nehta

Detailed Clinical Model Specification

Medication Instruction and Action
Version 2.2

4 September 2013

Approved for External Use

National E-Health Transition Authority Ltd

Level 25
56 Pitt Street
Sydney NSW 2000
Australia
www.nehta.gov.au

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Document Information

Document owner

Document Owner
The National Clinical Terminology and Information Service

Change history

Version	Date	Comments
1.0	22 Aug 2006	Initial NEHTA release.
2.0	26 Aug 2011	New version created in accordance with the archetype from *NEHTA Clinical Knowledge Manager*[1].
2.1	22 Dec 2011	This version of the specification is published to support the Structured Content Specifications published (at the end of 2011) that use the versions of the DCMs included in this specification. Changes to the DCMs, included in this specification, are primarily to support the Consolidated View in the PCEHR.
2.2	4 Sep 2013	This version of the specification (and the included DCMs) is published to support the PCEHR Prescription Record and PCEHR Dispense Record Structured Content Specifications.

Related documents

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

Included Detailed Clinical Models

This specification contains the following Detailed Clinical Models:

1. Exclusion Statement - Medications, version 1.2
2. Medication Action, version 4.0
3. Medication Instruction, version 3.2

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

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1 Introduction

1.1 Purpose and Scope

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

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

1.2 Intended Audience

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

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

1.3 Background

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

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

Data specifications have been developed:

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

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

[1] Level 4 interoperability is described in [WALJ2005a].

1.4 Terminology

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

The Systematized Nomenclature of Medicine - Clinical Terms® (SNOMED CT® [2]) has been recommended by NEHTA and endorsed by the Australian, state and territory governments as the preferred clinical terminology for Australia, and is now freely available for e-health software developers to use in their Australian products under International Health Terminology Standards Development Organisation (IHTSDO) licensing arrangements.

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

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

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

2 Medication Instruction Detailed Clinical Model

This chapter describes version 3.2 of the Medication Instruction Detailed Clinical Model.

2.1 Purpose

Recording intent to use or to continue to use a medicine, vaccine, or other therapeutic good, including instructions on use, dispensing, and administration, where necessary.

2.2 Use

For recording instructions to dispense, administer or use a medicine, vaccine or other therapeutic good. This medication instruction can be used in many circumstances including: a record in a progress note; an item in a medication list, prescription or drug chart (to be dispensed or administered); or in a summary document such as discharge summary or a referral for care. The instruction may be complex and involve more than one activity, such as in the case of a Prednisolone reducing dose regimen, or multiple medications as components of the same order. This would include a written order by a physician, dentist, nurse practitioner, or other designated health professional for a medication to be dispensed and administered to a patient.

This instruction will generally apply to things that can be prescribed or are available 'over the counter'.

Use for orders for vaccinations or other therapeutic goods. These may be presented differently in different applications but require the same structure.

Use for the consistent representation of an item in a medication list comprising the medicines that a clinicians collectively expect the individual to be taking.

The information recorded may separate dose, route and timing to achieve a computable and shareable specification but also allows for narrative instructions for orders like "Frusemide 40mg two tablets in the morning and one at lunch" to ensure compatibility with existing systems. To achieve a structured statement for such compound orders, two items are required: "Frusemide 40mg two tablets in the morning" and "Frusemide 40mg one tablet at lunch". The instruction will usually include information about the timing and dose (which may be structured) and in some settings will include the route of administration. The amount of the medicines will usually be given in terms of a number and a dose unit but may be a textural statement to ensure compatibility with existing systems and also coverage of all scenarios.

Use to represent a prescription item for a medicine, vaccine or other therapeutic good within a document such as an electronic prescription or a medication chart.

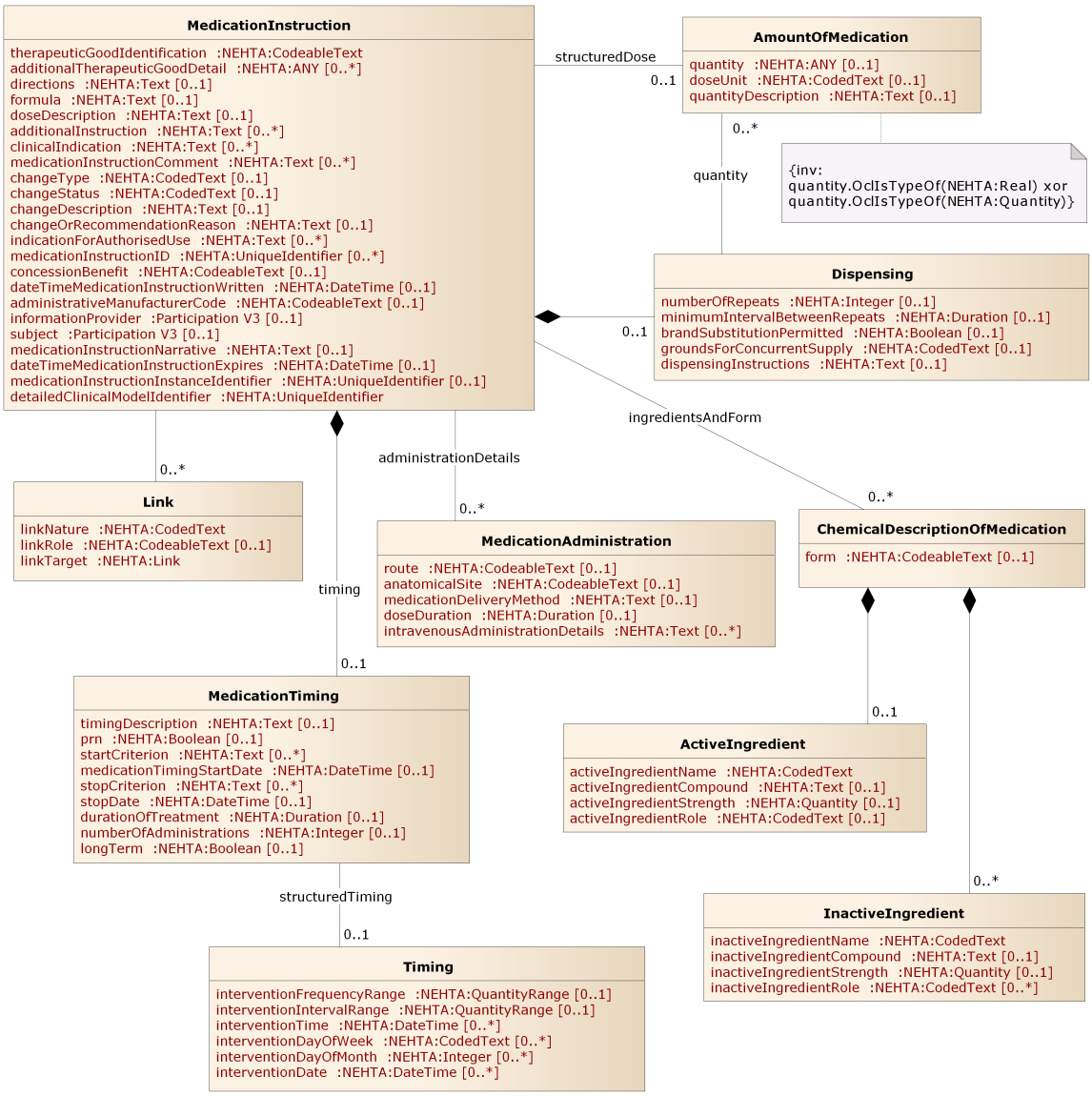
The content is potentially complex. Where the content is reusable in other contexts, especially the paired *Medication Action* DCM (for recording dispensing, administration etc.) the content has been specified in reusable data groups. For example: the *AMOUNT OF MEDICATION* `data group` contains detail about medication dose; *TIMING* `data group` contains detail about structured dose timing; *MEDICATION ADMINISTRATION* `data group` contains structure around administration for both the order and the action; and *CHEMICAL DESCRIPTION OF MEDICATION* `data group` describes the specific ingredients within a medicine. All of these data groups together are required to make up the total maximal dataset for a reusable medication instruction.

2.3 Misuse

Not to be used to record administration, use or dispensing. (For those use *Medication Action* DCM.)

Not to be used to record ordering of blood products, implants or major devices such as pacemakers and defibrillators, etc.

2.4 UML Class Diagram



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

2.5 MEDICATION INSTRUCTION

Identification

Label	MEDICATION INSTRUCTION
Metadata Type	Data Group
Identifier	DG-16211
OID	1.2.36.1.2001.1001.101.102.16211

Definition

Definition	Details of a medicine, vaccine or other therapeutic good with instructions for use.
Definition Source	NEHTA
Synonymous Names	Prescribed Item

Usage

Misuse	Recording stock on hand of a therapeutic good. *Medication Instruction* **SHALL NOT** be used to record administration of a medication.

Data Hierarchy

	MEDICATION INSTRUCTION				
	Medicine (Therapeutic Good Identification)				1..1
	Additional Medicine Detail (Additional Therapeutic Good Detail)				0..*
	Directions				0..1
	Formula				0..1
	Ingredients and Form (CHEMICAL DESCRIPTION OF MEDICATION)				0..*
		ACTIVE INGREDIENT			0..1
			Name (Active Ingredient Name)		1..1
			Compound (Active Ingredient Compound)		0..1
			Strength (Active Ingredient Strength)		0..1

				Role (Active Ingredient Role)	0..1
			Form		0..1
			INACTIVE INGREDIENT		0..*
				Name (Inactive Ingredient Name)	1..1
				Compound (Inactive Ingredient Compound)	0..1
				Strength (Inactive Ingredient Strength)	0..1
				Role (Inactive Ingredient Role)	0..*
		Dose Description			0..1
		Structured Dose (AMOUNT OF MEDICATION)			0..1
			Quantity		0..1
			Dose Unit		0..1
			Quantity Description		0..1
		Timing (MEDICATION TIMING)			0..1
			Timing Description		0..1
			Structured Timing (TIMING)		0..1
				Frequency Range (Intervention Frequency Range)	0..1
				Interval Range (Intervention Interval Range)	0..1
				Time (Intervention Time)	0..*
				Day of Week (Intervention Day of Week)	0..*
				Day of Month (Intervention Day of Month)	0..*
				Date (Intervention Date)	0..*
			PRN		0..1
			Start Criterion		0..*

			Start Date (Medication Timing Start Date)	0..1
			Stop Criterion	0..*
			Stop Date	0..1
			Duration of Treatment	0..1
			Number of Administrations	0..1
			Long-Term	0..1
		Additional Instruction		0..*
		Clinical Indication		0..*
		Administration Details (MEDICATION ADMINISTRATION)		0..*
			Route	0..1
			Site (Anatomical Site)	0..1
			Delivery Method (Medication Delivery Method)	0..1
			Dose Duration	0..1
			Intravenous Details (Intravenous Administration Details)	0..*
		Comment (Medication Instruction Comment)		0..*
		DISPENSING		0..1
			Quantity (AMOUNT OF MEDICATION)	0..*
			Quantity	0..1
			Dose Unit	0..1
			Quantity Description	0..1
			Number of Repeats	0..1
			Minimum Interval Between Repeats	0..1
			Brand Substitution Permitted	0..1

			Grounds for Concurrent Supply	0..1
			Dispensing Instructions	0..1
		Change Type		0..1
		Change or Recommendation? (Change Status)		0..1
		Change Description		0..1
		Change Reason (Change or Recommendation Reason)		0..1
		Indication for Authorised Use		0..*
		Medication Instruction ID		0..*
		Concession Benefit		0..1
		DateTime Medication Instruction Written		0..1
		Administrative Manufacturer Code		0..1
		INFORMATION PROVIDER		0..1
		SUBJECT		0..1
		Medication Instruction Narrative		0..1
		DateTime Medication Instruction Expires		0..1
		Medication Instruction Instance Identifier		0..1
		LINK		0..*
			Link Nature	1..1
			Link Role	0..1
			Link Target	1..1
		Detailed Clinical Model Identifier		1..1

2.6 Therapeutic Good Identification

Identification

Label	Medicine
Metadata Type	Data Element
Identifier	DE-10194
OID	1.2.36.1.2001.1001.101.103.10194

Definition

Definition	The medicine, vaccine or other therapeutic good being ordered, administered to or used by the subject of care.
Definition Source	Therapeutic Goods Administration
Synonymous Names	Item Name
Context	This includes medications and medical devices. It includes drugs, appliances, dressings, and reagents.
Context Source	NEHTA
Notes	Identifies a therapeutic good, which is broadly defined as a good which is represented in any way to be, or is likely to be taken to be, for therapeutic use (unless specifically excluded or included under Section 7 of the *Therapeutic Goods Act 1989*). Therapeutic use means use in or in connection with: • preventing, diagnosing, curing or alleviating a disease, ailment, defect or injury; or • influencing, inhibiting or modifying a physiological process; or • testing the susceptibility of persons to a disease or ailment; or • influencing, controlling or preventing conception; or • testing for pregnancy; or • replacement or modification of parts of the anatomy. From [TGA1989a]. The formal definition of a therapeutic good (from the *Therapeutic Goods Act 1989*) can be found at: [TGA1989a].
Data Type	CodeableText
Value Domain	Medicines Terminology

Usage

Conditions of Use	Where the therapeutic good can be identified by an AMT (Australian Medicines Terminology) concept, the value of this data element **SHALL** be the AMT ConceptID and Preferred Term. For details see Medicines Terminology. For items without an AMT code (including some extemporaneous preparations), a text description is suitable. For a medication, this **SHALL** include the name of the medication (brand name or generic name equivalent), the strength and, where appropriate, the dose form.
Conditions of Use Source	NEHTA
Examples	Some examples of AMT ConceptID and their AMT Preferred Term are: 1. 23641011000036102 |*paracetamol 500 mg + codeine phosphate 30 mg tablet*| 2. 28329011000036108 |*paracetamol 500 mg + codeine phosphate 30 mg tablet, 20*| 3. 13362011000036106 |*Panadeine Forte tablet: uncoated, 20 tablets*| 4. 6647011000036101 |*Panadeine Forte (paracetamol 500 mg + codeine phosphate 30 mg) tablet: uncoated, 1 tablet*| 5. 20138011000036107 |*Panadeine Forte tablet: uncoated, 20 tablets, blister pack*| 6. 51295011000036108 |*bandage compression 10 cm x 3.5 m bandage: high stretch, 1 bandage*| 7. 48667011000036100 |*Eloflex (2480) (bandage compression 10 cm x 3.5 m) bandage: high stretch, 1 bandage*| 8. 926706011000036104 |*Engerix-B Paediatric 10 microgram/0.5 mL injection: suspension, 1 x 0.5 mL syringe*|
Misuse	Detailing the formula of a compounded (extemporaneous) medication.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	MEDICATION INSTRUCTION	1..1

2.7 Medicines Terminology

Identification

Label	Medicines Terminology
Metadata Type	Value Domain
Identifier	VD-16115
OID	1.2.36.1.2001.1001.101.104.16115

Definition

Definition	A set of values used to refer to medicines and other therapeutic goods.
Definition Source	NEHTA
Notes	An explanation of AMT concepts can be found in Australian Medicines Terminology Editorial Rules (v2 model) [NEHT2011bs]. Prescribing and dispensing use different sets of values.

