order Identifier is Usually equivalent to the DICOM Accession Number and the Filler Order Identifier.
Assumptions Source	NEHTA
Data Type	UniqueIdentifier

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	TEST REQUEST DETAILS	0..1	

2.36 Laboratory Test Result Identifier

Identification

Label	Laboratory Test Result Identifier
Metadata Type	Data Element
Identifier	DE-11018
OID	1.2.36.1.2001.1001.101.103.11018

Definition

Definition	The identifier given to the laboratory test result of a pathology investigation.
Definition Source	NEHTA
Synonymous Names	Lab Number
Notes	The assignment of an identification code to a result allows the linking of a result to a request within the laboratory.
Data Type	UniqueIdentifier

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	TEST REQUEST DETAILS	0..1	

2.37 Test Procedure

Identification

Label	Test Procedure
Metadata Type	Data Element
Identifier	DE-16405
OID	1.2.36.1.2001.1001.101.102.16405

Definition

Definition	Additional structured details of pathology test methodology followed.
Definition Source	NEHTA
Synonymous Names	
Notes	Example is structured details about the laboratory method and data interpretation used. This free text data element is currently a placeholder for further structured data that is as yet undefined. See Appendix A, *Known Issues* for further information.
Data Type	Text

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	PATHOLOGY TEST RESULT	0..*	

2.38 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 laboratory test information.
Definition Source	NEHTA
Synonymous Names	
Notes	This does not necessarily have to be a person and, in particular, not 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*. • Participation Type **SHALL** have a fixed value of “Information Provider”. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a PERSON or as a DEVICE.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	PATHOLOGY TEST RESULT	0..1	

2.39 SUBJECT

Identification

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

Definition

Definition	The individual about whom the laboratory test information is being recorded.
Definition Source	NEHTA
Synonymous Names	
Scope	Generally only used when the recorder needs to make it explicit. Otherwise, subject of the enclosing Structured Document is assumed.
Scope Source	NEHTA
Notes	An example of use is: When the Subject of Care is the recipient of a donor organ, the SUBJECT of a Pathology Test Result could be the person from whom the organ was extracted.

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*. • Participation Type **SHALL** have a fixed value of “Subject”. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a PERSON.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	PATHOLOGY TEST RESULT	0..1	

2.40 Pathology Test Result DateTime

Identification

Label	Pathology Test Result DateTime
Metadata Type	Data Element
Identifier	DE-16605
OID	1.2.36.1.2001.1001.101.103.16605

Definition

Definition	The date and, optionally, time of the Pathology Test Result observation.
Definition Source	NEHTA
Synonymous Names	
Notes	If the *Pathology Test Result Duration* is non-zero, it is the time at which the Pathology Test Result observation was completed, i.e. the date (and time) of the trailing edge of the *Pathology Test Result Duration*.
Data Type	DateTime

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	PATHOLOGY TEST RESULT	1..1	

2.41 Pathology Test Result Duration

Identification

Label	Pathology Test Result Duration
Metadata Type	Data Element
Identifier	DE-16581
OID	1.2.36.1.2001.1001.101.103.16581

Definition

Definition	The duration over which the Pathology Test Result observation was taken.
Definition Source	NEHTA
Synonymous Names	
Data Type	Duration

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	PATHOLOGY TEST RESULT	0..1	

3 Specimen Data Group

3.1 Purpose

To record details of a laboratory specimen. Will often be used in different contexts e.g within an Instruction DCM to describe the specimen that has to be taken, or describing the specimen which accompanies the laboratory request. It may occur within an Action DCM e.g. describing specimens taken as part of a surgical procedure. It will finally be used within a Pathology Test DCM to describe the specimen being reported.

3.2 Use

Generally used within Pathology Test DCM and other laboratory related Instruction and Action DCMs.

3.3 PATHOLOGY TEST SPECIMEN DETAIL

Identification

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

Definition

Definition	Details of a laboratory specimen.
Definition Source	NEHTA
Synonymous Names	collection laboratory specimen sample

Usage

Conditions of Use	This **SHOULD** be used where there is a single specimen for the entire pathology test.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	PATHOLOGY TEST RESULT	0..*	

Children

Data Type	Name	Occur-rences	Condi-tion
	Specimen Tissue Type	0..1	
	Collection Procedure	0..1	
	Anatomical Site (ANATOMICAL LOCATION)	0..*	
	Physical Details (PHYSICAL PROPERTIES OF AN OBJECT)	0..*	

Data Type	Name	Occur-rences	Condi-tion
	NEEDLE BIOPSY CORE DETAILS	0..1	
	COLLECTION AND HANDLING	0..1	
	HANDLING AND PROCESSING	0..1	
	SPECIMEN QUALITY	0..1	
	IDENTIFIERS	0..1	

3.4 Specimen Tissue Type

Identification

Label	Specimen Tissue Type
Metadata Type	Data Element
Identifier	DE-11008
OID	1.2.36.1.2001.1001.101.103.11008

Definition

Definition	The type of specimen to be collected.
Definition Source	NEHTA
Synonymous Names	
Notes	The categorisation of the sample taken from an individual and submitted for pathology investigation.
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

Conditions of Use	This is the actual specimen being submitted to the laboratory for analysis.
Conditions of Use Source	NEHTA
Examples	1. Venous blood. 2. Prostatic biopsy. 3. Urine. 4. Sputum. 5. Scraping. 6. Catheter tip.