Value Domain

Source	Australian Medicines Terminology
Permissible Values	The permissible values are the members of the following seven AMT reference sets: • 929360061000036106 |*Medicinal product reference set*| • 929360081000036101 |*Medicinal product pack reference set*| • 929360071000036103 |*Medicinal product unit of use reference set*| • 929360021000036102 |*Trade product reference set*| • 929360041000036105 |*Trade product pack reference set*| • 929360031000036100 |*Trade product unit of use reference set*| • 929360051000036108 |*Contained trade product pack reference set*| Different reference sets are allowed in the differing contexts of prescribing, dispensing and administering, as listed below. Prescribing: • 929360081000036101 |*Medicinal product pack reference set*| • 929360071000036103 |*Medicinal product unit of use reference set*| • 929360041000036105 |*Trade product pack reference set*| • 929360031000036100 |*Trade product unit of use reference set*| • 929360051000036108 |*Contained trade product pack reference set*|

Dispensing:

- 929360041000036105 |*Trade product pack reference set*|
- 929360031000036100 |*Trade product unit of use reference set*|
- 929360051000036108 |*Containered trade product pack reference set*|

Administering:

- 929360031000036100 |*Trade product unit of use reference set*|

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Medicine (Therapeutic Good Identification)	1..1

2.8 Additional Therapeutic Good Detail

Identification

Label	Additional Medicine Detail
Metadata Type	Data Element
Identifier	DE-16769
OID	1.2.36.1.2001.1001.101.103.16769

Definition

Definition	An item of information about a therapeutic good.
Definition Source	NEHTA
Synonymous Names	
Data Type	

Usage

Examples	

Relationships

Parents

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

2.9 Directions

Identification

Label	Directions
Metadata Type	Data Element
Identifier	DE-16429
OID	1.2.36.1.2001.1001.101.103.16429

Definition

Definition	A complete narrative description of how much, when and how to use the medicine, vaccine or other therapeutic good.
Definition Source	NEHTA
Synonymous Names	
Notes	It is essential that when the *Directions* `data element` is used together with structured information components such as *Ingredients and Form* and *Structured Dose* in clinical records or prescriptions, the contents of *Direction* not contradict the contents of these structured information components.
Data Type	Text

Usage

Conditions of Use	The contents of this data component **SHALL NOT** contradict the contents of other data components within the entry.
Conditions of Use Source	NEHTA
Examples	

Relationships

Parents

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

2.10 Formula

Identification

Label	Formula
Metadata Type	Data Element
Identifier	DE-16272
OID	1.2.36.1.2001.1001.101.103.16272

Definition

Definition	The recipe for compounding a medicine.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	1. Salicylic Acid 2% in White Soft Paraffin to 100g: Salicylic Acid 2g White Soft Paraffin to 100g
Misuse	Describing off-the-shelf medications.

Relationships

Parents

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

2.11 CHEMICAL DESCRIPTION OF MEDICATION

Identification

Label	Ingredients and Form
Metadata Type	Data Group
Identifier	DG-16408
OID	1.2.36.1.2001.1001.101.102.16408

Definition

Definition	Detailed information about the ingredient(s) including form and strength.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

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

Children

Data Type	Name	Occurrences
	ACTIVE INGREDIENT	0..1
	Form	0..1
	INACTIVE INGREDIENT	0..*

2.12 ACTIVE INGREDIENT

Identification

Label	ACTIVE INGREDIENT
Metadata Type	Data Group
Identifier	DG-10132
OID	1.2.36.1.2001.1001.101.102.10132

Definition

Definition	Information about an ingredient that is active.
Definition Source	NEHTA
Synonymous Names	Active Pharmaceutical Ingredient Active Pharmaceutical Constituent
Notes	The substance in the medication formulation that is pharmaceutically active and is responsible for the medication's therapeutic effect defined by its identifying name and the strength per dose unit.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Ingredients and Form (CHEMICAL DESCRIPTION OF MEDICATION)	0..1

Children

Data Type	Name	Occurrences
	Name (Active Ingredient Name)	1..1
	Compound (Active Ingredient Compound)	0..1
	Strength (Active Ingredient Strength)	0..1
	Role (Active Ingredient Role)	0..1

2.13 Active Ingredient Name

Identification

Label	Name
Metadata Type	Data Element
Identifier	DE-10195
OID	1.2.36.1.2001.1001.101.103.10195

Definition

Definition	The name of the chemical or medication.
Definition Source	NEHTA
Synonymous Names	
Notes	The identifying name of the active ingredient in the formulated medication.
Data Type	CodedText
Value Domain	*Not specified.* In the absence of national standard code sets, the code sets used **SHALL** be registered code sets, i.e. registered through the *HL7 code set registration procedure*[1] with an appropriate object identifier (OID), and **SHALL** be publicly available. When national standard code sets become available, they **SHALL** be used and the non-standard code sets **SHALL** be deprecated.

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	ACTIVE INGREDIENT	1..1

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

2.14 Active Ingredient Compound

Identification

Label	Compound
Metadata Type	Data Element
Identifier	DE-16409
OID	1.2.36.1.2001.1001.101.103.16409

Definition

Definition	The detailed chemical name of the compound that is an active ingredient.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

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

2.15 Active Ingredient Strength

Identification

Label	Strength
Metadata Type	Data Element
Identifier	DE-16410
OID	1.2.36.1.2001.1001.101.103.16410

Definition

Definition	The amount or concentration of this ingredient.
Definition Source	NEHTA
Synonymous Names	
Data Type	Quantity

Usage

Examples	

Relationships

Parents

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

2.16 Active Ingredient Role

Identification

Label	Role
Metadata Type	Data Element
Identifier	DE-16412
OID	1.2.36.1.2001.1001.101.103.16412

Definition

Definition	The role of the ingredient.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodedText
Value Domain	*Not specified.* In the absence of national standard code sets, the code sets used **SHALL** be registered code sets, i.e. registered through the *HL7 code set registration procedure*[2] with an appropriate object identifier (OID), and **SHALL** be publicly available. When national standard code sets become available, they **SHALL** be used and the non-standard code sets **SHALL** be deprecated.

Usage

Examples	1. Therapeutic: The chemical has a known and desired effect that is positive. 2. Toxic: This chemical is toxic and has no therapeutic effect. 3. Adjuvant: The chemical is active but aids the therapeutic effect of another ingredient. 4. Other: The chemical has another active role.

Relationships

Parents

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

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

2.17 Form

Identification

Label	Form
Metadata Type	Data Element
Identifier	DE-10186
OID	1.2.36.1.2001.1001.101.103.10186

Definition

Definition	The formulation or presentation of the overall substance.
Definition Source	NEHTA
Synonymous Names	Manufactured Form Dose Form
Notes	*Form* is used to specify a characteristic of a product as it is manufactured or formulated for dispensing. The form the medication takes when actually administered may vary somewhat from the manufactured form. Tablets may be soluble. Such tablets may or may not be actually dissolved into a solution prior to administration. Similarly with powders and liquids. If it is critical for the care of the patient to differentiate the manufactured form from the administered form, then this should be done via correct labelling and patient instructions. See *Subject of Care Instructions* and *Cautionary Advice*.
Data Type	CodeableText
Value Domain	Medication Form Reference Set

Usage

Examples	1. Tablet 2. Capsule 3. Oral drops 4. Effervescent powder

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Ingredients and Form (CHEMICAL DESCRIPTION OF MEDICATION)	0..1

2.18 Medication Form Reference Set

Identification

Label	Medication Form Reference Set
Metadata Type	Value Domain
Identifier	VD-16618
OID	1.2.36.1.2001.1001.101.104.16618
External Identifier	SNOMED CT-AU Concept Id: 32570621000036105

Definition

Definition	The set of values for the medication form.
Definition Source	NEHTA

Value Domain

Source	SNOMED CT-AU

Relationships

Parents

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

2.19 INACTIVE INGREDIENT

Identification

Label	INACTIVE INGREDIENT
Metadata Type	Data Group
Identifier	DG-16413
OID	1.2.36.1.2001.1001.101.102.16413

Definition

Definition	Ingredients in the substance that are not active.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Ingredients and Form (CHEMICAL DESCRIPTION OF MEDICATION)	0..*

Children

Data Type	Name	Occurrences
	Name (Inactive Ingredient Name)	1..1
	Compound (Inactive Ingredient Compound)	0..1
	Strength (Inactive Ingredient Strength)	0..1
	Role (Inactive Ingredient Role)	0..*

2.20 Inactive Ingredient Name

Identification

Label	Name
Metadata Type	Data Element
Identifier	DE-16415
OID	1.2.36.1.2001.1001.101.103.16415

Definition

Definition	The name of the inactive substance.
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	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	INACTIVE INGREDIENT	1..1

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

2.21 Inactive Ingredient Compound

Identification

Label	Compound
Metadata Type	Data Element
Identifier	DE-16416
OID	1.2.36.1.2001.1001.101.103.16416

Definition

Definition	The detailed chemical name of the compound that is an inactive ingredient.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

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

2.22 Inactive Ingredient Strength

Identification

Label	Strength
Metadata Type	Data Element
Identifier	DE-16417
OID	1.2.36.1.2001.1001.101.103.16417

Definition

Definition	The amount or concentration of this ingredient.
Definition Source	NEHTA
Synonymous Names	
Data Type	Quantity

Usage

Examples	

Relationships

Parents

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

2.23 Inactive Ingredient Role

Identification

Label	Role
Metadata Type	Data Element
Identifier	DE-16419
OID	1.2.36.1.2001.1001.101.103.16419

Definition

Definition	The role of the ingredient.
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. Additive: Inert additive. 2. Diluent: Inert diluent. 3. Propellant: Inert propellant. 4. Preservative: The ingredient is present to prolong the life of the substance. 5. Colouring: The ingredient is used to colour the substance.

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

Relationships

Parents

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

2.24 Dose Description

Identification

Label	Dose Description
Metadata Type	Data Element
Identifier	DE-16430
OID	1.2.36.1.2001.1001.101.103.16430

Definition

Definition	The amount and units of the medicine, vaccine or other therapeutic good to be used or administered at one time.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Conditions of Use	If this *Dose Description* `data element` is used together with the *Structured Dose* information component, its contents **SHALL NOT** contradict the contents of the structured information component.
Conditions of Use Source	NEHTA
Examples	

Relationships

Parents

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

2.25 AMOUNT OF MEDICATION

Identification

Label	Structured Dose
Metadata Type	Data Group
Identifier	DG-16423
OID	1.2.36.1.2001.1001.101.102.16423

Definition

Definition	The amount of medicine, vaccine or other therapeutic good to be dispensed.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

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

Children

Data Type	Name	Occurrences
	Quantity	0..1
	Dose Unit	0..1
	Quantity Description	0..1

2.26 Quantity

Identification

Label	Quantity
Metadata Type	Data Element
Identifier	DE-10145
OID	1.2.36.1.2001.1001.101.103.10145

Definition

Definition	The quantity, number or proportion.
Definition Source	NEHTA
Synonymous Names	
Notes	The number of doses or physical amount of the therapeutic good.
Data Type	Real Quantity

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Structured Dose (AMOUNT OF MEDICATION)	0..1

2.27 Dose Unit

Identification

Label	Dose Unit
Metadata Type	Data Element
Identifier	DE-16524
OID	1.2.36.1.2001.1001.101.103.16524

Definition

Definition	The dose unit of this amount.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodedText
Value Domain	Dose Unit Reference Set

Usage

Examples	1. Tablets 2. Capsules 3. Sachets 4. mg 5. mL

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Structured Dose (AMOUNT OF MEDICATION)	0..1

2.28 Dose Unit Reference Set

Identification

Label	Dose Unit Reference Set
Metadata Type	Value Domain
Identifier	VD-16523
OID	1.2.36.1.2001.1001.101.104.16523
External Identifier	SNOMED CT-AU Concept Id: 32570641000036102

Definition

Definition	The set of values for dose unit.
Definition Source	NEHTA

Value Domain

Source	SNOMED CT-AU

Relationships

Parents

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

2.29 Quantity Description

Identification

Label	Quantity Description
Metadata Type	Data Element
Identifier	DE-16525
OID	1.2.36.1.2001.1001.101.103.16525

Definition

Definition	Free text description of the amount which may consist of the quantity and dose unit.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Structured Dose (AMOUNT OF MEDICATION)	0..1

2.30 MEDICATION TIMING

Identification

Label	Timing
Metadata Type	Data Group
Identifier	DG-16766
OID	1.2.36.1.2001.1001.101.102.16766

Definition

Definition	Details of the timing of the use or administration of the medicine, vaccine or other therapeutic good.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

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

Children

Data Type	Name	Occurrences
	Timing Description	0..1
	Structured Timing (TIMING)	0..1
	PRN	0..1
	Start Criterion	0..*
	Start Date (Medication Timing Start Date)	0..1
	Stop Criterion	0..*
	Stop Date	0..1
	Duration of Treatment	0..1

Data Type	Name	Occurrences
	Number of Administrations	0..1
	Long-Term	0..1

2.31 Timing Description

Identification

Label	Timing Description
Metadata Type	Data Element
Identifier	DE-16432
OID	1.2.36.1.2001.1001.101.103.16432

Definition

Definition	The timing of the doses, which may include frequency and details such as relationship to food.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Conditions of Use	If *Timing Description* is used together with the *Structured Timing* information component, the contents of both **SHALL** be semantically equivalent.
Conditions of Use Source	NEHTA
Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Timing (MEDICATION TIMING)	0..1

2.32 TIMING

Identification

Label	Structured Timing
Metadata Type	Data Group
Identifier	DG-16431
OID	1.2.36.1.2001.1001.101.102.16431

Definition

Definition	Structured details of the timing of the use or administration.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Timing (MEDICATION TIMING)	0..1

Children

Data Type	Name	Occurrences
	Frequency Range (Intervention Frequency Range)	0..1
	Interval Range (Intervention Interval Range)	0..1
	Time (Intervention Time)	0..*
	Day of Week (Intervention Day of Week)	0..*
	Day of Month (Intervention Day of Month)	0..*
	Date (Intervention Date)	0..*

2.33 Intervention Frequency Range

Identification

Label	Frequency Range
Metadata Type	Data Element
Identifier	DE-16547
OID	1.2.36.1.2001.1001.101.103.16547

Definition

Definition	The frequency as number of times per time period that the intervention is to take place.
Definition Source	NEHTA
Synonymous Names	
Notes	Includes details of variable upper and lower frequency e.g. 3-4 times a day.
Data Type	QuantityRange

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Structured Timing (TIMING)	0..1

2.34 Intervention Interval Range

Identification

Label	Interval Range
Metadata Type	Data Element
Identifier	DE-16548
OID	1.2.36.1.2001.1001.101.103.16548

Definition

Definition	The length of time between doses or interventions.
Definition Source	NEHTA
Synonymous Names	
Notes	8 Hourly is PT8H, monthly is P1M, every hour and a half is PT1H30M. Includes details of variable upper and lower intervals e.g. every 2-3 hours.
Data Type	QuantityRange

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Structured Timing (TIMING)	0..1

2.35 Intervention Time

Identification

Label	Time
Metadata Type	Data Element
Identifier	DE-16549
OID	1.2.36.1.2001.1001.101.103.16549

Definition

Definition	Specific time(s) during the day when the intervention should be applied.
Definition Source	NEHTA
Synonymous Names	
Data Type	DateTime

Usage

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Structured Timing (TIMING)	0..*

2.36 Intervention Day of Week

Identification

Label	Day of Week
Metadata Type	Data Element
Identifier	DE-16551
OID	1.2.36.1.2001.1001.101.103.16551

Definition

Definition	The specific and repeating day(s) of the week.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodedText
Value Domain	*Not specified.* In the absence of national standard code sets, the code sets used **SHALL** be registered code sets, i.e. registered through the *HL7 code set registration procedure*[5] with an appropriate object identifier (OID), and **SHALL** be publicly available. When national standard code sets become available, they **SHALL** be used and the non-standard code sets **SHALL** be deprecated.

Usage

Examples	1. Monday 2. Wednesday 3. Friday 4. Sunday

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Structured Timing (TIMING)	0..*

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

2.37 Intervention Day of Month

Identification

Label	Day of Month
Metadata Type	Data Element
Identifier	DE-16552
OID	1.2.36.1.2001.1001.101.103.16552

Definition

Definition	The specific and repeating day(s) of the month.
Definition Source	NEHTA
Synonymous Names	
Notes	If it is required to give a dose on the 2nd day of each month, then the value is 2.
Data Type	Integer

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Structured Timing (TIMING)	0..*

2.38 Intervention Date

Identification

Label	Date
Metadata Type	Data Element
Identifier	DE-16553
OID	1.2.36.1.2001.1001.101.103.16553

Definition

Definition	Actual dates.
Definition Source	NEHTA
Synonymous Names	
Data Type	DateTime

Usage

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

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	Structured Timing (TIMING)	0..*

2.39 PRN

Identification

Label	PRN
Metadata Type	Data Element
Identifier	DE-16433
OID	1.2.36.1.2001.1001.101.103.16433

Definition

Definition	The timing is dependent within limits on the subject of care's condition or symptoms.
Definition Source	NEHTA
Synonymous Names	
Notes	For example, 4hrly p.r.n. means the medicine can be taken as frequently as every four hours if necessary. "Pro re nata" in Latin means as circumstances arise.
Data Type	Boolean

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Timing (MEDICATION TIMING)	0..1

2.40 Start Criterion

Identification

Label	Start Criterion
Metadata Type	Data Element
Identifier	DE-16434
OID	1.2.36.1.2001.1001.101.103.16434

Definition

Definition	A condition that, when met, requires the start of administration or use.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Timing (MEDICATION TIMING)	0..*

2.41 Medication Timing Start Date

Identification

Label	Start Date
Metadata Type	Data Element
Identifier	DE-16435
OID	1.2.36.1.2001.1001.101.103.16435

Definition

Definition	The date and, optionally, time to begin using the medicine, vaccine or other therapeutic good.
Definition Source	NEHTA
Synonymous Names	
Data Type	DateTime

Usage

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Timing (MEDICATION TIMING)	0..1

2.42 Stop Criterion

Identification

Label	Stop Criterion
Metadata Type	Data Element
Identifier	DE-16436
OID	1.2.36.1.2001.1001.101.103.16436

Definition

Definition	A condition that, when met, requires the cessation of administration or use.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Timing (MEDICATION TIMING)	0..*

2.43 Stop Date

Identification

Label	Stop Date
Metadata Type	Data Element
Identifier	DE-16437
OID	1.2.36.1.2001.1001.101.103.16437

Definition

Definition	The date and, optionally, time to stop using the medicine, vaccine or other therapeutic good.
Definition Source	NEHTA
Synonymous Names	
Data Type	DateTime

Usage

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

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Timing (MEDICATION TIMING)	0..1

2.44 Duration of Treatment

Identification

Label	Duration of Treatment
Metadata Type	Data Element
Identifier	DE-16438
OID	1.2.36.1.2001.1001.101.103.16438

Definition

Definition	The length of time for which the medicine, vaccine or other therapeutic good should be used or administered (from the initial dose to the final dose).
Definition Source	NEHTA
Synonymous Names	
Data Type	Duration

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Timing (MEDICATION TIMING)	0..1

2.45 Number of Administrations

Identification

Label	Number of Administrations
Metadata Type	Data Element
Identifier	DE-16439
OID	1.2.36.1.2001.1001.101.103.16439

Definition

Definition	The total number of doses of the medicine, vaccine or other therapeutic good that are to be used or administered (from the initial dose to the final dose).
Definition Source	NEHTA
Synonymous Names	
Data Type	Integer

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Timing (MEDICATION TIMING)	0..1

2.46 Long-Term

Identification

Label	Long-Term
Metadata Type	Data Element
Identifier	DE-16440
OID	1.2.36.1.2001.1001.101.103.16440

Definition

Definition	It is anticipated that the medicine, vaccine or therapeutic good will be represcribed or redispensed over a period of time.
Definition Source	NEHTA
Synonymous Names	
Data Type	Boolean

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Timing (MEDICATION TIMING)	0..1

2.47 Additional Instruction

Identification

Label	Additional Instruction
Metadata Type	Data Element
Identifier	DE-16441
OID	1.2.36.1.2001.1001.101.103.16441

Definition

Definition	An additional statement on how to use the medicine, vaccine or other therapeutic good.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

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

2.48 Clinical Indication

Identification

Label	Clinical Indication
Metadata Type	Data Element
Identifier	DE-10141
OID	1.2.36.1.2001.1001.101.103.10141

Definition

Definition	A reason for ordering the medicine, vaccine or other therapeutic good.
Definition Source	NEHTA
Synonymous Names	Reason for Prescribing
Notes	The clinical justification (e.g. specific therapeutic effect intended) for this subject of care's use of the therapeutic good.
Data Type	Text

Usage

Conditions of Use	For inpatient discharge summaries, this should always be recorded.
Conditions of Use Source	NEHTA
Examples	1. Long-term maintenance treatment of bronchospasm and dyspnoea.

Relationships

Parents

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

2.49 MEDICATION ADMINISTRATION

Identification

Label	Administration Details
Metadata Type	Data Group
Identifier	DG-10108
OID	1.2.36.1.2001.1001.101.102.10108

Definition

Definition	Details of the administration of the medicine, vaccine or other therapeutic good.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

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

Children

Data Type	Name	Occurrences
	Route	0..1
	Site (Anatomical Site)	0..1
	Delivery Method (Medication Delivery Method)	0..1
	Dose Duration	0..1
	Intravenous Details (Intravenous Administration Details)	0..*

2.50 Route

Identification

Label	Route
Metadata Type	Data Element
Identifier	DE-10147
OID	1.2.36.1.2001.1001.101.103.10147

Definition

Definition	The route by which the medication is administered.
Definition Source	NEHTA
Synonymous Names	Route of Administration
Notes	It is used to describe the path or channel by which the substance/agent is introduced or gains access into a patient's body. This includes the route for which medication is administered.
Data Type	CodeableText
Value Domain	Route of Administration Reference Set

Usage

Conditions of Use	Use “Unknown” only for retrospective data collection.
Conditions of Use Source	NEHTA
Examples	1. Oral 2. Subcutaneous injection 3. Epidural 4. Rectal 5. Otic

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Administration Details (MEDICATION ADMINISTRATION)	0..1

2.51 Route of Administration Reference Set

Identification

Label	Route of Administration Reference Set
Metadata Type	Value Domain
Identifier	VD-10147
OID	1.2.36.1.2001.1001.101.104.10147
External Identifier	SNOMED CT-AU Concept Id: 32570601000036100

Definition

Definition	A list of all possible routes of administration of medication.
Definition Source	NEHTA
Notes	Set of allowable values to describe the way through which a medication is administered to/by the subject of care.

Value Domain

Source	SNOMED CT-AU

Relationships

Parents

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

2.52 Anatomical Site

Identification

Label	Site
Metadata Type	Data Element
Identifier	DE-10156
OID	1.2.36.1.2001.1001.101.103.10156

Definition

Definition	A description of the site of administration.
Definition Source	NEHTA
Synonymous Names	
Notes	Location on or in the body of the subject of care where the substance/agent entered the body or therapeutic good was administered.
Data Type	CodeableText
Value Domain	Body Structure Foundation Reference Set

Usage

Examples	1. Left thigh 2. Upper arm 3. Entire left renal artery

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Administration Details (MEDICATION ADMINISTRATION)	0..1

2.53 Body Structure Foundation Reference Set

Identification

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

Definition

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

Value Domain

Source	SNOMED CT-AU

Relationships

Parents

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

2.54 Medication Delivery Method

Identification

Label	Delivery Method
Metadata Type	Data Element
Identifier	DE-16470
OID	1.2.36.1.2001.1001.101.103.16470

Definition

Definition	The method of delivery if this should be specified.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	1. Delivery via nebuliser or spacer. 2. Delivery via syringe pump.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Administration Details (MEDICATION ADMINISTRATION)	0..1

2.55 Dose Duration

Identification

Label	Dose Duration
Metadata Type	Data Element
Identifier	DE-16471
OID	1.2.36.1.2001.1001.101.103.16471

Definition

Definition	The length of time over which to administer each dose.
Definition Source	NEHTA
Synonymous Names	
Data Type	Duration

Usage

Examples	1. An intravenous injection may be administered over a period of 5 minutes.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Administration Details (MEDICATION ADMINISTRATION)	0..1

2.56 Intravenous Administration Details

Identification

Label	Intravenous Details
Metadata Type	Data Element
Identifier	DE-16634
OID	1.2.36.1.2001.1001.101.105.16634

Definition

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

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Administration Details (MEDICATION ADMINISTRATION)	0..*

2.57 Medication Instruction Comment

Identification

Label	Comment
Metadata Type	Data Element
Identifier	DE-16044
OID	1.2.36.1.2001.1001.101.103.16044

Definition

Definition	Any additional information that may be needed to ensure the continuity of supply, rationale for current dose and timing, or safe and appropriate use.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	1. Patient requires an administration aid. 2. Portable Pulse Oximeter measurement to be taken by clipping the sensor onto the tip of a finger. 3. Consulted prescriber concerning dose.
Misuse	Use for information that could be recorded as structured data.

Relationships

Parents

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

2.58 DISPENSING

Identification

Label	DISPENSING
Metadata Type	Data Group
Identifier	DG-16442
OID	1.2.36.1.2001.1001.101.102.16442

Definition

Definition	Information for the dispenser.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

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

Children

Data Type	Name	Occurrences
	Quantity (AMOUNT OF MEDICATION)	0..*
	Number of Repeats	0..1
	Minimum Interval Between Repeats	0..1
	Brand Substitution Permitted	0..1
	Grounds for Concurrent Supply	0..1
	Dispensing Instructions	0..1

2.59 AMOUNT OF MEDICATION

Identification

Label	Quantity
Metadata Type	Data Group
Identifier	DG-16423
OID	1.2.36.1.2001.1001.101.102.16423

Definition

Definition	The amount of medicine, vaccine or other therapeutic good to be dispensed.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

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

Children

Data Type	Name	Occurrences
	Quantity	0..1
	Dose Unit	0..1
	Quantity Description	0..1

2.60 Quantity

Identification

Label	Quantity
Metadata Type	Data Element
Identifier	DE-10145
OID	1.2.36.1.2001.1001.101.103.10145

Definition

Definition	The quantity, number or proportion.
Definition Source	NEHTA
Synonymous Names	
Notes	The number of doses or physical amount of the therapeutic good.
Data Type	Real Quantity

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Quantity (AMOUNT OF MEDICATION)	0..1

2.61 Dose Unit

Identification

Label	Dose Unit
Metadata Type	Data Element
Identifier	DE-16524
OID	1.2.36.1.2001.1001.101.103.16524

Definition

Definition	The dose unit of this amount.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodedText
Value Domain	Dose Unit Reference Set

Usage

Examples	1. Tablets 2. Capsules 3. Sachets 4. mg 5. mL

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Quantity (AMOUNT OF MEDICATION)	0..1

2.62 Dose Unit Reference Set

Identification

Label	Dose Unit Reference Set
Metadata Type	Value Domain
Identifier	VD-16523
OID	1.2.36.1.2001.1001.101.104.16523
External Identifier	SNOMED CT-AU Concept Id: 32570641000036102

Definition

Definition	The set of values for dose unit.
Definition Source	NEHTA

Value Domain

Source	SNOMED CT-AU

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Dose Unit	1..1

2.63 Quantity Description

Identification

Label	Quantity Description
Metadata Type	Data Element
Identifier	DE-16525
OID	1.2.36.1.2001.1001.101.103.16525

Definition

Definition	Free text description of the amount which may consist of the quantity and dose unit.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Quantity (AMOUNT OF MEDICATION)	0..1

2.64 Number of Repeats

Identification

Label	Number of Repeats
Metadata Type	Data Element
Identifier	DE-10169
OID	1.2.36.1.2001.1001.101.103.10169

Definition

Definition	The number of times the expressed quantity of medicine, vaccine or other therapeutic good may be refilled or redispensed without a new prescription.
Definition Source	NEHTA
Synonymous Names	
Data Type	Integer

Usage

Examples	

Relationships

Parents

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

2.65 Minimum Interval Between Repeats

Identification

Label	Minimum Interval Between Repeats
Metadata Type	Data Element
Identifier	DE-10164
OID	1.2.36.1.2001.1001.101.103.10164

Definition

Definition	The minimum time between repeat dispensing of the medicine, vaccine or therapeutic good.
Definition Source	NEHTA
Synonymous Names	
Notes	This is specified by the ordering clinician for a specific reason such as safety or best practice. Where the prescription is for a Schedule 8 medicine and the dispensing of the prescription is authorised to be repeated, the minimum intervals at which it may be dispensed must be written on the prescription by the prescriber. This is different to the PBS rules for claiming subsidies for repeat prescriptions. This may be used for situations where a prescriber wants to limit access – e.g. if there are safety concerns or if the subject of care is taking greater than the prescribed dose.
Data Type	Duration

Usage

Examples	1. 20 days

Relationships

Parents

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

2.66 Brand Substitution Permitted

Identification

Label	Brand Substitution Permitted
Metadata Type	Data Element
Identifier	DE-10107
OID	1.2.36.1.2001.1001.101.103.10107

Definition

Definition	Indicates whether or not the substitution of a prescribed medicine with a different brand name of the same medicine, vaccine or other therapeutic good, that has been determined as bioequivalent, is allowed when the medication is dispensed or supplied.
Definition Source	NEHTA
Synonymous Names	Allow Substitutions
Notes	PBS prescriptions must not be prepared using a computer prescribing program that contains a default that would result in all prescriptions being indicated as Brand Substitution Not Permitted [DHA2009a].
Data Type	Boolean

Usage

Misuse	Using this data element for therapeutic substitution. Using this data element for medical appliances.
Default Value	true
Examples	

Relationships

Parents

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

2.67 Grounds for Concurrent Supply

Identification

Label	Grounds for Concurrent Supply
Metadata Type	Data Element
Identifier	DE-16139
OID	1.2.36.1.2001.1001.101.103.16139

Definition

Definition	Indicates the grounds which authorise a PBS or RPBS subsidy for the concurrent supply of an item specified in a prescription and all of its repeats.
Definition Source	NEHTA
Synonymous Names	
Notes	*Concurrent supply* means supplying an item from a prescription together with all of its repeats at the one time. There are different rules for the concurrent supply of prescribed items, depending upon whether they are subsidised by the PBS or the RPBS. **For PBS prescriptions** (Regulation 24): Generally, a pharmaceutical benefit may not be supplied to the same person more than once in any four clear days (or 20 clear days for items listed in the Schedule with five repeats or more). Under Regulation 24 of the National Health (Pharmaceutical Benefits) Regulations 1960, a prescriber can direct that the original and all repeats of a PBS medicine ordered on a prescription be supplied at the one time, provided that the prescriber is satisfied that all of the following circumstances apply: • The maximum quantity or number of units applicable in relation to the pharmaceutical benefit is insufficient for the treatment of the person for whom the prescription is written. • The person requires the pharmaceutical benefit for the treatment of a chronic illness or is residing in a place remote from the approved pharmacist nearest to that person's place of residence. • The person could not, without great hardship, obtain the required quantity or number of units of the pharmaceutical benefit by means of repeated supplies on separate occasions. A PBS prescription must be endorsed by the prescriber with “Regulation 24” as certification that all the above conditions apply. An example of where a prescription would need to be endorsed as Regulation 24 for each item would be where a subject of care taking antihypertensive medicine plans to travel overseas and requires the dispensing of the original and repeats at one time. **For RPBS prescriptions** (Hardship conditions apply):