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

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Test Specimen Detail (PATHOLOGY TEST SPECIMEN DETAIL)	0..1	
	Result Specimen Detail (RESULT GROUP SPECIMEN DETAIL)	0..1	

3.5 Collection Procedure

Identification

Label	Collection Procedure
Metadata Type	Data Element
Identifier	DE-16111
OID	1.2.36.1.2001.1001.101.103.16111

Definition

Definition	The method of collection to be used.
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. Venepuncture 2. Biopsy 3. Resection

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Test Specimen Detail (PATHOLOGY TEST SPECIMEN DETAIL)	0..1	
	Result Specimen Detail (RESULT GROUP SPECIMEN DETAIL)	0..1	

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

3.6 ANATOMICAL LOCATION

Identification

Label	Anatomical Site
Metadata Type	Data Group
Identifier	DG-16150
OID	1.2.36.1.2001.1001.101.102.16150

Definition

Definition	The anatomical site from where the specimen was taken.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Test Specimen Detail (PATHOLOGY TEST SPECIMEN DETAIL)	0..*	
	Result Specimen Detail (RESULT GROUP SPECIMEN DETAIL)	0..*	

Children

Data Type	Name	Occur-rences	Condi-tion
	SPECIFIC LOCATION	0..1	
	RELATIVE LOCATION	0..*	
	Description (Anatomical Location Description)	0..*	
	Visual Markings/Orientation	0..*	
	Image (Anatomical Location Image)	0..*	

3.7 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	Occur-rences	Condi-tion
	Anatomical Site (ANATOMICAL LOCATION)	0..1	

Children

Data Type	Name	Occur-rences	Condi-tion
	Name of Location (Anatomical Location Name)	0..1	
	Side	0..1	
	Numerical Identifier	0..1	
	Anatomical Plane	0..1	

3.8 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 an anatomical location.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodeableText
Value Domain	Body Structure Foundation Reference Set

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	SPECIFIC LOCATION	0..1	

3.9 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	Occur-rences	Condi-tion
	Name of Location (Anatomical Location Name)	1..1	

3.10 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 an anatomical location.
Definition Source	NEHTA
Synonymous Names	Laterality
Data Type	CodedText
Value Domain	Laterality Reference Set

Usage

Examples	1. Right. 2. Left. 3. Bilalteral.

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	SPECIFIC LOCATION	0..1	

3.11 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 laterality of an anatomical location.
Definition Source	NEHTA

Value Domain

Source	SNOMED CT-AU

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Side	1..1	

3.12 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	Identify the specific anatomical site out of 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*[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

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'

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

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	SPECIFIC LOCATION	0..1	

3.13 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*[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. Midline. 2. Midclavicular. 3. Midaxillary. 4. Midscapular.

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	SPECIFIC LOCATION	0..1	

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

3.14 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	Qualifiers to identify 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	Occur-rences	Condi-tion
	Anatomical Site (ANATOMICAL LOCATION)	0..*	

Children

Data Type	Name	Occur-rences	Condi-tion
	Identified Landmark	0..1	
	Aspect (Anatomical Location Aspect)	0..1	
	Distance From Landmark	0..1	

3.15 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 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*[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	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	RELATIVE LOCATION	0..1	

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

3.16 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*[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. 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 medial 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.

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

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

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	RELATIVE LOCATION	0..1	

3.17 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	Occur-rences	Condi-tion
	RELATIVE LOCATION	0..1	

3.18 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 anatomical location.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Anatomical Site (ANATOMICAL LOCATION)	0..*	

3.19 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	Occur-rences	Condi-tion
	Anatomical Site (ANATOMICAL LOCATION)	0..*	

3.20 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	Image or images used to identify a location.
Definition Source	NEHTA
Synonymous Names	
Context	This element is intended to be an image, e.g. 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	Occur-rences	Condi-tion
	Anatomical Site (ANATOMICAL LOCATION)	0..*	

3.21 PHYSICAL PROPERTIES OF AN OBJECT

Identification

Label	Physical Details
Metadata Type	Data Group
Identifier	DG-16166
OID	1.2.36.1.2001.1001.101.102.16166

Definition

Definition	Record of physical details such as weight and dimenstions, of a body part, device, device, lesion or specimen.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Test Specimen Detail (PATHOLOGY TEST SPECIMEN DETAIL)	0..*	
	Result Specimen Detail (RESULT GROUP SPECIMEN DETAIL)	0..*	

Children

Data Type	Name	Occur-rences	Condi-tion
	Name (Physical Object Name)	0..1	
	Weight	0..1	
	DIMENSIONS	0..1	
	Description (Object Description)	0..1	
	Image	0..1	

3.22 Physical Object Name

Identification

Label	Name
Metadata Type	Data Element
Identifier	DE-16326
OID	1.2.36.1.2001.1001.101.103.16326

Definition

Definition	The object concerned.
Definition Source	NEHTA
Synonymous Names	
Notes	May be a body part, device or specimen.
Data Type	Text

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Physical Details (PHYSICAL PROPERTIES OF AN OBJECT)	0..1	

3.23 Weight

Identification

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

Definition

Definition	Weight of the object.
Definition Source	NEHTA
Synonymous Names	
Data Type	Quantity

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Physical Details (PHYSICAL PROPERTIES OF AN OBJECT)	0..1	

3.24 DIMENSIONS

Identification

Label	DIMENSIONS
Metadata Type	Data Group
Identifier	DG-16328
OID	1.2.36.1.2001.1001.101.102.16328

Definition

Definition	The dimensions of the object.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Physical Details (PHYSICAL PROPERTIES OF AN OBJECT)	0..1	

Children

Data Type	Name	Occur-rences	Condi-tion
	Diameter	0..1	
	Circumference	0..1	
	Length	0..1	
	Breadth	0..1	
	Depth	0..1	
	Area	0..1	
	Volume	0..1	

3.25 Diameter

Identification

Label	Diameter
Metadata Type	Data Element
Identifier	DE-16329
OID	1.2.36.1.2001.1001.101.103.16329

Definition

Definition	Diameter of the object.
Definition Source	NEHTA
Synonymous Names	
Data Type	Quantity

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	DIMENSIONS	0..1	

3.26 Circumference

Identification

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

Definition

Definition	Circumference of the object.
Definition Source	NEHTA
Synonymous Names	
Data Type	Quantity

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	DIMENSIONS	0..1	

3.27 Length

Identification

Label	Length
Metadata Type	Data Element
Identifier	DE-16331
OID	1.2.36.1.2001.1001.101.103.16331

Definition

Definition	Length of the object.
Definition Source	NEHTA
Synonymous Names	
Data Type	Quantity

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	DIMENSIONS	0..1	

3.28 Breadth

Identification

Label	Breadth
Metadata Type	Data Element
Identifier	DE-16332
OID	1.2.36.1.2001.1001.101.103.16332

Definition

Definition	The measure or dimension from side to side.
Definition Source	NEHTA
Synonymous Names	
Data Type	Quantity