	The original and repeat supplies of an item ordered on a prescription may be supplied at the one time if: • the veteran lives a long way from the nearest pharmacy; or • the circumstances of the veteran's condition would impose hardship if separate visits for supply of repeats was required. The words “hardship conditions apply” (or “Regulation 24”) written on the prescription will be sufficient authority for a pharmacist to supply the items and repeats at the one time.
Data Type	CodedText
Value Domain	Grounds for Concurrent Supply Values

Usage

Conditions of Use	Only applicable to PBS and RPBS prescriptions. Not applicable to private prescriptions.
Conditions of Use Source	NEHTA
Examples	

Relationships

Parents

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

2.68 Grounds for Concurrent Supply Values

Identification

Label	Grounds for Concurrent Supply Values
Metadata Type	Value Domain
Identifier	VD-16085
OID	1.2.36.1.2001.1001.101.104.16085

Definition

Definition	The set of values of *Grounds of Concurrent Supply*.
Definition Source	NEHTA

Value Domain

Source	NEHTA	
Permissible Values	1, Pursuant to Regulation 24	Supply is in accord with Regulation 24 of the National Health (Pharmaceutical Benefits) Regulations 1960.
	2, Hardship conditions apply	Supply is in accord with the “Hardship conditions” provision of RPBS prescribing guidelines.
	9, No grounds	There are no grounds for concurrent supply.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Grounds for Concurrent Supply	1..1

2.69 Dispensing Instructions

Identification

Label	Dispensing Instructions
Metadata Type	Data Element
Identifier	DE-10165
OID	1.2.36.1.2001.1001.101.103.10165

Definition

Definition	Additional instructions to the person dispensing the medicine, vaccine or other therapeutic good.
Definition Source	NEHTA
Synonymous Names	
Notes	Information provided by the prescriber to the dispenser in addition to all other Medication data elements relevant to dispensing that provides more detail or guidance about how the medication should be dispensed.
Data Type	Text

Usage

Examples	1. Patient has arthritis of the hands; please supply easy-open bottles.

Relationships

Parents

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

2.70 Change Type

Identification

Label	Change Type
Metadata Type	Data Element
Identifier	DE-16593
OID	1.2.36.1.2001.1001.101.103.16593

Definition

Definition	The way in which this instruction differs from the previous instruction.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodedText
Value Domain	Change Type Values

Usage

Examples	1. New prescription 2. Change of previous 3. Cancellation

Relationships

Parents

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

2.71 Change Type Values

Identification

Label	Change Type Values
Metadata Type	Value Domain
Identifier	VD-16592
OID	1.2.36.1.2001.1001.101.104.16592

Definition

Definition	The set of values for *Change Type*.
Definition Source	NEHTA

Value Domain

Source	NEHTA	
Permissible Values	Unchanged	There is no change to the instruction.
	Changed	There is a change to the instruction.
	Ceased	The instruction has been ended.
	Prescribed	A new prescription has been issued.

Relationships

Parents

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

2.72 Change Status

Identification

Label	Change or Recommendation?
Metadata Type	Data Element
Identifier	DE-16595
OID	1.2.36.1.2001.1001.101.103.16595

Definition

Definition	Identifies whether the change has already been made or is a recommendation that has not been made.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodedText
Value Domain	Change Status Values

Usage

Examples	

Relationships

Parents

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

2.73 Change Status Values

Identification

Label	Change Status Values
Metadata Type	Value Domain
Identifier	VD-16626
OID	1.2.36.1.2001.1001.101.104.16626

Definition

Definition	The set of values for *Change Status*.
Definition Source	NEHTA

Value Domain

Source	NEHTA	
Permissible Values	Change recommended	The change has not been made, but it is recommended to be made.
	Change made	The change has been made.

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	Change or Recommendation? (Change Status)	1..1

2.74 Change Description

Identification

Label	Change Description
Metadata Type	Data Element
Identifier	DE-10176
OID	1.2.36.1.2001.1001.101.103.10176

Definition

Definition	Description of the change in the subject of care's medication item information.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	1. Correction of prescription error. 2. Cessation of medication. 3. Change of dose. 4. Addition of drug. 5. Substitution of drug.

Relationships

Parents

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

2.75 Change or Recommendation Reason

Identification

Label	Change Reason
Metadata Type	Data Element
Identifier	DE-10177
OID	1.2.36.1.2001.1001.101.103.10177

Definition

Definition	The justification for the stated change in medication.
Definition Source	NEHTA
Synonymous Names	Reason for Alteration Reason for Modification
Notes	Should be completed if a change has been made.
Data Type	Text

Usage

Examples	1. Optimise drug therapy. 2. Intolerable side effect of dizziness.

Relationships

Parents

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

2.76 Indication for Authorised Use

Identification

Label	Indication for Authorised Use
Metadata Type	Data Element
Identifier	DE-16443
OID	1.2.36.1.2001.1001.101.103.16443

Definition

Definition	The specific indication for use that is required by an authorising agency to achieve subsidy for or access to the medicine, vaccine or other therapeutic good.
Definition Source	NEHTA
Synonymous Names	
Notes	Authorising agency could be a national medication scheme, insurance company or other funding agency.
Data Type	Text

Usage

Examples	

Relationships

Parents

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

2.77 Medication Instruction ID

Identification

Label	Medication Instruction ID
Metadata Type	Data Element
Identifier	DE-16444
OID	1.2.36.1.2001.1001.101.103.16444

Definition

Definition	An identifier used in an external system and associated with this medication instruction.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Examples	

Relationships

Parents

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

2.78 Concession Benefit

Identification

Label	Concession Benefit
Metadata Type	Data Element
Identifier	DE-16095
OID	1.2.36.1.2001.1001.101.103.16095

Definition

Definition	Indicates the category of subsidy appropriate to the item being prescribed.
Definition Source	NEHTA
Synonymous Names	
Notes	This indicates whether the item has been prescribed for a use that attracts a subsidy. Not to be confused with Claim Category.
Data Type	CodeableText
Value Domain	Therapeutic Good Benefit Eligibility Reference Set

Usage

Examples	1. Eligible for PBS subsidy 2. Eligible for Closing the Gap - PBS Co-Payment Measure subsidy 3. Not eligible for a pharmaceutical subsidy

Relationships

Parents

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

2.79 Therapeutic Good Benefit Eligibility Reference Set

Identification

Label	Therapeutic Good Benefit Eligibility Reference Set
Metadata Type	Value Domain
Identifier	VD-16095
OID	1.2.36.1.2001.1001.101.104.16095
External Identifier	SNOMED CT-AU Concept Id: 32570811000036104

Definition

Definition	The set of values of *Concession Benefit*.
Definition Source	NEHTA

Value Domain

Source	SNOMED CT-AU

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
001011001	Concession Benefit	1..1

2.80 DateTime Medication Instruction Written

Identification

Label	DateTime Medication Instruction Written
Metadata Type	Data Element
Identifier	DE-16770
OID	1.2.36.1.2001.1001.101.103.16770

Definition

Definition	The date (and optionally time) of the completion of the writing of the medication instruction.
Definition Source	NEHTA
Synonymous Names	
Data Type	DateTime

Usage

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

Relationships

Parents

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

2.81 Administrative Manufacturer Code

Identification

Label	Administrative Manufacturer Code
Metadata Type	Data Element
Identifier	DE-16648
OID	1.2.36.1.2001.1001.101.103.16648

Definition

Definition	Administrative code of the manufacturer of the therapeutic good.
Definition Source	NEHTA
Synonymous Names	
Notes	This element can assist with claims processing. This element is typically used for the PBS Manufacturer's Code, a DoHA allocated detailed code that specifies the sponsor of the pharmaceutical item supplied.
Data Type	CodeableText
Value Domain	Administrative Manufacturer Code Values

Usage

Examples	

Relationships

Parents

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

2.82 Administrative Manufacturer Code Values

Identification

Label	Administrative Manufacturer Code Values
Metadata Type	Value Domain
Identifier	VD-16647
OID	1.2.36.1.2001.1001.101.104.16647

Definition

Definition	The set of values of *Administrative Manufacturer Code*.
Definition Source	NEHTA
Notes	If the data element is instantiated as the PBS Manufacturer Code, then the value set Australian PBS Manufacturer Code (OID 1.2.36.1.2001.1005.23) should be used. The set of values appropriate to the type of Administrative Manufacturer Code chosen. For example, if this is instantiated as the PBS Manufacturer Code, then the value set for PBS Manufacturer Code as specified by the Australian Government Department of Human Services (Medicare) should be used.

Value Domain

Source	Department of Health and Ageing, PBS manufacturer code.

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	Administrative Manufacturer Code	1..1

2.83 INFORMATION PROVIDER

Identification

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

Definition

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

Usage

Conditions of Use	This **SHALL NOT** be used unless the provider of the information is not the *Composer/Author* of the enclosing Structured Document. This is a reuse of the *PARTICIPATION* `data group`, which is described in Participation Data Specification [NEHT2011v]. The following constraints are additional to those specified in Participation Data Specification [NEHT2011v]. Constraints are explained in Appendix B, *Specification Guide for Use*. • Participation Type **SHALL** have an implementation-specific value equivalent to “Information Provider”. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a PERSON or as a DEVICE.
Conditions of Use Source	NEHTA

Relationships

Parents

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

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

Usage

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

Relationships

Parents

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

2.85 Medication Instruction Narrative

Identification

Label	Medication Instruction Narrative
Metadata Type	Data Element
Identifier	DE-16596
OID	1.2.36.1.2001.1001.101.103.16596

Definition

Definition	A textual narrative describing what the medication instruction is about.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

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

2.86 DateTime Medication Instruction Expires

Identification

Label	DateTime Medication Instruction Expires
Metadata Type	Data Element
Identifier	DE-10104
OID	1.2.36.1.2001.1001.101.103.10104

Definition

Definition	The date and, optionally, time after which the Medication Instruction is no longer effective or in force.
Definition Source	NEHTA
Synonymous Names	
Data Type	DateTime

Usage

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

Relationships

Parents

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

2.87 Medication Instruction Instance Identifier

Identification

Label	Medication Instruction Instance Identifier
Metadata Type	Data Element
Identifier	DE-16713
OID	1.2.36.1.2001.1001.101.103.16713

Definition

Definition	A globally unique object identifier for each instance of a *Medication Instruction* instruction.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Examples	

Relationships

Parents

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

2.88 LINK

Identification

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

Definition

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

Relationships

Parents

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

Children

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

2.89 Link Nature

Identification

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

Definition

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

Usage

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

Relationships

Parents

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

2.90 Link Nature Values

Identification

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

Definition

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

Value Domain

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

		two might be defining the same care plan, act or episode, or both might be related milestones.
	LINK-E0, is a related documentation	The target [instance of a DCM or document] is an alternative documentary form of the source [DCM instance], such as re-expression of the same clinical information or additional supplementary explanatory information.

Relationships

Parents

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

2.91 Link Role

Identification

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

Definition

Definition	The detailed semantic description of the relationship between this instance of this DCM, i.e. the source, and the target DCM instance or target document.
Definition Source	NEHTA
Synonymous Names	
Notes	This is one of two attributes which together communicate the semantics of the relationship between the source and target DCMs. This attribute provides for a specific description of the actual role played by the target in relation to the source. This attribute may be populated from any suitable terminology, and therefore might support human readership better than interoperable automated processing.
Data Type	CodeableText
Value Domain	Link Role Values

Usage

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

Relationships

Parents

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

2.92 Link Role Values

Identification

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

Definition

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

Value Domain

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

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

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

Usage

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

Relationships

Parents

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

2.93 Link Target

Identification

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

Definition

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

Usage

Examples	

Relationships

Parents

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

2.94 Detailed Clinical Model Identifier

Identification

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

Definition

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

Usage

Examples	
Default Value	1.2.36.1.2001.1001.101.102.16211
Default Value Conditions of Use	The value of this item is fixed and **SHALL** be the default value.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	MEDICATION INSTRUCTION	1..1

3 Medication Action Detailed Clinical Model

This chapter describes version 4.0 of the Medication Action Detailed Clinical Model.

3.1 Purpose

The recording of activities undertaken with regard to a medicine, vaccine or other therapeutic good, and linking to the instruction if appropriate.

3.2 Use

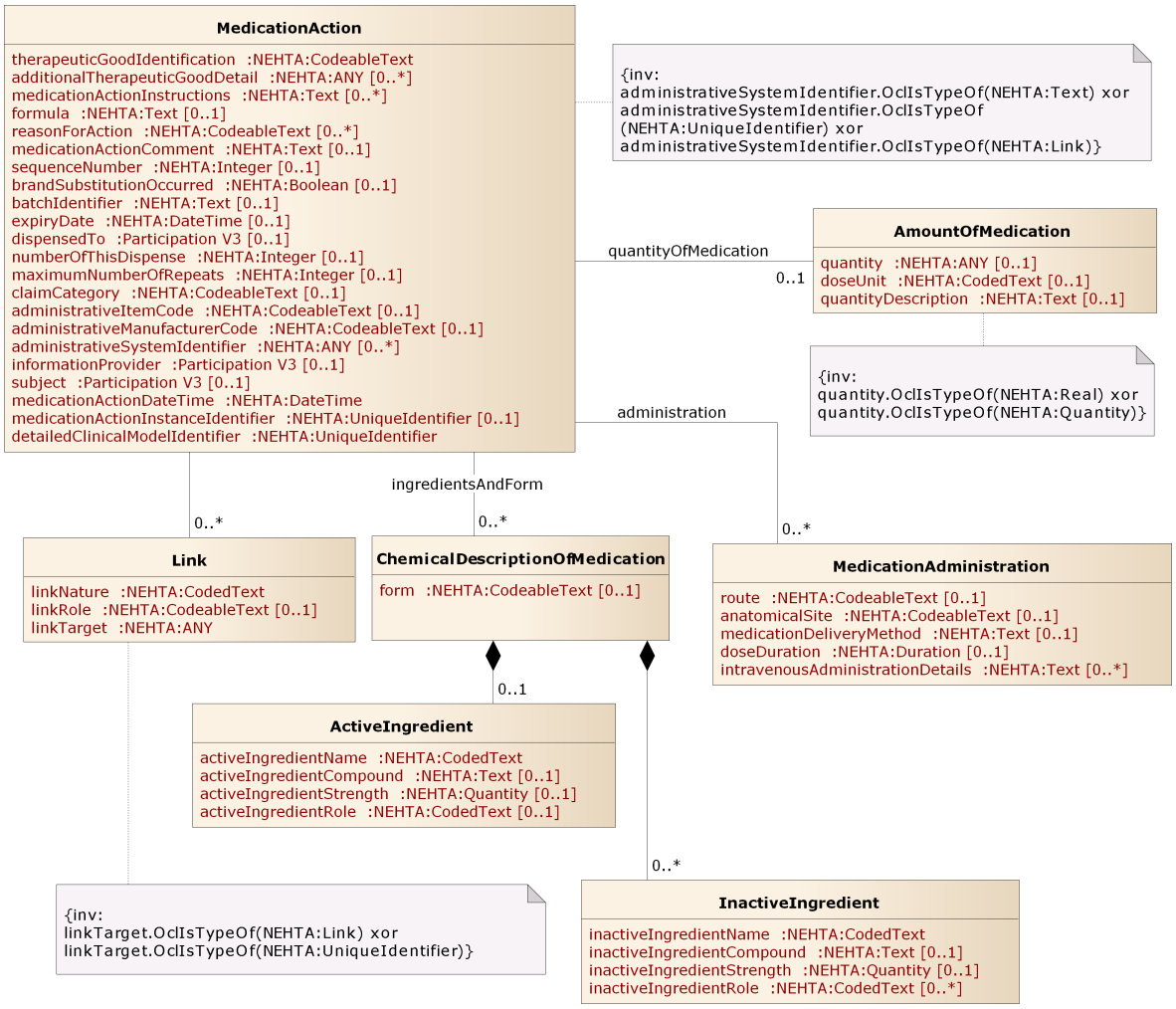
For recording the planning, issuing of a prescription, dispensing, administration, cessation, suspension, completion of a medicine, vaccine or other therapeutic good. This will usually be in response to a medication order but may be administered immediately without an order at times, thus requiring recording of the administration alone (e.g. in an emergency situation). Such a record may be made to indicate the administration of a dose, dispensing of a certain quantity or as a record of ceasing a medication. The state of the medication instruction is altered by the action taken as indicated in the pathway definition.