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	DIMENSIONS	0..1	

3.29 Depth

Identification

Label	Depth
Metadata Type	Data Element
Identifier	DE-16333
OID	1.2.36.1.2001.1001.101.103.16333

Definition

Definition	Depth of the object.
Definition Source	NEHTA
Synonymous Names	
Data Type	Quantity

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	DIMENSIONS	0..1	

3.30 Area

Identification

Label	Area
Metadata Type	Data Element
Identifier	DE-16334
OID	1.2.36.1.2001.1001.101.103.16334

Definition

Definition	The amount of two-dimensional space, typically a measure of the outermost surface of an object.
Definition Source	NEHTA
Synonymous Names	
Data Type	Quantity

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	DIMENSIONS	0..1	

3.31 Volume

Identification

Label	Volume
Metadata Type	Data Element
Identifier	DE-16335
OID	1.2.36.1.2001.1001.101.103.16335

Definition

Definition	Volume of the object.
Definition Source	NEHTA
Synonymous Names	
Data Type	Quantity

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	DIMENSIONS	0..1	

3.32 Object Description

Identification

Label	Description
Metadata Type	Data Element
Identifier	DE-16621
OID	1.2.36.1.2001.1001.101.103.16621

Definition

Definition	A general description of the specimen preparation.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Physical Details (PHYSICAL PROPERTIES OF AN OBJECT)	0..1	

3.33 Image

Identification

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

Definition

Definition	A picture of the specimen.
Definition Source	NEHTA
Synonymous Names	
Data Type	EncapsulatedData

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Physical Details (PHYSICAL PROPERTIES OF AN OBJECT)	0..1	

3.34 NEEDLE BIOPSY CORE DETAILS

Identification

Label	NEEDLE BIOPSY CORE DETAILS
Metadata Type	Data Group
Identifier	DG-16161
OID	1.2.36.1.2001.1001.101.102.16161

Definition

Definition	Details of the needle used to take a needle biopsy.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Test Specimen Detail (PATHOLOGY TEST SPECIMEN DETAIL)	0..1	
	Result Specimen Detail (RESULT GROUP SPECIMEN DETAIL)	0..1	

Children

Data Type	Name	Occur-rences	Condi-tion
	Biopsy Core Needle Gauge	0..1	
	Maximum Biopsy Core Length	0..1	
	Number of Cores Received	0..1	

3.35 Biopsy Core Needle Gauge

Identification

Label	Biopsy Core Needle Gauge
Metadata Type	Data Element
Identifier	DE-16163
OID	1.2.36.1.2001.1001.101.103.16163

Definition

Definition	The diameter of the core obtained via needle biopsy expressed using the needle gauge used to take the specimen.
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*[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	Occur-rences	Condi-tion
	NEEDLE BIOPSY CORE DETAILS	0..1	

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

3.36 Maximum Biopsy Core Length

Identification

Label	Maximum Biopsy Core Length
Metadata Type	Data Element
Identifier	DE-16164
OID	1.2.36.1.2001.1001.101.103.16164

Definition

Definition	The length of the core obtained by needle biopsy.
Definition Source	NEHTA
Synonymous Names	
Data Type	Quantity

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	NEEDLE BIOPSY CORE DETAILS	0..1	

3.37 Number of Cores Received

Identification

Label	Number of Cores Received
Metadata Type	Data Element
Identifier	DE-16165
OID	1.2.36.1.2001.1001.101.103.16165

Definition

Definition	The number of needle biopsy cores received.
Definition Source	NEHTA
Synonymous Names	
Data Type	Integer

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	NEEDLE BIOPSY CORE DETAILS	0..1	

3.38 COLLECTION AND HANDLING

Identification

Label	COLLECTION AND HANDLING
Metadata Type	Data Group
Identifier	DG-16167
OID	1.2.36.1.2001.1001.101.102.16167

Definition

Definition	Collection and handling requirements.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Test Specimen Detail (PATHOLOGY TEST SPECIMEN DETAIL)	0..1	
	Result Specimen Detail (RESULT GROUP SPECIMEN DETAIL)	0..1	

Children

Data Type	Name	Occur-rences	Condi-tion
	Potential Risk / Biohazard	0..1	
	Sampling Preconditions	0..1	
	Number of Containers	0..1	
	Collection Procedure Details	0..1	
	Transport Medium	0..1	
	Testing Method	0..1	
	DEVICE	0..*	

3.39 Potential Risk / Biohazard

Identification

Label	Potential Risk / Biohazard
Metadata Type	Data Element
Identifier	DE-16169
OID	1.2.36.1.2001.1001.101.103.16169

Definition

Definition	Any risk or biohazard associated with collecting or handling the specimen.
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*[8] 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	Occur-rences	Condi-tion
	COLLECTION AND HANDLING	0..1	

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

3.40 Sampling Preconditions

Identification

Label	Sampling Preconditions
Metadata Type	Data Element
Identifier	DE-16171
OID	1.2.36.1.2001.1001.101.103.16171

Definition

Definition	Any conditions to be met before the sample should be taken.
Definition Source	NEHTA
Synonymous Names	
Notes	Can also be used to document any known deviations from collection or handling instructions, e.g patient was not fasted. Examples include fasting, 'full bladder', 'sterile field' or any special instructions on the handling or immediate processing of the sample e.g. centrifuge on receipt.
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*[9] 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	Occur-rences	Condi-tion
	COLLECTION AND HANDLING	0..1	

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

3.41 Number of Containers

Identification

Label	Number of Containers
Metadata Type	Data Element
Identifier	DE-16526
OID	1.2.36.1.2001.1001.101.103.16526

Definition

Definition	The total number of containers holding this specimen.
Definition Source	NEHTA
Synonymous Names	
Data Type	Integer

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	COLLECTION AND HANDLING	0..1	

3.42 Collection Procedure Details

Identification

Label	Collection Procedure Details
Metadata Type	Data Element
Identifier	DE-16527
OID	1.2.36.1.2001.1001.101.103.16527

Definition

Definition	Additional detailed description of method of sample collection.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	COLLECTION AND HANDLING	0..1	

3.43 Transport Medium

Identification

Label	Transport Medium
Metadata Type	Data Element
Identifier	DE-16173
OID	1.2.36.1.2001.1001.101.103.16173