There is a date and time at which this action took place (as there is for all actions) and use of this DCM indicates that some action has actually occurred.

3.3 Misuse

Use when recording an instruction or order (use *Medication Instruction* DCM).

3.4 UML Class Diagram



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

3.5 MEDICATION ACTION

Identification

Label	MEDICATION ACTION
Metadata Type	Data Group
Identifier	DG-16210
OID	1.2.36.1.2001.1001.101.102.16210

Definition

Definition	Details of use, administration, dispensing or other care step relating to a medicine, vaccine or other therapeutic good which may arise from an instruction from a clinician.
Definition Source	NEHTA
Synonymous Names	Medication Item
Scope	The specification of each constituent data element is the same whether it is being used in the context of prescribed, dispensed, administered or reviewed. There may be separate data instances for each of these contexts.
Scope Source	NEHTA

Data Hierarchy

	MEDICATION ACTION				
		Medicine (Therapeutic Good Identification)			1..1
		Additional Medicine Detail (Additional Therapeutic Good Detail)			0..*
		Instructions to Subject of Care or Carer (Medication Action Instructions)			0..*
		Formula			0..1
		Ingredients and Form (CHEMICAL DESCRIPTION OF MEDICATION)			0..*
			ACTIVE INGREDIENT		0..1
				Name (Active Ingredient Name)	1..1
				Compound (Active Ingredient Compound)	0..1
				Strength (Active Ingredient Strength)	0..1

				Role (Active Ingredient Role)	0..1
		Form			0..1
		INACTIVE INGREDIENT			0..*
				Name (Inactive Ingredient Name)	1..1
				Compound (Inactive Ingredient Compound)	0..1
				Strength (Inactive Ingredient Strength)	0..1
				Role (Inactive Ingredient Role)	0..*
	Reason (Reason for Action)				0..*
	Quantity of Medication (AMOUNT OF MEDICATION)				0..1
		Quantity			0..1
		Dose Unit			0..1
		Quantity Description			0..1
	Comment (Medication Action Comment)				0..1
	Sequence Number				0..1
	Administration (MEDICATION ADMINISTRATION)				0..*
		Route			0..1
		Site (Anatomical Site)			0..1
		Delivery Method (Medication Delivery Method)			0..1
		Dose Duration			0..1
		Intravenous Details (Intravenous Administration Details)			0..*
	Brand Substituted (Brand Substitution Occurred)				0..1
	Batchid (Batch Identifier)				0..1
	Date of Expiry (Expiry Date)				0..1

		DISPENSED TO	0..1
		Number of this Dispense	0..1
		Maximum Number of Repeats	0..1
		Claim Category	0..1
		Administrative Item Code	0..1
		Administrative Manufacturer Code	0..1
		Administrative System Identifier	0..*
		INFORMATION PROVIDER	0..1
		SUBJECT	0..1
		Medication Action DateTime	1..1
		Medication Action Instance Identifier	0..1
		LINK	0..*
		Link Nature	1..1
		Link Role	0..1
		Link Target	1..1
		Detailed Clinical Model Identifier	1..1

3.6 Therapeutic Good Identification

Identification

Label	Medicine
Metadata Type	Data Element
Identifier	DE-10194
OID	1.2.36.1.2001.1001.101.103.10194

Definition

Definition	The medicine, vaccine or other therapeutic good that was the focus of the action.
Definition Source	Therapeutic Goods Administration
Synonymous Names	Item Name
Context	This includes medications and medical devices. It includes drugs, appliances, dressings, and reagents.
Context Source	NEHTA
Notes	Identifies a therapeutic good, which is broadly defined as a good which is represented in any way to be, or is likely to be taken to be, for therapeutic use (unless specifically excluded or included under Section 7 of the *Therapeutic Goods Act 1989*). Therapeutic use means use in or in connection with: • preventing, diagnosing, curing or alleviating a disease, ailment, defect or injury; or • influencing, inhibiting or modifying a physiological process; or • testing the susceptibility of persons to a disease or ailment; or • influencing, controlling or preventing conception; or • testing for pregnancy; or • replacement or modification of parts of the anatomy. From [TGA1989a]. The formal definition of a therapeutic good (from the *Therapeutic Goods Act 1989*) can be found at: [TGA1989a].
Data Type	CodeableText
Value Domain	Medicines Terminology

Usage

Conditions of Use	Where the therapeutic good can be identified by an AMT (Australian Medicines Terminology) concept, the value of this data element **SHALL** be the AMT ConceptID and Preferred Term. For details see Medicines Terminology.

	For items without an AMT code (including some extemporaneous preparations), a text description is suitable. For a medication, this **SHALL** include the name of the medication (brand name or generic name equivalent), the strength and, where appropriate, the dose form.
Conditions of Use Source	NEHTA
Examples	Some examples of AMT ConceptID and their AMT Preferred Term are: 1. 23641011000036102 |*paracetamol 500 mg + codeine phosphate 30 mg tablet*| 2. 28329011000036108 |*paracetamol 500 mg + codeine phosphate 30 mg tablet, 20*| 3. 13362011000036106 |*Panadeine Forte tablet: uncoated, 20 tablets*| 4. 6647011000036101 |*Panadeine Forte (paracetamol 500 mg + codeine phosphate 30 mg) tablet: uncoated, 1 tablet*| 5. 20138011000036107 |*Panadeine Forte tablet: uncoated, 20 tablets, blister pack*| 6. 51295011000036108 |*bandage compression 10 cm x 3.5 m bandage: high stretch, 1 bandage*| 7. 48667011000036100 |*Eloflex (2480) (bandage compression 10 cm x 3.5 m) bandage: high stretch, 1 bandage*| 8. 926706011000036104 |*Engerix-B Paediatric 10 microgram/0.5 mL injection: suspension, 1 x 0.5 mL syringe*|
Misuse	Detailing the formula of a compounded (extemporaneous) medication.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	MEDICATION ACTION	1..1

3.7 Medicines Terminology

Identification

Label	Medicines Terminology
Metadata Type	Value Domain
Identifier	VD-16115
OID	1.2.36.1.2001.1001.101.104.16115

Definition

Definition	A set of values used to refer to medicines and other therapeutic goods.
Definition Source	NEHTA
Notes	An explanation of AMT concepts can be found in Australian Medicines Terminology Editorial Rules (v2 model) [NEHT2011bs]. Prescribing and dispensing use different sets of values.

Value Domain

Source	Australian Medicines Terminology
Permissible Values	The permissible values are the members of the following seven AMT reference sets: • 929360061000036106 |*Medicinal product reference set*| • 929360081000036101 |*Medicinal product pack reference set*| • 929360071000036103 |*Medicinal product unit of use reference set*| • 929360021000036102 |*Trade product reference set*| • 929360041000036105 |*Trade product pack reference set*| • 929360031000036100 |*Trade product unit of use reference set*| • 929360051000036108 |*Containered trade product pack reference set*| Different reference sets are allowed in the differing contexts of prescribing, dispensing and administering, as listed below. Prescribing: • 929360081000036101 |*Medicinal product pack reference set*| • 929360071000036103 |*Medicinal product unit of use reference set*| • 929360041000036105 |*Trade product pack reference set*| • 929360031000036100 |*Trade product unit of use reference set*| • 929360051000036108 |*Containered trade product pack reference set*|

Dispensing:

- 929360041000036105 |*Trade product pack reference set*|
- 929360031000036100 |*Trade product unit of use reference set*|
- 929360051000036108 |*Containered trade product pack reference set*|

Administering:

- 929360031000036100 |*Trade product unit of use reference set*|

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	Medicine (Therapeutic Good Identification)	1..1

3.8 Additional Therapeutic Good Detail

Identification

Label	Additional Medicine Detail
Metadata Type	Data Element
Identifier	DE-16769
OID	1.2.36.1.2001.1001.101.103.16769

Definition

Definition	An item of information about a therapeutic good.
Definition Source	NEHTA
Synonymous Names	
Data Type	

Usage

Examples	

Relationships

Parents

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

3.9 Medication Action Instructions

Identification

Label	Instructions to Subject of Care or Carer
Metadata Type	Data Element
Identifier	DE-16109
OID	1.2.36.1.2001.1001.101.103.16109

Definition

Definition	Any instructions given to the subject of care or carer at the time of the action.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

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

3.10 Formula

Identification

Label	Formula
Metadata Type	Data Element
Identifier	DE-16272
OID	1.2.36.1.2001.1001.101.103.16272

Definition

Definition	The recipe for compounding a medicine.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	1. Salicylic Acid 2% in White Soft Paraffin to 100g: Salicylic Acid 2g White Soft Paraffin to 100g
Misuse	Describing off-the-shelf medications.

Relationships

Parents

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

3.11 CHEMICAL DESCRIPTION OF MEDICATION

Identification

Label	Ingredients and Form
Metadata Type	Data Group
Identifier	DG-16408
OID	1.2.36.1.2001.1001.101.102.16408

Definition

Definition	Detailed information about the ingredient(s) including form and strength.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

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

Children

Data Type	Name	Occurrences
	ACTIVE INGREDIENT	0..1
	Form	0..1
	INACTIVE INGREDIENT	0..*

3.12 ACTIVE INGREDIENT

Identification

Label	ACTIVE INGREDIENT
Metadata Type	Data Group
Identifier	DG-10132
OID	1.2.36.1.2001.1001.101.102.10132

Definition

Definition	Information about an ingredient that is active.
Definition Source	NEHTA
Synonymous Names	Active Pharmaceutical Ingredient Active Pharmaceutical Constituent
Notes	The substance in the medication formulation that is pharmaceutically active and is responsible for the medication's therapeutic effect defined by its identifying name and the strength per dose unit.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Ingredients and Form (CHEMICAL DESCRIPTION OF MEDICATION)	0..1

Children

Data Type	Name	Occurrences
	Name (Active Ingredient Name)	1..1
	Compound (Active Ingredient Compound)	0..1
	Strength (Active Ingredient Strength)	0..1
	Role (Active Ingredient Role)	0..1

3.13 Active Ingredient Name

Identification

Label	Name
Metadata Type	Data Element
Identifier	DE-10195
OID	1.2.36.1.2001.1001.101.103.10195

Definition

Definition	The name of the chemical or medication.
Definition Source	NEHTA
Synonymous Names	
Notes	The identifying name of the active ingredient in the formulated medication.
Data Type	CodedText
Value Domain	*Not specified.* In the absence of national standard code sets, the code sets used **SHALL** be registered code sets, i.e. registered through the *HL7 code set registration procedure*[1] with an appropriate object identifier (OID), and **SHALL** be publicly available. When national standard code sets become available, they **SHALL** be used and the non-standard code sets **SHALL** be deprecated.

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	ACTIVE INGREDIENT	1..1

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

3.14 Active Ingredient Compound

Identification

Label	Compound
Metadata Type	Data Element
Identifier	DE-16409
OID	1.2.36.1.2001.1001.101.103.16409

Definition

Definition	The detailed chemical name of the compound that is an active ingredient.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

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

3.15 Active Ingredient Strength

Identification

Label	Strength
Metadata Type	Data Element
Identifier	DE-16410
OID	1.2.36.1.2001.1001.101.103.16410

Definition

Definition	The amount or concentration of this ingredient.
Definition Source	NEHTA
Synonymous Names	
Data Type	Quantity

Usage

Examples	

Relationships

Parents

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

3.16 Active Ingredient Role

Identification

Label	Role
Metadata Type	Data Element
Identifier	DE-16412
OID	1.2.36.1.2001.1001.101.103.16412

Definition

Definition	The role of the ingredient.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodedText
Value Domain	*Not specified.* In the absence of national standard code sets, the code sets used **SHALL** be registered code sets, i.e. registered through the *HL7 code set registration procedure*[2] with an appropriate object identifier (OID), and **SHALL** be publicly available. When national standard code sets become available, they **SHALL** be used and the non-standard code sets **SHALL** be deprecated.

Usage

Examples	1. Therapeutic: The chemical has a known and desired effect that is positive. 2. Toxic: This chemical is toxic and has no therapeutic effect. 3. Adjuvant: The chemical is active but aids the therapeutic effect of another ingredient. 4. Other: The chemical has another active role.

Relationships

Parents

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

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

3.17 Form

Identification

Label	Form
Metadata Type	Data Element
Identifier	DE-10186
OID	1.2.36.1.2001.1001.101.103.10186

Definition

Definition	The formulation or presentation of the overall substance.
Definition Source	NEHTA
Synonymous Names	Manufactured Form Dose Form
Notes	*Form* is used to specify a characteristic of a product as it is manufactured or formulated for dispensing. The form the medication takes when actually administered may vary somewhat from the manufactured form. Tablets may be soluble. Such tablets may or may not be actually dissolved into a solution prior to administration. Similarly with powders and liquids. If it is critical for the care of the patient to differentiate the manufactured form from the administered form, then this should be done via correct labelling and patient instructions. See *Subject of Care Instructions* and *Cautionary Advice*.
Data Type	CodeableText
Value Domain	Medication Form Reference Set

Usage

Examples	1. Tablet 2. Capsule 3. Oral drops 4. Effervescent powder

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Ingredients and Form (CHEMICAL DESCRIPTION OF MEDICATION)	0..1

3.18 Medication Form Reference Set

Identification

Label	Medication Form Reference Set
Metadata Type	Value Domain
Identifier	VD-16618
OID	1.2.36.1.2001.1001.101.104.16618
External Identifier	SNOMED CT-AU Concept Id: 32570621000036105

Definition

Definition	The set of values for the medication form.
Definition Source	NEHTA

Value Domain

Source	SNOMED CT-AU

Relationships

Parents

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

3.19 INACTIVE INGREDIENT

Identification

Label	INACTIVE INGREDIENT
Metadata Type	Data Group
Identifier	DG-16413
OID	1.2.36.1.2001.1001.101.102.16413

Definition

Definition	Ingredients in the substance that are not active.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Ingredients and Form (CHEMICAL DESCRIPTION OF MEDICATION)	0..*

Children

Data Type	Name	Occurrences
	Name (Inactive Ingredient Name)	1..1
	Compound (Inactive Ingredient Compound)	0..1
	Strength (Inactive Ingredient Strength)	0..1
	Role (Inactive Ingredient Role)	0..*

3.20 Inactive Ingredient Name

Identification

Label	Name
Metadata Type	Data Element
Identifier	DE-16415
OID	1.2.36.1.2001.1001.101.103.16415

Definition

Definition	The name of the inactive substance.
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	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	INACTIVE INGREDIENT	1..1

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

3.21 Inactive Ingredient Compound

Identification

Label	Compound
Metadata Type	Data Element
Identifier	DE-16416
OID	1.2.36.1.2001.1001.101.103.16416

Definition

Definition	The detailed chemical name of the compound that is an inactive ingredient.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

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

3.22 Inactive Ingredient Strength

Identification

Label	Strength
Metadata Type	Data Element
Identifier	DE-16417
OID	1.2.36.1.2001.1001.101.103.16417

Definition

Definition	The amount or concentration of this ingredient.
Definition Source	NEHTA
Synonymous Names	
Data Type	Quantity

Usage

Examples	

Relationships

Parents

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

3.23 Inactive Ingredient Role

Identification

Label	Role
Metadata Type	Data Element
Identifier	DE-16419
OID	1.2.36.1.2001.1001.101.103.16419

Definition

Definition	The role of the ingredient.
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. Additive: Inert additive. 2. Diluent: Inert diluent. 3. Propellant: Inert propellant. 4. Preservative: The ingredient is present to prolong the life of the substance. 5. Colouring: The ingredient is used to colour the substance.