Definition

Definition	Any special preservative or transport medium requirements.
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*[10] 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	Occur-rences	Condi-tion
	COLLECTION AND HANDLING	0..1	

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

3.44 Testing Method

Identification

Label	Testing Method
Metadata Type	Data Element
Identifier	DE-11025
OID	1.2.36.1.2001.1001.101.103.11025

Definition

Definition	The test method used to arrive at result.
Definition Source	NEHTA
Synonymous Names	
Notes	The method used has a critical impact in the comparability of results. A decision on diagnosis can be affected by the method used based on the likelihood of false or true positives and negatives related to sensitivities and specificities of tests. This is associated with the result observable name. The method is chosen by the performing pathologist and/or pathology laboratory. This may be recorded or reported at whole test level or for an individual result.
Data Type	CodeableText
Value Domain	Testing Method Reference Set

Usage

Conditions of Use	To be used to describe method used, especially in cases where the method has a bearing on the result interpretation.
Conditions of Use Source	NEHTA
Examples	1. 54826005 - Chromatography measurement 2. 117259009 - Microscopy

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	COLLECTION AND HANDLING	0..1	

3.45 Testing Method Reference Set

Identification

Label	Testing Method Reference Set
Metadata Type	Value Domain
Identifier	VD-11025
OID	1.2.36.1.2001.1001.101.104.11025
External Identifier	SNOMED CT-AU Concept Id: 3021000036100

Definition

Definition	The set of values for the specific method(s) used by the laboratory to perform the analyses and produce the reported test results.
Definition Source	NEHTA

Value Domain

Source	SNOMED CT-AU

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Testing Method	1..1	

3.46 DEVICE

Identification

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

Definition

Definition	Details of the device used to perform the test.
Definition Source	NEHTA
Synonymous Names	
Scope	Generally only used when the recorder needs to make it explicit. Otherwise, device of the enclosing Structured Document is assumed.
Scope Source	NEHTA

Usage

Conditions of Use	This SHALL NOT be used unless the device is different to the Device 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*. • Participation Type **SHALL** have a fixed value of “Device”. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a DEVICE.
Conditions of Use Source	NEHTA

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	COLLECTION AND HANDLING	0..*	

3.47 HANDLING AND PROCESSING

Identification

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

Definition

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

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Test Specimen Detail (PATHOLOGY TEST SPECIMEN DETAIL)	0..1	
	Result Specimen Detail (RESULT GROUP SPECIMEN DETAIL)	0..1	

Children

Data Type	Name	Occur-rences	Condi-tion
	Date and Time of Collection (Collection DateTime)	0..1	
	Collection Setting	0..1	
	Date and Time of Receipt (DateTime Received)	0..1	
	Date and Time Processed (DateTime Processed)	0..1	

3.48 Collection DateTime

Identification

Label	Date and Time of Collection
Metadata Type	Data Element
Identifier	DE-11013
OID	1.2.36.1.2001.1001.101.103.11013

Definition

Definition	The date and time that collection has been ordered to take place or has taken place.
Definition Source	NEHTA
Synonymous Names	Collected Date/Time
Notes	This provides a point in time reference for linking of result data to request data, and a point in time reference within a health record that the clinician may refer to.
Data Type	DateTime

Usage

Examples	See: Appendix B, *Specification Guide for Use*.

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	HANDLING AND PROCESSING	0..1	

3.49 Collection Setting

Identification

Label	Collection Setting
Metadata Type	Data Element
Identifier	DE-16529
OID	1.2.36.1.2001.1001.101.103.16529

Definition

Definition	Identification of the setting at which the specimen was collected from a subject of care.
Definition Source	NEHTA
Synonymous Names	
Notes	The specimen is often collected by a healthcare provider, but may be collected directly by the patient or carer at home. This specifies the specimen collection location within the healthcare environment. It enables the laboratory to ask questions about the collection of the specimen, if required. The specimen collection setting may provide additional information relevant to the analysis of the result data.
Data Type	Text

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	HANDLING AND PROCESSING	0..1	

3.50 DateTime Received

Identification

Label	Date and Time of Receipt
Metadata Type	Data Element
Identifier	DE-11014
OID	1.2.36.1.2001.1001.101.103.11014

Definition

Definition	The date and time that the sample was received at the laboratory.
Definition Source	NEHTA
Synonymous Names	Received Date/Time
Notes	This provides a point in time reference for linking of result data to request data, and a point in time reference within a health record that the clinician may refer to.
Data Type	DateTime

Usage

Examples	See: Appendix B, *Specification Guide for Use*.

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	HANDLING AND PROCESSING	0..1	

3.51 DateTime Processed

Identification

Label	Date and Time Processed
Metadata Type	Data Element
Identifier	DE-16176
OID	1.2.36.1.2001.1001.101.103.16176

Definition

Definition	The date and time that the specimen was processed by the laboratory.
Definition Source	NEHTA
Synonymous Names	
Data Type	DateTime

Usage

Examples	See: Appendix B, *Specification Guide for Use*.

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	HANDLING AND PROCESSING	0..1	

3.52 SPECIMEN QUALITY

Identification

Label	SPECIMEN QUALITY
Metadata Type	Data Group
Identifier	DG-16530
OID	1.2.36.1.2001.1001.101.102.16530

Definition

Definition	An assessment of the quality of the specimen received by pathology services, especially regarding the suitability of the specimen for testing or analysis.
Definition Source	NEHTA
Synonymous Names	
Notes	Assessment of quality is important for proper analysis to be done by the pathology laboratory. If a tissue sample is crushed or too small, assessment will not be optimal, so an indication of the quality of the sample must be given. This data group provides an indication of whether the specimen is suitable for the required laboratory testing.

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Test Specimen Detail (PATHOLOGY TEST SPECIMEN DETAIL)	0..1	
	Result Specimen Detail (RESULT GROUP SPECIMEN DETAIL)	0..1	

Children

Data Type	Name	Occur-rences	Condi-tion
	Specimen Received Issues	0..*	
	Laboratory Handling Issues	0..*	
	Adequacy for Testing	0..1	
	Comment (Specimen Quality Comment)	0..1	

3.53 Specimen Received Issues

Identification

Label	Specimen Received Issues
Metadata Type	Data Element
Identifier	DE-16178
OID	1.2.36.1.2001.1001.101.103.16178

Definition

Definition	Specific issue with a received specimen.
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*[11] 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. Haemolysed: The specimen was haemolysed. 2. Lipaemic: The specimen was lipaemic. 3. Incorrect transport medium: An incorrect preservative was used when transporting the specimen. 4. Insufficient sample: An insufficient sample was given to undertake measurement.

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	SPECIMEN QUALITY	0..*	

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

3.54 Laboratory Handling Issues

Identification

Label	Laboratory Handling Issues
Metadata Type	Data Element
Identifier	DE-16182
OID	1.2.36.1.2001.1001.101.103.16182

Definition

Definition	Issue arising with handling or processing of the specimen within the laboratory.
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*[12] 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. Handling error: An error arose when handling the specimen. 2. Age: The specimen was too old to analyse accurately. 3. Laboratory accident: An accident occurred with the sample in the laboratory. 4. Technical failure: The specimen could not be analysed for technical reasons.

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	SPECIMEN QUALITY	0..*	

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

3.55 Adequacy for Testing

Identification

Label	Adequacy for Testing
Metadata Type	Data Element
Identifier	DE-16183
OID	1.2.36.1.2001.1001.101.103.16183

Definition

Definition	Is the specimen adequate for testing?
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*[13] 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. Satisfactory: The specimen is of sufficient quality to allow reporting. 2. Unsatisfactory - processed: The specimen is unsatisfactory but has been processed. 3. Unsatisfactory - not processed: The specimen is unsatisfactory and has not been processed.

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	SPECIMEN QUALITY	0..1	

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

3.56 Specimen Quality Comment

Identification

Label	Comment
Metadata Type	Data Element
Identifier	DE-16181
OID	1.2.36.1.2001.1001.101.103.16181

Definition

Definition	An additional text comment on the quality of the received specimen.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	SPECIMEN QUALITY	0..1	

3.57 IDENTIFIERS

Identification

Label	IDENTIFIERS
Metadata Type	Data Group
Identifier	DG-16186
OID	1.2.36.1.2001.1001.101.102.16186

Definition

Definition	Sample identifications.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	Test Specimen Detail (PATHOLOGY TEST SPECIMEN DETAIL)	0..1	
	Result Specimen Detail (RESULT GROUP SPECIMEN DETAIL)	0..1	

Children

Data Type	Name	Occur-rences	Condi-tion
	Specimen Identifier	0..1	
	Parent Specimen Identifier	0..1	
	Container Identifier	0..1	
	Specimen Collector Identifier	0..1	
	SPECIMEN COLLECTOR DETAILS	0..*	

3.58 Specimen Identifier

Identification

Label	Specimen Identifier
Metadata Type	Data Element
Identifier	DE-11012
OID	1.2.36.1.2001.1001.101.103.11012

Definition

Definition	Unique identifier of the specimen, normally assigned by the laboratory.
Definition Source	NEHTA
Synonymous Names	
Notes	The assignment of an identification code to a specimen allows the tracking of the specimen through receipt, processing, analysis, reporting and storage within the laboratory. This identifier may be placed on several vials of the same specimen type collected at the same time as in the case of blood vials.
Data Type	UniqueIdentifier

Usage

Conditions of Use	It is desirable that each specimen has an identifier.
Conditions of Use Source	NEHTA
Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	IDENTIFIERS	0..1	

3.59 Parent Specimen Identifier

Identification

Label	Parent Specimen Identifier
Metadata Type	Data Element
Identifier	DE-16187
OID	1.2.36.1.2001.1001.101.103.16187

Definition

Definition	Unique identifier of the parent specimen, where the specimen is split into sub-samples.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	IDENTIFIERS	0..1	

3.60 Container Identifier

Identification

Label	Container Identifier
Metadata Type	Data Element
Identifier	DE-16188
OID	1.2.36.1.2001.1001.101.103.16188

Definition

Definition	Unique identifier given to the container in which the specimen is transported or processed.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	IDENTIFIERS	0..1	

3.61 Specimen Collector Identifier

Identification

Label	Specimen Collector Identifier
Metadata Type	Data Element
Identifier	DE-16534
OID	1.2.36.1.2001.1001.101.103.16534

Definition

Definition	Identifier of the person or agency responsible for collecting the specimen.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Examples	

Relationships

Parents

Data Type	Name	Occur-rences	Condi-tion
	IDENTIFIERS	0..1	

3.62 SPECIMEN COLLECTOR DETAILS

Identification

Label	SPECIMEN COLLECTOR DETAILS
Metadata Type	Data Group
Identifier	DG-10296
OID	1.2.36.1.2001.1001.101.102.10296

Definition

Definition	The person or organisation responsible for collecting the specimen.
Definition Source	NEHTA
Synonymous Names	
Notes	This can be a person or an organisation. Types of sources include: • the clinician; and • a healthcare provider or organisation

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*. • Participation Type **SHALL** have a fixed value of “Specimen Collector Details”. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a PERSON or ORGANISATION.
Conditions of Use Source	NEHTA