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

Relationships

Parents

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

3.24 Reason for Action

Identification

Label	Reason
Metadata Type	Data Element
Identifier	DE-16492
OID	1.2.36.1.2001.1001.101.103.16492

Definition

Definition	The reason(s) the specific action or step was carried out.
Definition Source	NEHTA
Synonymous Names	
Notes	This is not the reason for the medication instruction, rather it is the specific reason for the action, such as for administration of the medication or for ceasing the medication.
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	Occurrences (child within parent)
	MEDICATION ACTION	0..*

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

3.25 AMOUNT OF MEDICATION

Identification

Label	Quantity of Medication
Metadata Type	Data Group
Identifier	DG-16423
OID	1.2.36.1.2001.1001.101.102.16423

Definition

Definition	The quantity of medicine, vaccine or other therapeutic good.
Definition Source	NEHTA
Synonymous Names	

Relationships

Parents

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

Children

Data Type	Name	Occurrences
	Quantity	0..1
	Dose Unit	0..1
	Quantity Description	0..1

3.26 Quantity

Identification

Label	Quantity
Metadata Type	Data Element
Identifier	DE-10145
OID	1.2.36.1.2001.1001.101.103.10145

Definition

Definition	The quantity, number or proportion.
Definition Source	NEHTA
Synonymous Names	
Notes	The number of doses or physical amount of the therapeutic good.
Data Type	Real Quantity

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Quantity of Medication (AMOUNT OF MEDICATION)	0..1

3.27 Dose Unit

Identification

Label	Dose Unit
Metadata Type	Data Element
Identifier	DE-16524
OID	1.2.36.1.2001.1001.101.103.16524

Definition

Definition	The dose unit of this amount.
Definition Source	NEHTA
Synonymous Names	
Data Type	CodedText
Value Domain	Dose Unit Reference Set

Usage

Examples	1. Tablets 2. Capsules 3. Sachets 4. mg 5. mL

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Quantity of Medication (AMOUNT OF MEDICATION)	0..1

3.28 Dose Unit Reference Set

Identification

Label	Dose Unit Reference Set
Metadata Type	Value Domain
Identifier	VD-16523
OID	1.2.36.1.2001.1001.101.104.16523
External Identifier	SNOMED CT-AU Concept Id: 32570641000036102

Definition

Definition	The set of values for dose unit.
Definition Source	NEHTA

Value Domain

Source	SNOMED CT-AU

Relationships

Parents

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

3.29 Quantity Description

Identification

Label	Quantity Description
Metadata Type	Data Element
Identifier	DE-16525
OID	1.2.36.1.2001.1001.101.103.16525

Definition

Definition	Free text description of the amount which may consist of the quantity and dose unit.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Quantity of Medication (AMOUNT OF MEDICATION)	0..1

3.30 Medication Action Comment

Identification

Label	Comment
Metadata Type	Data Element
Identifier	DE-16044
OID	1.2.36.1.2001.1001.101.103.16044

Definition

Definition	A comment on the action taken.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

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

3.31 Sequence Number

Identification

Label	Sequence Number
Metadata Type	Data Element
Identifier	DE-16424
OID	1.2.36.1.2001.1001.101.103.16424

Definition

Definition	The sequence number specific to the action being recorded.
Definition Source	NEHTA
Synonymous Names	
Notes	Used to specify the sequence number of the dispensing (in a prescription with repeats) or medication administration action.
Data Type	Integer

Usage

Examples	

Relationships

Parents

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

3.32 MEDICATION ADMINISTRATION

Identification

Label	Administration
Metadata Type	Data Group
Identifier	DG-10108
OID	1.2.36.1.2001.1001.101.102.10108

Definition

Definition	Details about the administration of the medicine, vaccine or other therapeutic good.
Definition Source	NEHTA
Synonymous Names	

Usage

Conditions of Use	This data group is repeated for every instance of medication administration being recorded.
Conditions of Use Source	NEHTA

Relationships

Parents

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

Children

Data Type	Name	Occurrences
	Route	0..1
	Site (Anatomical Site)	0..1
	Delivery Method (Medication Delivery Method)	0..1
	Dose Duration	0..1

Data Type	Name	Occurrences
T	Intravenous Details (Intravenous Administration Details)	0..*

3.33 Route

Identification

Label	Route
Metadata Type	Data Element
Identifier	DE-10147
OID	1.2.36.1.2001.1001.101.103.10147

Definition

Definition	The route by which the medication is administered.
Definition Source	NEHTA
Synonymous Names	Route of Administration
Notes	It is used to describe the path or channel by which the substance/agent is introduced or gains access into a patient's body. This includes the route for which medication is administered.
Data Type	CodeableText
Value Domain	Route of Administration Reference Set

Usage

Conditions of Use	Use “Unknown” only for retrospective data collection.
Conditions of Use Source	NEHTA
Examples	1. Oral 2. Subcutaneous injection 3. Epidural 4. Rectal 5. Otic

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Administration (MEDICATION ADMINISTRATION)	0..1

3.34 Route of Administration Reference Set

Identification

Label	Route of Administration Reference Set
Metadata Type	Value Domain
Identifier	VD-10147
OID	1.2.36.1.2001.1001.101.104.10147
External Identifier	SNOMED CT-AU Concept Id: 32570601000036100

Definition

Definition	A list of all possible routes of administration of medication.
Definition Source	NEHTA
Notes	Set of allowable values to describe the way through which a medication is administered to/by the subject of care.

Value Domain

Source	SNOMED CT-AU

Relationships

Parents

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

3.35 Anatomical Site

Identification

Label	Site
Metadata Type	Data Element
Identifier	DE-10156
OID	1.2.36.1.2001.1001.101.103.10156

Definition

Definition	A description of the site of administration.
Definition Source	NEHTA
Synonymous Names	
Notes	Location on or in the body of the subject of care where the substance/agent entered the body or therapeutic good was administered.
Data Type	CodeableText
Value Domain	Body Structure Foundation Reference Set

Usage

Examples	1. Left thigh 2. Upper arm 3. Entire left renal artery

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Administration (MEDICATION ADMINISTRATION)	0..1

3.36 Body Structure Foundation Reference Set

Identification

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

Definition

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

Value Domain

Source	SNOMED CT-AU

Relationships

Parents

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

3.37 Medication Delivery Method

Identification

Label	Delivery Method
Metadata Type	Data Element
Identifier	DE-16470
OID	1.2.36.1.2001.1001.101.103.16470

Definition

Definition	The method of delivery if this should be specified.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	1. Delivery via nebuliser or spacer. 2. Delivery via syringe pump.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Administration (MEDICATION ADMINISTRATION)	0..1

3.38 Dose Duration

Identification

Label	Dose Duration
Metadata Type	Data Element
Identifier	DE-16471
OID	1.2.36.1.2001.1001.101.103.16471

Definition

Definition	The length of time over which to administer each dose.
Definition Source	NEHTA
Synonymous Names	
Data Type	Duration

Usage

Examples	1. An intravenous injection may be administered over a period of 5 minutes.

Relationships

Parents

Data Type	Name	**Occurrences** (child within parent)
	Administration (MEDICATION ADMINISTRATION)	0..1

3.39 Intravenous Administration Details

Identification

Label	Intravenous Details
Metadata Type	Data Element
Identifier	DE-16634
OID	1.2.36.1.2001.1001.101.105.16634

Definition

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

Usage

Examples	

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Administration (MEDICATION ADMINISTRATION)	0..*

3.40 Brand Substitution Occurred

Identification

Label	Brand Substituted
Metadata Type	Data Element
Identifier	DE-16064
OID	1.2.36.1.2001.1001.101.103.16064

Definition

Definition	A different brand of the same medicine, vaccine or other therapeutic good was substituted for the one nominated in the order.
Definition Source	NEHTA
Synonymous Names	
Data Type	Boolean

Usage

Examples	
Misuse	Using this data element for therapeutic substitution. Using this data element for medical appliances.

Relationships

Parents

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

3.41 Batch Identifier

Identification

Label	Batchid
Metadata Type	Data Element
Identifier	DE-16273
OID	1.2.36.1.2001.1001.101.103.16273

Definition

Definition	A code assigned by the manufacturer to identify the manufactured batch of an item.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text

Usage

Examples	

Relationships

Parents

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

3.42 Expiry Date

Identification

Label	Date of Expiry
Metadata Type	Data Element
Identifier	DE-16425
OID	1.2.36.1.2001.1001.101.103.16425

Definition

Definition	The expiry date as documented by the manufacturer.
Definition Source	NEHTA
Synonymous Names	
Data Type	DateTime

Usage

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

Relationships

Parents

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

3.43 DISPENSED TO

Identification

Label	DISPENSED TO
Metadata Type	Data Group
Identifier	DG-10296
OID	1.2.36.1.2001.1001.101.102.10296

Definition

Definition	The name of the person to whom this was dispensed, if not the subject of care.
Definition Source	NEHTA
Synonymous Names	

Usage

Conditions of Use	This **SHALL NOT** be used unless the subject of the information is not the *Subject of Care* of the enclosing Structured Document. This is a reuse of the *PARTICIPATION* `data group`, which is described in Participation Data Specification [NEHT2011v]. The following constraints are additional to those specified in Participation Data Specification [NEHT2011v]. Constraints are explained in Appendix B, *Specification Guide for Use*. • Participation Type **SHALL** have an implementation-specific value equivalent to "Dispensed To". • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a PERSON.
Conditions of Use Source	NEHTA

Relationships

Parents

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

3.44 Number of this Dispense

Identification

Label	Number of this Dispense
Metadata Type	Data Element
Identifier	DE-16106
OID	1.2.36.1.2001.1001.101.103.16106

Definition

Definition	A numeric value that represents the dispense number or sequence number that has been reached for a therapeutic good prescribed with repeats. This count includes the first dispense. It has the value 1 when there are no repeats.
Definition Source	NEHTA
Synonymous Names	
Notes	Each prescribed item logically possesses a pre-determined number of times it may be dispensed; the number is 1 (for the original prescription) + the maximum number of repeats. This data element (Number of this Dispense) indicates which dispensing of the item is being attempted by the dispense act that this dispense record documents. Its value is one more than the number of times the prescribed item has successfully been dispensed prior to this dispensing. Its value increments by one each time a dispense act is successfully completed. The value of this term is one more than the commonly used term “number this repeat”.
Data Type	Integer

Usage

Examples	

Relationships

Parents

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

3.45 Maximum Number of Repeats

Identification

Label	Maximum Number of Repeats
Metadata Type	Data Element
Identifier	DE-10169
OID	1.2.36.1.2001.1001.101.103.10169

Definition

Definition	The number of times the supply of the prescribed item may be repeated under the terms of the prescription.
Definition Source	NEHTA
Synonymous Names	
Notes	Note that the initial supply under the prescription is not counted as a repeat. PBS and RPBS items specify a maximum number of permitted repeats within the Schedules. This number must not be exceeded on a prescription without the appropriate authorisation. When a prescription for a PBS medicine asks for repeat supplies, the pharmacist shall prepare a Repeat Authorisation Form to be attached to the “Pharmacist/Subject of Care” copy. An exception to this is when the prescription is marked “Regulation 24”, where all repeats are supplied at once with the original prescription. A similar exception is permitted for RPBS prescriptions endorsed with “hardship conditions apply”. The Repeat Authorisation is to be detailed in a separate Structured Document Template.
Data Type	Integer

Usage

Examples	
Default Value	0

Relationships

Parents

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

3.46 Claim Category

Identification

Label	Claim Category
Metadata Type	Data Element
Identifier	DE-16060
OID	1.2.36.1.2001.1001.101.103.16060

Definition

Definition	The category of reimbursement or subsidy sought for the item.
Definition Source	NEHTA
Synonymous Names	
Notes	The primary purpose of this data element is to enable the determination of the source of any applicable financial subsidy for the item. Not to be confused with Concession Benefit.
Data Type	CodeableText
Value Domain	Therapeutic Good Claim Category Reference Set

Usage

Conditions of Use	This data element only relates to Dispense Records of successful dispense events.
Conditions of Use Source	NEHTA
Examples	1. General PBS benefit 2. Safety Net Concession benefit 3. Safety Net Entitlement Card benefit

Relationships

Parents

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

3.47 Therapeutic Good Claim Category Reference Set

Identification

Label	Therapeutic Good Claim Category Reference Set
Metadata Type	Value Domain
Identifier	VD-16060
OID	1.2.36.1.2001.1001.101.104.16060
External Identifier	SNOMED CT-AU Concept Id: 32570711000036105

Definition

Definition	The set of values of *Claim Category*.
Definition Source	NEHTA

Value Domain

Source	SNOMED CT-AU

Relationships

Parents

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

3.48 Administrative Item Code

Identification

Label	Administrative Item Code
Metadata Type	Data Element
Identifier	DE-16646
OID	1.2.36.1.2001.1001.101.103.16646

Definition

Definition	Administrative code of the pharmaceutical item supplied.
Definition Source	NEHTA
Synonymous Names	
Notes	This element is to be used to assist with claims processing.
Data Type	CodeableText
Value Domain	Administrative Item Code Values

Usage

Conditions of Use	This would typically be used for the PBS Scheduled Item Code, a DoHA allocated detailed code that specifies the use, and funding about the use, of a particular medication.
Conditions of Use Source	NEHTA
Examples	

Relationships

Parents

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

3.49 Administrative Item Code Values

Identification

Label	Administrative Item Code Values
Metadata Type	Value Domain
Identifier	VD-16645
OID	1.2.36.1.2001.1001.101.104.16645

Definition

Definition	The set of values of *Administrative Item Code*.
Definition Source	NEHTA
Notes	This will have a set of values appropriate to its use. If *Administrative Item Code* is used to hold a PBS Item Code, the set of values will be the set of PBS Item Code values.

Value Domain

Source	Department of Health and Ageing, PBS Schedule item code.