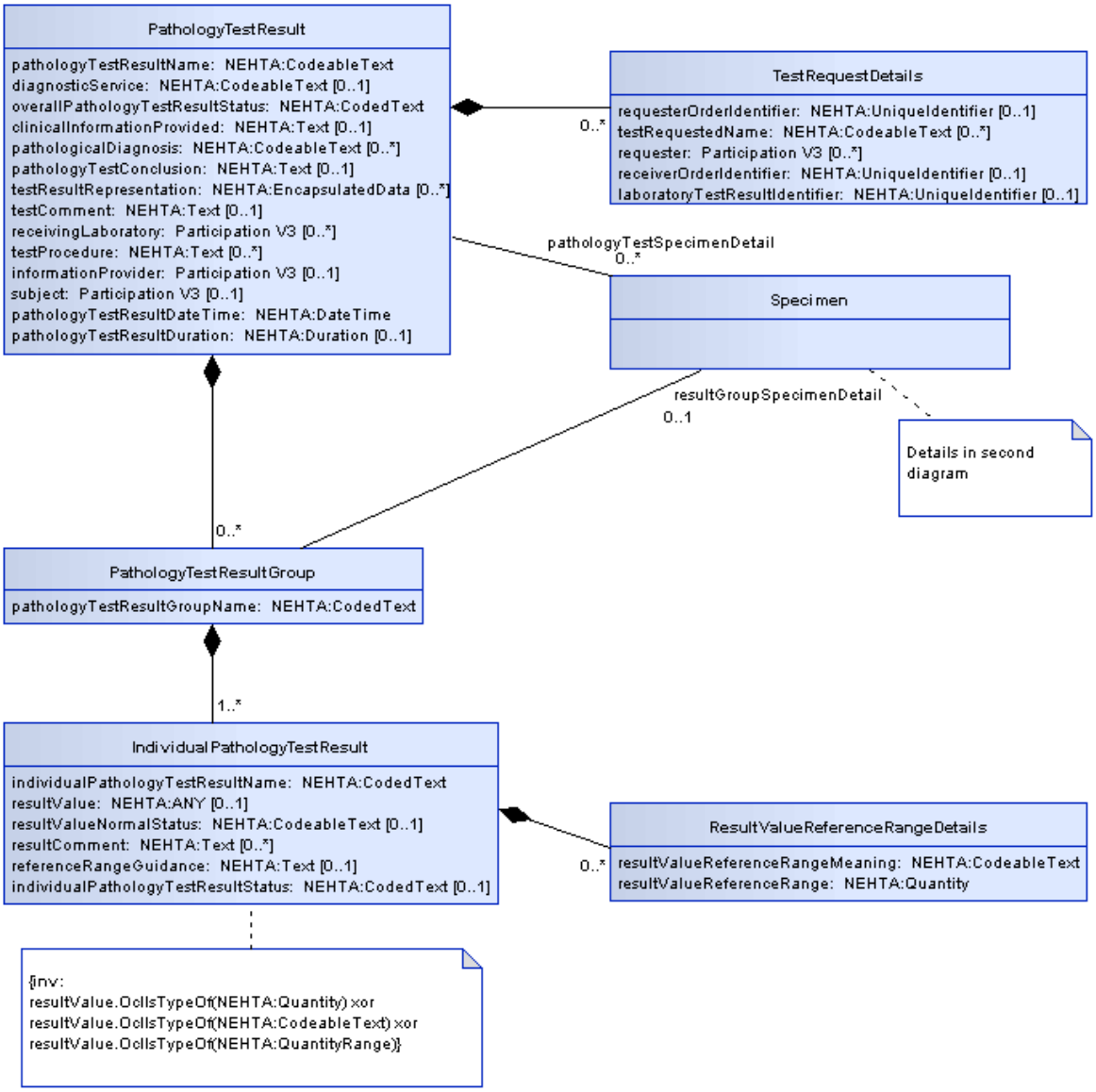
Relationships

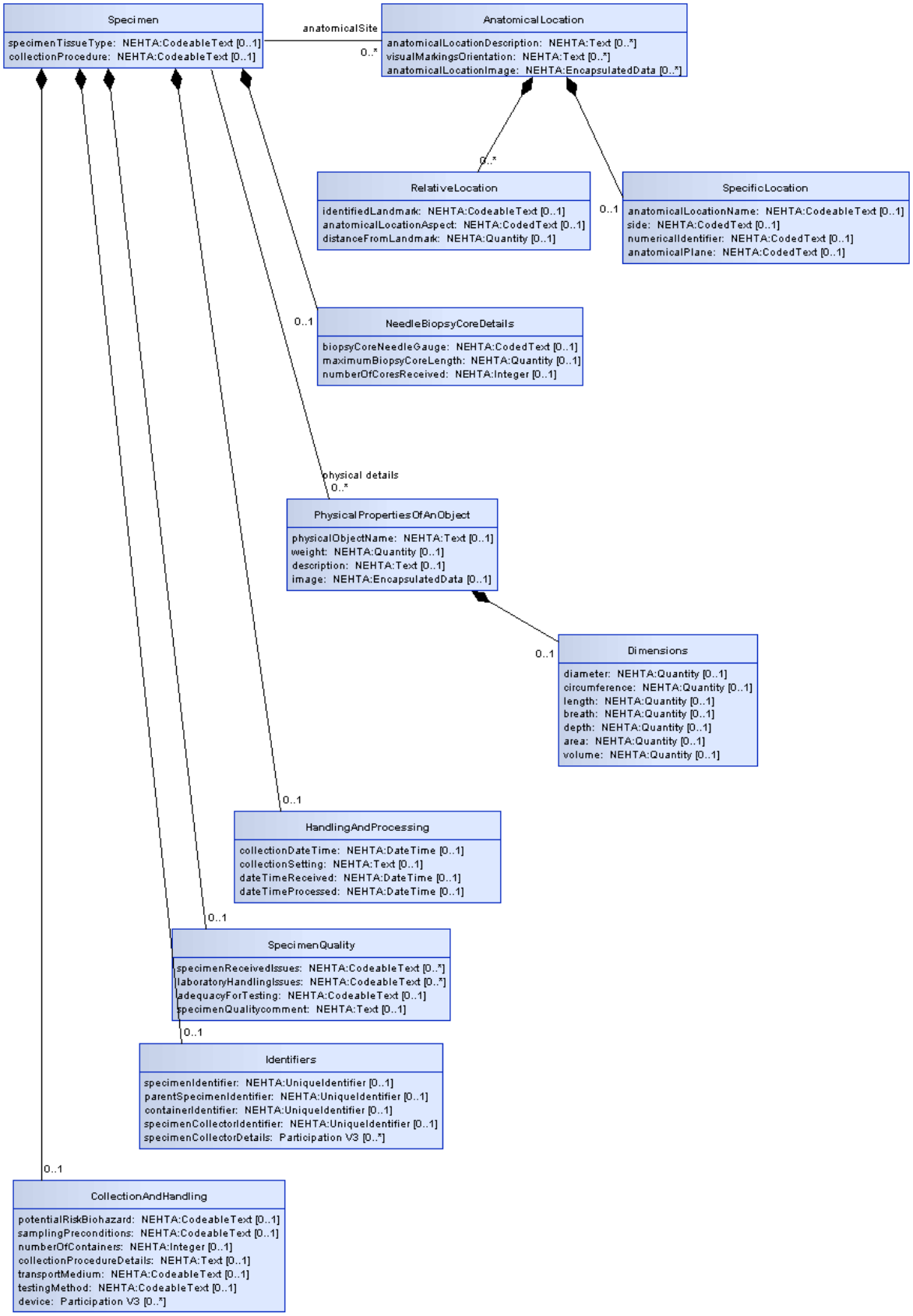
Parents

Data Type	Name	Occur-rences	Condi-tion
	IDENTIFIERS	0..*	

4 UML Diagram

The following figure presents the data hierarchy using a UML 2.0 class diagram. The diagram displays data groups and data elements, together with their names, data types and multiplicities. Data elements are displayed as attributes. Data groups are displayed as classes, their 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.