Relationships

Parents

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

3.50 Administrative Manufacturer Code

Identification

Label	Administrative Manufacturer Code
Metadata Type	Data Element
Identifier	DE-16648
OID	1.2.36.1.2001.1001.101.103.16648

Definition

Definition	Administrative code of the manufacturer of the therapeutic good.
Definition Source	NEHTA
Synonymous Names	
Notes	This element can assist with claims processing. This element is typically used for the PBS Manufacturer's Code, a DoHA allocated detailed code that specifies the sponsor of the pharmaceutical item supplied.
Data Type	CodeableText
Value Domain	Administrative Manufacturer Code Values

Usage

Examples	

Relationships

Parents

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

3.51 Administrative Manufacturer Code Values

Identification

Label	Administrative Manufacturer Code Values
Metadata Type	Value Domain
Identifier	VD-16647
OID	1.2.36.1.2001.1001.101.104.16647

Definition

Definition	The set of values of *Administrative Manufacturer Code*.
Definition Source	NEHTA
Notes	The set of values will be appropriate to the type of Administrative Manufacturer Code chosen. If the data element is instantiated as the PBS Manufacturer Code, then the value set Australian PBS Manufacturer Code (OID 1.2.36.1.2001.1005.23) should be used.

Value Domain

Source	Department of Health and Ageing, PBS manufacturer code.

Relationships

Parents

Data Type	Name	Occurrences (child within parent)
	Administrative Manufacturer Code	1..1

3.52 Administrative System Identifier

Identification

Label	Administrative System Identifier
Metadata Type	Data Element
Identifier	DE-16786
OID	1.2.36.1.2001.1001.101.103.16786

Definition

Definition	A system identifier of additional administrative information relevant to this medication action.
Definition Source	NEHTA
Synonymous Names	
Data Type	Text UniqueIdentifier Link

Usage

Conditions of Use	The value **SHOULD** be unique. The value **MAY** be not unique.
Conditions of Use Source	NEHTA
Examples	1. Australian Pharmacy Approval Number 2. Australian Unique Pharmacy Prescription Number

Relationships

Parents

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

3.53 INFORMATION PROVIDER

Identification

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

Definition

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

Usage

Conditions of Use	This **SHALL NOT** be used unless the provider of the information is not the *Composer/Author* of the enclosing Structured Document. This is a reuse of the *PARTICIPATION* `data group`, which is described in Participation Data Specification [NEHT2011v]. The following constraints are additional to those specified in Participation Data Specification [NEHT2011v]. Constraints are explained in Appendix B, *Specification Guide for Use*. • Participation Type **SHALL** have an implementation-specific value equivalent to “Information Provider”. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a PERSON or as a DEVICE.
Conditions of Use Source	NEHTA

Relationships

Parents

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

3.54 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 medication action information is being recorded.
Definition Source	NEHTA
Synonymous Names	

Usage

Conditions of Use	This **SHALL NOT** be used unless the subject of the information is not the *Subject of Care* of the enclosing Structured Document. This is a reuse of the *PARTICIPATION* `data group`, which is described in Participation Data Specification [NEHT2011v]. The following constraints are additional to those specified in Participation Data Specification [NEHT2011v]. Constraints are explained in Appendix B, *Specification Guide for Use*. • Participation Type **SHALL** have an implementation-specific value equivalent to "Subject". • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a PERSON.
Conditions of Use Source	NEHTA

Relationships

Parents

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

3.55 Medication Action DateTime

Identification

Label	Medication Action DateTime
Metadata Type	Data Element
Identifier	DE-16591
OID	1.2.36.1.2001.1001.101.103.16591

Definition

Definition	The point in time at which the medication action is completed.
Definition Source	NEHTA
Synonymous Names	
Data Type	DateTime

Usage

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

Relationships

Parents

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

3.56 Medication Action Instance Identifier

Identification

Label	Medication Action Instance Identifier
Metadata Type	Data Element
Identifier	DE-16637
OID	1.2.36.1.2001.1001.101.103.16637

Definition

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

Usage

Examples	

Relationships

Parents

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

3.57 LINK

Identification

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

Definition

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

Relationships

Parents

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

Children

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

3.58 Link Nature

Identification

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

Definition

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

Usage

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

Relationships

Parents

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

3.59 Link Nature Values

Identification

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

Definition

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

Value Domain

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

		two might be defining the same care plan, act or episode, or both might be related milestones.
	LINK-E0, is a related documentation	The target [instance of a DCM or document] is an alternative documentary form of the source [DCM instance], such as re-expression of the same clinical information or additional supplementary explanatory information.

Relationships

Parents

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

3.60 Link Role

Identification

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

Definition

Definition	The detailed semantic description of the relationship between this instance of this DCM, i.e. the source, and the target DCM instance or target document.
Definition Source	NEHTA
Synonymous Names	
Notes	This is one of two attributes which together communicate the semantics of the relationship between the source and target DCMs. This attribute provides for a specific description of the actual role played by the target in relation to the source. This attribute may be populated from any suitable terminology, and therefore might support human readership better than interoperable automated processing.
Data Type	CodeableText
Value Domain	Link Role Values

Usage

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

Relationships

Parents

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

3.61 Link Role Values

Identification

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

Definition

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

Value Domain

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

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

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

Usage

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

Relationships

Parents

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

3.62 Link Target

Identification

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

Definition

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

Usage

Examples	

Relationships

Parents

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

3.63 Detailed Clinical Model Identifier

Identification

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

Definition

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

Usage

Examples	
Default Value	1.2.36.1.2001.1001.101.102.16210
Default Value Conditions of Use	The value of this item is fixed and **SHALL** be the default value.

Relationships

Parents

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

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4 Exclusion Statement - Medications Detailed Clinical Model

This chapter describes version 1.2 of the Exclusion Statement - Medications Detailed Clinical Model.

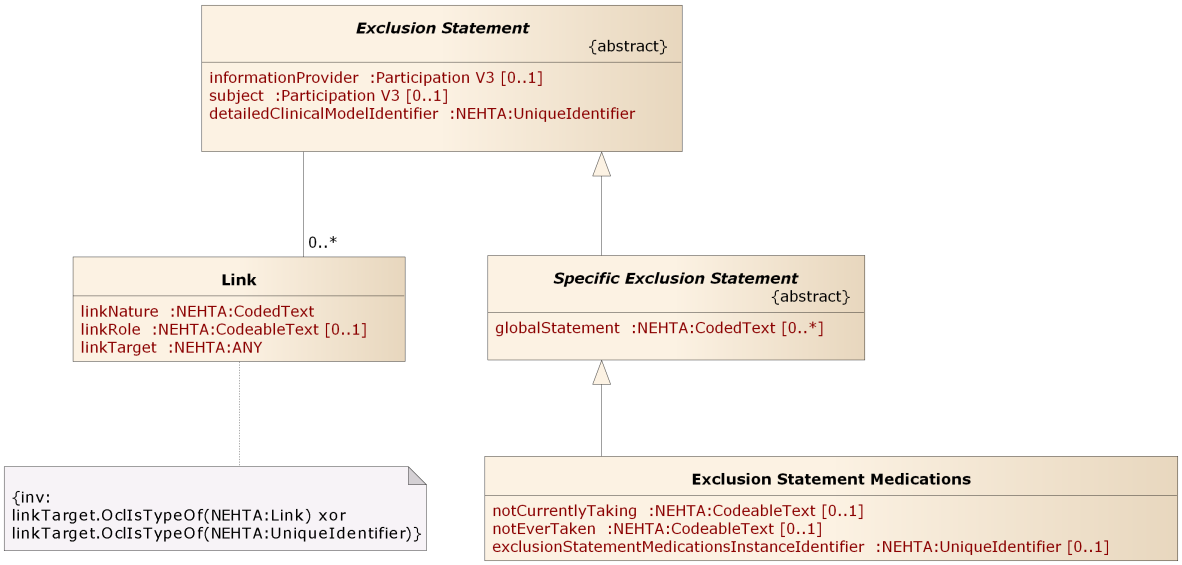
4.1 Purpose

To positively record the absence or exclusion of any medication use within the health record.

4.2 Use

Use to record the positive exclusion or absence of medication use within the health record. This DCM avoids the need to use terminology to express negation about any item within the health record. This data group is only to be used to record 'point in time' or event-based information. It is not to be used for a persistent storage of information as the patient should always be questioned about current or past medication use prior to initiation of any treatment or management plan.

4.3 UML Class Diagram



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

4.4 EXCLUSION STATEMENT - MEDICATIONS

Identification

Label	EXCLUSION STATEMENT - MEDICATIONS
Metadata Type	Data Group
Identifier	DG-16136
OID	1.2.36.1.2001.1001.101.102.16136

Definition

Definition	Statement to positively assert that the patient has not been prescribed or is not taking certain medication.
Definition Source	openEHR Foundation
Scope	To positively record the absence or exclusion of any medication use within the health record.
Scope Source	openEHR Foundation

Usage

Conditions of Use	Use to record the positive exclusion or absence of medication use within the health record. This Detailed Clinical Model (DCM) avoids the need to use terminology to express negation about any item within the health record. It is important to note that exclusion statement information is time-specific. Its validity may not extend beyond the point in time that information is recorded. The patient should always be asked to verify previous statements on any exclusion statement about medications.
Conditions of Use Source	NEHTA

Data Hierarchy

		EXCLUSION STATEMENT - MEDICATIONS	
		Global Statement	0..*
		Not Currently Taking	0..1
		Not Ever Taken	0..1
		INFORMATION PROVIDER	0..1
		SUBJECT	0..1

		Exclusion Statement - Medications Instance Identifier		0..1
		LINK		0..*
			Link Nature	1..1
			Link Role	0..1
			Link Target	1..1
		Detailed Clinical Model Identifier		1..1

4.5 Global Statement

Identification

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

Definition

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

Usage

Examples	

Relationships

Parents

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

4.6 Global Statement Values

Identification

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

Definition

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

Value Domain

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

Relationships

Parents

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

4.7 Not Currently Taking

Identification

Label	Not Currently Taking
Metadata Type	Data Element
Identifier	DE-16310
OID	1.2.36.1.2001.1001.101.103.16310

Definition

Definition	Positive statement about medications that are explicitly not being taken or used at the time of recording.
Definition Source	openEHR Foundation
Synonymous Names	
Data Type	CodeableText
Value Domain	*Not specified.* In the absence of national standard code sets, the code sets used **SHALL** be registered code sets, i.e. registered through the *HL7 code set registration procedure*[1] with an appropriate object identifier (OID), and **SHALL** be publicly available. When national standard code sets become available, they **SHALL** be used and the non-standard code sets **SHALL** be deprecated.

Usage

Examples	

Relationships

Parents

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

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

4.8 Not Ever Taken

Identification

Label	Not Ever Taken
Metadata Type	Data Element
Identifier	DE-16311
OID	1.2.36.1.2001.1001.101.103.16311

Definition

Definition	Positive statement about medications that are explicitly known not to have ever been taken or used at the time of recording.
Definition Source	openEHR Foundation
Synonymous Names	
Data Type	CodeableText
Value Domain	*Not specified.* In the absence of national standard code sets, the code sets used **SHALL** be registered code sets, i.e. registered through the *HL7 code set registration procedure*[2] with an appropriate object identifier (OID), and **SHALL** be publicly available. When national standard code sets become available, they **SHALL** be used and the non-standard code sets **SHALL** be deprecated.

Usage

Examples	

Relationships

Parents

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

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

4.9 INFORMATION PROVIDER

Identification

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

Definition

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

Usage

Conditions of Use	This **SHALL NOT** be used unless the provider of the information is not the *Composer/Author* of the enclosing Structured Document. This is a reuse of the *PARTICIPATION* `data group`, which is described in Participation Data Specification [NEHT2011v]. The following constraints are additional to those specified in Participation Data Specification [NEHT2011v]. Constraints are explained in Appendix B, *Specification Guide for Use*. • Participation Type **SHALL** have an implementation-specific value equivalent to “Information Provider”. • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a PERSON or as a DEVICE.
Conditions of Use Source	NEHTA

Relationships

Parents

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

4.10 SUBJECT

Identification

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

Definition

Definition	The individual for whom the exclusion statement is recorded.
Definition Source	NEHTA
Synonymous Names	

Usage

Conditions of Use	This **SHALL NOT** be used unless the subject of the information is not the *Subject of Care* of the enclosing Structured Document. This is a reuse of the *PARTICIPATION* `data group`, which is described in Participation Data Specification [NEHT2011v]. The following constraints are additional to those specified in Participation Data Specification [NEHT2011v]. Constraints are explained in Appendix B, *Specification Guide for Use*. • Participation Type **SHALL** have an implementation-specific value equivalent to "Subject". • PERSON OR ORGANISATION OR DEVICE **SHALL** be instantiated as a PERSON.
Conditions of Use Source	NEHTA

Relationships

Parents

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

4.11 Exclusion Statement - Medications Instance Identifier

Identification

Label	Exclusion Statement - Medications Instance Identifier
Metadata Type	Data Element
Identifier	DE-16709
OID	1.2.36.1.2001.1001.101.103.16709

Definition

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

Usage

Examples	

Relationships

Parents

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

4.12 LINK

Identification

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

Definition

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

Relationships

Parents

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

Children

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

4.13 Link Nature

Identification

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

Definition

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

Usage

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

Relationships

Parents

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

4.14 Link Nature Values

Identification

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

Definition

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

Value Domain

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

		two might be defining the same care plan, act or episode, or both might be related milestones.
	LINK-E0, is a related documentation	The target [instance of a DCM or document] is an alternative documentary form of the source [DCM instance], such as re-expression of the same clinical information or additional supplementary explanatory information.

Relationships

Parents

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

4.15 Link Role

Identification

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

Definition

Definition	The detailed semantic description of the relationship between this instance of this DCM, i.e. the source, and the target DCM instance or target document.
Definition Source	NEHTA
Synonymous Names	
Notes	This is one of two attributes which together communicate the semantics of the relationship between the source and target DCMs. This attribute provides for a specific description of the actual role played by the target in relation to the source. This attribute may be populated from any suitable terminology, and therefore might support human readership better than interoperable automated processing.
Data Type	CodeableText
Value Domain	Link Role Values

Usage

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

Relationships

Parents

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

4.16 Link Role Values

Identification

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

Definition

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

Value Domain

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

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

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

Usage

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

Relationships

Parents

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

4.17 Link Target

Identification

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

Definition

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

Usage

Examples	

Relationships

Parents

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

4.18 Detailed Clinical Model Identifier

Identification

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

Definition

Definition	The NEHTA OID for the *Exclusion Statement - Medications* concept represented by this DCM.
Definition Source	NEHTA
Synonymous Names	
Data Type	UniqueIdentifier

Usage

Examples	
Default Value	1.2.36.1.2001.1001.101.102.16136
Default Value Conditions of Use	The value of this item is fixed and **SHALL** be the default value.