Specimen
specimenTissueType: NEHTA:CodeableText [0..1]
collectionProcedure: NEHTA:CodeableText [0..1]
anatomicalSite
0..*
AnatomicalLocation
anatomicalLocationDescription: NEHTA:Text [0..*]
visualMarkingsOrientation: NEHTA:Text [0..*]
anatomicalLocationImage: NEHTA:EncapsulatedData [0..*]
0..*
RelativeLocation
identifiedLandmark: NEHTA:CodeableText [0..1]
anatomicalLocationAspect: NEHTA:CodedText [0..1]
distanceFromLandmark: NEHTA:Quantity [0..1]
0..1
SpecificLocation
anatomicalLocationName: NEHTA:CodeableText [0..1]
side: NEHTA:CodedText [0..1]
numericalIdentifier: NEHTA:CodedText [0..1]
anatomicalPlane: NEHTA:CodedText [0..1]
0..1
NeedleBiopsyCoreDetails
biopsyCoreNeedleGauge: NEHTA:CodedText [0..1]
maximumBiopsyCoreLength: NEHTA:Quantity [0..1]
numberOfCoresReceived: NEHTA:Integer [0..1]
physical details
0..*
PhysicalPropertiesOfAnObject
physicalObjectName: NEHTA:Text [0..1]
weight: NEHTA:Quantity [0..1]
description: NEHTA:Text [0..1]
image: NEHTA:EncapsulatedData [0..1]
0..1
Dimensions
diameter: NEHTA:Quantity [0..1]
circumference: NEHTA:Quantity [0..1]
length: NEHTA:Quantity [0..1]
breath: NEHTA:Quantity [0..1]
depth: NEHTA:Quantity [0..1]
area: NEHTA:Quantity [0..1]
volume: NEHTA:Quantity [0..1]
0..1
HandlingAndProcessing
collectionDateTime: NEHTA:DateTime [0..1]
collectionSetting: NEHTA:Text [0..1]
dateTimeReceived: NEHTA:DateTime [0..1]
dateTimeProcessed: NEHTA:DateTime [0..1]
0..1
SpecimenQuality
specimenReceivedIssues: NEHTA:CodeableText [0..*]
laboratoryHandlingIssues: NEHTA:CodeableText [0..*]
adequacyForTesting: NEHTA:CodeableText [0..1]
specimenQualitycomment: NEHTA:Text [0..1]
0..1
Identifiers
specimenIdentifier: NEHTA:UniqueIdentifier [0..1]
parentSpecimenIdentifier: NEHTA:UniqueIdentifier [0..1]
containerIdentifier: NEHTA:UniqueIdentifier [0..1]
specimenCollectorIdentifier: NEHTA:UniqueIdentifier [0..1]
specimenCollectorDetails: Participation V3 [0..*]
0..1
CollectionAndHandling
potentialRiskBiohazard: NEHTA:CodeableText [0..1]
samplingPreconditions: NEHTA:CodeableText [0..1]
numberOfContainers: NEHTA:Integer [0..1]
collectionProcedureDetails: NEHTA:Text [0..1]
transportMedium: NEHTA:CodeableText [0..1]
testingMethod: NEHTA:CodeableText [0..1]
device: Participation V3 [0..*]

Reference List

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[NEHT2009s] National E-Health Transition Authority, 30 June 2009, *Pathology Result Report Structured Document Template*, Version 1.0, accessed 26 August 2010.
http://www.nehta.gov.au/component/docman/doc_download/776-pathology-result-report-structured-document-template-v10-20090630

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[RFC2119] Network Working Group, 1997, *RFC2119 - Key words for use in RFCs to Indicate Requirement Levels*, accessed 13 April 2010.
http://www.faqs.org/rfcs/rfc2119.html

[SA2006a] Standards Australia, 2006, *AS 4846 (2006) – Healthcare Provider Identification*, accessed 12 November 2009.
http://infostore.saiglobal.com/store/Details.aspx?ProductID=318554

[SA2006b] Standards Australia, 2006, *AS 5017 (2006) – Healthcare Client Identification*, accessed 12 November 2009.
http://infostore.saiglobal.com/store/Details.aspx?ProductID=320426

Appendix A. Known Issues

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

Reference	Description
Data Hierarchy	This detailed clinical model has not yet been fully mapped to HL7 CDA. Mapping to CDA may reveal inconsistencies in the data hierarchy requiring normative change.
Undefined Value Domains	The following data elements lack a defined value domain: 'Pathology Test Result Group Name', 'Individual Pathology Test Result Name', 'Individual Pathology Test Result Status', 'Numerical Identifier', 'Anatomical Plane', 'Anatomical Location Aspect', 'Biopsy Core Needle Gauge' 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.

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

A DCM can be considered as a Data Group with no parent.

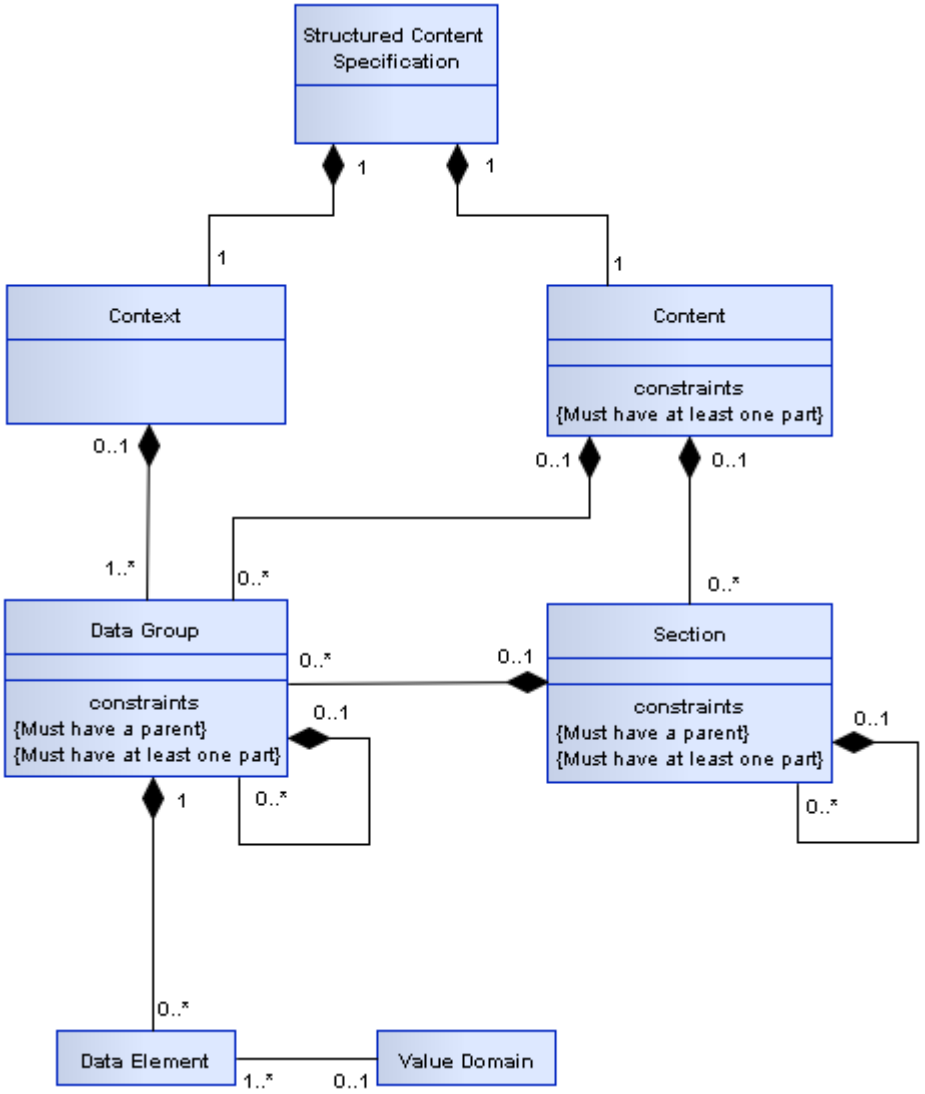

Figure 1: SCS Metamodel

There are two main components used to organise information within a Structured Content Specification (SCS) as follows:

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

Content: This contains information, which 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

The Content contains a collection of health information pertinent to a subject of care which is derived from the healthcare event described in the document. The detail **MAY** be organised into one or more sections, each of which contains one or more data groups and/or possible data elements.

Section

The contents of the structured document Content **MAY** be subdivided into one or more sections. A section is an organising container that gives a reader a clue as to the expected content. The primary purpose of a section is to organise information in the manner that is suitable for the primary purpose for which it is collected, and that provides a way to navigate through the data components within the document, thereby enabling more efficient querying. It **SHOULD** also support safe re-use 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 and/or data elements. Some data groups are reused across detailed clinical models.

Participation

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

A Participant has been defined to align with the concepts of the NEHTA interoperability framework. 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 **SHALL** be chosen.

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 **SHALL** be done with the choice of either the *Person* data group or 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 **MAY** be 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 **SHOULD**be noted that many of these reference sets have been developed specifically for the context in which they appear. An assessment of fitness for purpose **SHOULD** therefore be undertaken before using any of the reference sets in another context.

Value domains constrain by either specifying a lower and/or upper bound 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>
<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>To Be Advised</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>

Table 1: Value Domain Examples

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.

Icon	Metadata Types
	Structured Document
	Section
	Data Group
	Participation
	Choice

Table 2: Metadata Types Legend

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].

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; 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. Whilst 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 and/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 and/or time. Has the ability to indicate a level of precision, but not whether the date/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 upon 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/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
 RealNumber (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. 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 as such. *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: The *root* attribute **SHALL** be used. 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. For an entity identifier the *root* attribute **SHALL NOT** be a UUID. 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.

Table 3: Data Types Legend

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

Keyword	Interpretation
SHALL	This word, or the terms ‘required’ or ‘must’, means that the definition 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 which does not include a particular option **SHALL** be prepared to interoperate with another implementation which does include the option, perhaps with reduced functionality. In the same vein, an implementation which does include a particular option **SHALL** be prepared to interoperate with another implementation which does not include the option (except of course, for the feature the option provides).
SHALL NOT	This phrase, or the phrase 'must not' means that the definition 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.

Table 4: Keywords Legend

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 three occupied cells. One contains an icon to indicate its data type. One 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). One contains the multiplicity range for the data component.

In a 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.

Label	A suggested display name for the component. (Source NEHTA.)

Metadata Type	The metadata 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 which is assigned by an organisation other than NEHTA. (Source NEHTA.)

Table 6: Identification Section Legend

Definition Section Legend

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

Definition	The meaning, description and/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 are 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.

Table 7: Definition Section Legend

Value Domain Section Legend

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

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.

Table 8: Value Domain Section Legend

Usage Section Legend

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

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 and/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 and/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 and/or applicable, typically assigned at the creation of an instance of the component. (Source NEHTA.)

Table 9: Usage Section Legend

Relationships Section Legend

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

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

Data Type	Name	Occurrences	Condition
Icon illustrating the Metadata type or Data type	Component Name	The maximum and minimum number of instances of this child component that **SHALL** occur.	The conditions that **SHALL** be met to include this child data element. Only applicable for elements with a Conditional obligation.

Table 10: Children Legend

The following table illustrates the layout of the Parent relationships table. Note that the relationships described by this table are from the parent to the child component.

Data Type	Name	Occurrences	Condition
Icon illustrating the Metadata or Data type	Component Name	The maximum and minimum 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.

Table 11: Parent Legend

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