Relationships

Parents

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

Appendix A. Known Issues

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

Reference	Description
Data Hierarchy	Only the parts of these DCMs required for current Structured Content Specifications have been mapped to HL7 CDA. Mapping the remaining parts to CDA may reveal inconsistencies in the data hierarchies, requiring normative change.
Chemical Description of Medication Data Group	This data group is immature and may need revision. The data groups *ACTIVE INGREDIENT* and *INACTIVE INGREDIENT* may require different structures. The chosen example values for *Active Ingredient Role* and *Inactive Ingredient Role* are likely to be revised. There is no distinct data element for an unstructured description of extemporaneous medications.
Clinical Indication Data Element	The data element is a candidate for terminology. In the future its data type is to be changed to *Codeable Text*.
Medication Delivery Method Data Element	The data element is a candidate for terminology. In the future its data type is to be changed to *Codeable Text*.
Quantity Data Element	The correctness of the solution presented in this specification is uncertain; this data element needs to be able to cater for quantities of non-medications.
Intravenous Administration Details Data Group	This data group has not yet been designed.
Indication for Authorised Use Data Element	This data element is intended to record values such as PBS/RPBS Authority Approval Numbers, PBS/RPBS Streamline Authority Approval Numbers, State Authority Numbers and PBS Item Codes. The current design allows multiple values to be recorded, but does not allow the type of value to be recorded (e.g. State Authority Number or PBS/RPBS Authority Approval Number). This will be corrected in a future revision.
Early supply of medication	There is no distinct data element in *Medication Action* to indicate early supply with pharmaceutical benefit.
Change Description	The data element is a candidate for terminology. In the future its data type is to be changed to *Codeable Text*.
Global Statement Values Value Domain	The list of permissible values is a sample set to initiate discussion and collaboration to develop the correct set of values.
Exclusion Statement	The Exclusion Statement DCMs are the subject of ongoing development and review and may well change in the future.
Undefined Value Domains	The following data elements lack a defined value domain: *Active Ingredient Name*, *Active Ingredient Role*, *Inactive Ingredient Name*, *Inactive Ingredient Role*, *Intervention Day of Week*, *Not Currently Taking*, and *Not Ever Taken*. 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.

Reference	Description
Undefined Data Structures	The following data elements lack a defined data structure: *Intravenous Administration Details*. A free-text data element is currently used as an interim solution.

Appendix B. Specification Guide for Use

B.1 Overview

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

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

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

B.2 The Structured Content Specification Metamodel

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

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

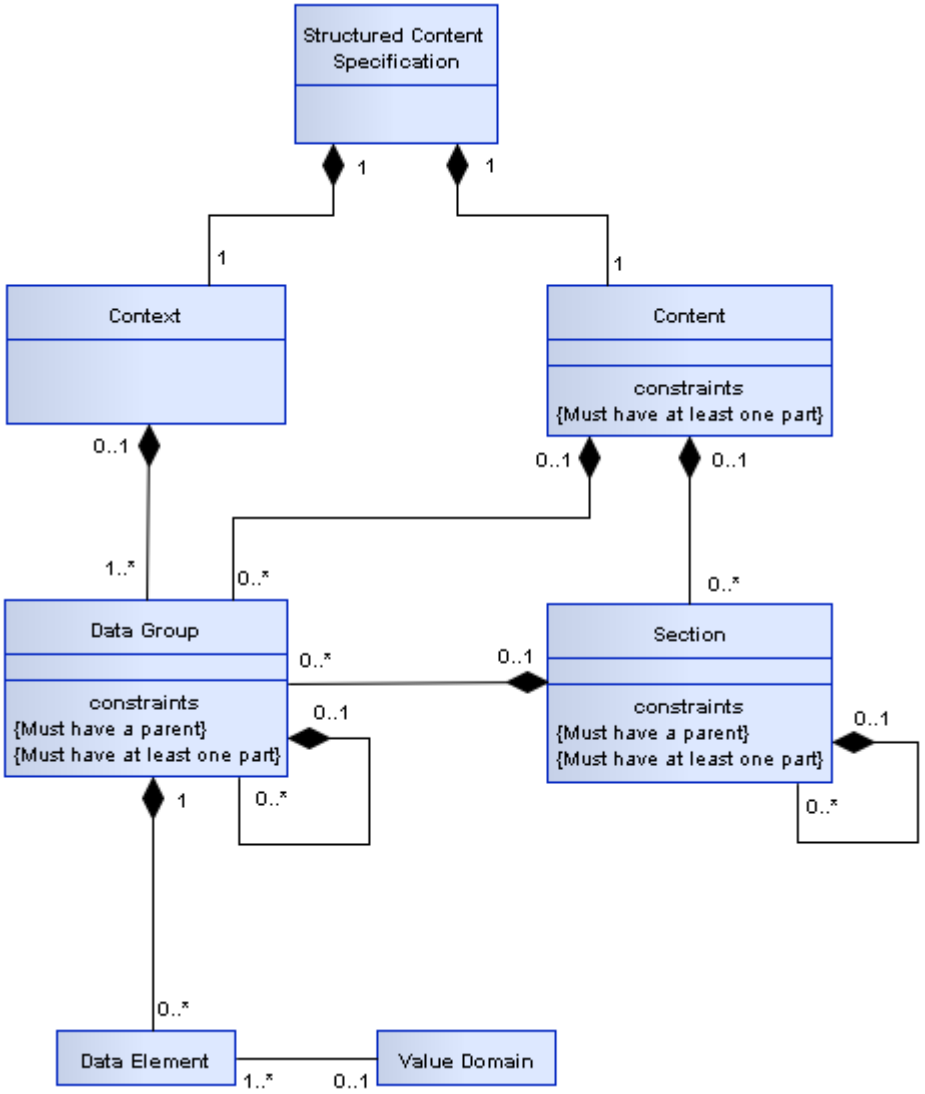


Figure 1: SCS Metamodel

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

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

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

- Section
- Data Group
- Data Element
- Value Domain

These components are described in more detail below.

Context

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

Content

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

Section

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

Data Group

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

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

Participation

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

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

[NEHT2011v] defines the full Participation specification.

Choice

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

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

Data Element

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

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

Value Domain

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

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

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

Table 1: Value Domain Examples

<table>
<tr><th>Data Element</th><th>Data Type</th><th>Example of Value Domain</th></tr>
<tr><td>Sex</td><td>CodedText</td><td>[SA2006a] and [SA2006b] derive their values from METeOR 270263 which includes values such as:
<table><tr><th>Value</th><th>Meaning</th></tr><tr><td>1</td><td>Male</td></tr><tr><td>2</td><td>Female</td></tr><tr><td>3</td><td>Intersex or Indeterminate</td></tr><tr><td>9</td><td>Not Stated/Inadequately Described</td></tr></table></td></tr>
<tr><td>Diagnosis</td><td>CodeableText</td><td>A SNOMED CT-AU reference set which references concepts such as ‘Bronchitis’ (Concept ID: 32398004).</td></tr>
<tr><td>Therapeutic Good Identification</td><td>CodeableText</td><td>An AMT reference set which references concepts such as ‘Ibuprofen Blue (Herron) (ibuprofen 200 mg) tablet: film-coated, 1 tablet’ (Concept ID: 54363011000036107).</td></tr>
<tr><td>Individual Pathology Test Result Name</td><td>CodeableText</td><td>A LOINC subset which references concepts such as ‘Cholesterol [Moles/volume] in Serum or Plasma’ (ID: 14647-2).</td></tr>
</table>

B.3 Icon Legend

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

Metadata Types Legend

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

Table 2: Metadata Types Legend

Icon	Metadata Types
	Structured Document
	Section
	Data Group
	Participation
	Choice

Data Types Legend

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

Table 3: Data Types Legend

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

CodeableText

(ISO 21090: CD)

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

Usage/Examples

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

CodedText

(ISO 21090: CD)

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

Usage/Examples

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

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

DateTime

(ISO 21090: TS)

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

Usage/Examples

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

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

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

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

Keywords Legend

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

The following table defines these keywords.

Table 4: Keywords Legend

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

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

Obligation Legend

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

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

The following table defines the obligations.

Table 5: Obligations Legend

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

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

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

B.4 Information Model Specification Parts Legends

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

Data Hierarchy

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

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

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

Chapter Name

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

Identification Section Legend

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

Table 6: Identification Section Legend

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

Definition Section Legend

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

Table 7: Definition Section Legend

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

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

Value Domain Section Legend

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

Table 8: Value Domain Section Legend

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

Usage Section Legend

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

Table 9: Usage Section Legend

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

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

Relationships Section Legend

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

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

Table 10: Parent Legend

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

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

Table 11: Children Legend

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

Appendix C. Change History

C.1 Changes Introduced in this Version

Chapter 2 Medication Instruction Detailed Clinical Model

This chapter has been revised through editorial review, a number of editorial and typographical errors have been corrected.
Added three (3) commas to 2.1 Purpose.
In 2.2 Use: a. corrected use of ' to '' b. corrected “etc” to “etc.” c. corrected “and/or” to “or” d. replaced “reducing dose of Predisolone” with “Prednisolone reducing dose regimen” e. replaced “To achieve a structure statement for such” with “To achieve a structured statement for such” f. replaced “re-use” with “reuse” and replaced “re-useable” with “reusable” g. replaced “re-useable” with “reusable”
Updated the UML Diagram to reflect the changes in the included data components.
Added the following data components: a. Additional Therapeutic Good Detail b. Formula c. DateTime Medication Instruction Written d. Administrative Manufacturer Code
Corrected presentation of examples for: a. Active Ingredient Role b. Inactive Ingredient Role c. Medication Delivery Method d. Therapeutic Good Identification
Corrected the presentation of permissible values for: a. Medicines Terminology b. Change Type Values c. Change Status Values

Updated “which” to “that”in the definitions and notes of: a. Therapeutic Good Identification b. Inactive Ingredient Compound c. Start Criterion d. Stop Criterion e. Brand Substitution Permitted f. Change Status g. Concession Benefit
In the conditions of use of Therapeutic Good Identification “this” was replaced with “the value of this data element” and a comma was added.
Renamed *Start Date* to Medication Timing Start Date (Label: Start Date).
Updated the reference cited in the notes of Medicines Terminology.
Amended Directions by shifting the text from the conditions of use to notes and adding a **SHALL NOT** condition of use.
Removed “that” from notes; corrected “disolved” to “dissolved” and the case of the synonymous names in Form.
Corrected the condition of use statement in Dose Description replacing “must not contradict contents included in” with “ **SHALL NOT** contradict the contents of”, replaced “If the” with “If this”, and inserted another “the”.
Changed the data types of Quantity from (*Real*, *QuantityRatio*) to (*Real*, *Quantity*).
Corrected “Mg” to “mg” in the examples of Dose Unit.
Removed Notes from of Dose Unit Reference Set.
Replaced “The dispensing interval for other scripts is a dispensing issue and is governed by PBS rules. However, there may be other situations, where a prescriber may want to limit access -” with “This is different to the PBS rules for claiming subsidies for repeat prescriptions. This may be used for situations where a prescriber wants to limit access -” in Minimum Interval Between Repeats.
Corrected the condition of use statement in Timing Description correcting the presentation of the names of data components and replacing “must” with “ **SHALL** ”.
Corrected “latin” to “Latin” in PRN.
Improved the definition of Medication Timing Start Date and Stop Date.
Corrected “re-prescribed”to“represcribed” in the definition of Long-Term
Amended the wording of the example in Dose Duration.
Corrected identifier and OID of Intravenous Administration Details.
Removed context and context source from Minimum Interval Between Repeats, and Concession Benefit.
Corrected *Therapeutic Good Benefit Category Reference Set* to Therapeutic Good Benefit Eligibility Reference Set.
Corrected identifier and OID of DateTime Medication Instruction Expires.
Amended the notes of Link Nature to include “or document”.
Amended the permissible value LINK-B0 to include “or DCM and document”.
Amended the data types of Link Target to include *UniqueIdenifier*.

Chapter 3 Medication Action Detailed Clinical Model

This chapter has been revised through editorial review, a number of editorial and typographical errors have been corrected.
Added one (1) comma to 3.1 Purpose.
Corrected extra white space in 3.2 Use.
Corrected “seperate” to “separate” in MEDICATION ACTION.
Updated the UML Diagram to reflect the changes in the included data components.
Added the following data components: a. Additional Therapeutic Good Detail b. Formula c. Administrative System Identifier
Corrected presentation of examples for: a. Therapeutic Good Identification b. Active Ingredient Role c. Inactive Ingredient Role d. Medication Delivery Method
Updated “which” to “that”in the definition and notes of: a. Therapeutic Good Identification b. INACTIVE INGREDIENT
In the conditions of use of Therapeutic Good Identification “this” was replaced with “the value of this data element” and a comma was added.
Removed “that” from notes of Form.
Replaced the data component *Remaining Repeats* with Maximum Number of Repeats.
Replaced the data component *Number of Times Dispensed* with Number of this Dispense.
Updated the reference cited in the notes of Medicines Terminology.
Corrected identifier and OID of Medication Action Instructions.
Corrected “disolved” to “dissolved” and the case of the synonymous names in Form.
Corrected representation of Reason for Action to *CodeableText* and amended the notes.
Changed the data types of Quantity from (*Real*, *QuantityRatio*) to (*Real*, *Quantity*).
Corrected “Mg” to “mg” in Examples of Dose Unit.
Removed the notes from of Dose Unit Reference Set.
Amended the wording of the example in Dose Duration.
Corrected identifier and OID of Intravenous Administration Details.
Removed the context and context source from Brand Substitution Occurred, and Claim Category.
Replaced the definition of Batch Identifier with “A code assigned by the manufacturer to identify the manufactured batch of an item.”

Added two (2) commas to Administrative Item Code.
In the definition of Administrative Item Code Values, replaced “derived from the PBS item code” with “of Administrative Item Code” and added a note.
Replaced the definition and note and removed conditions of use from Administrative Manufacturer Code.
Revised definition and added notes in Administrative Manufacturer Code Values.
Amended the notes of Link Nature to include “or document”.
Amended the permissible value LINK-B0 to include “or DCM and document”.
Amended the data type of Link Target to include *UniqueIdenifier* and added a note.

Chapter 4 Exclusion Statement - Medications Detailed Clinical Model

Amended the notes of Link Nature to include “or document”.
Amended the permissible value LINK-B0 to include “or DCM and document”.

Reference List

Updated the entry for [NEHT2009r] to [NEHT2011bs].

Appendix A Known Issues

Removed the entry for *Therapeutic Good Identification* in line with the changes made the Data Group
Corrected the entry for undefined value domains to include all applicable data components.

C.2 Changes Introduced in Version 2.1

General

This specification has been revised through editorial review, a number of editorial and typographical errors have been corrected.
Sentence introducing the version of each DCM added to each Detailed Clinical Model chapter.
The UML Class Diagrams and explanative text have been moved (and those chapters deleted) into their respective DCM chapters, e.g. Chapter 2 Medication Instruction Detailed Clinical Model.
The structure of the tables within the relationships sections of each data component has been modified to remove the condition column and change the title of the “Occurrences” column in the Parents table to “Occurrences (child within parent)”.
All instances of “have a fixed value of” have been replaced with “have an implementation-specific value equivalent to”.
Corrected formatting of data component names in text.
Added standard examples text for all data components of type *DateTime*.

Preliminary Pages

Added the section “Included Detailed Clinical Models” to provide identification of the version of each DCM included in this specification.
Corrected “Australian Institute of Health & Welfare” to “Australian Institute of Health and Welfare”.

Section 1 Introduction

Added footnote to 1.1 Purpose and Scope to provide a reference defining the concept “Level 4 (semantic) interoperability”.

Chapter 2 Medication Instruction Detailed Clinical Model

The Medication Instruction UML Class Diagram has been moved to this chapter and updated to reflect the changes in the included data components; the explanative text has been revised.
Primarily to support the Consolidated View in the PCEHR the following data components (sourced from the openEHR Reference Model) have been added: a. *Medication Instruction Instance Identifier* b. *LINK* i. *Link Nature* ii. *Link Role* iii. *Link Target* c. *Detailed Clinical Model Identifier*
The following data components have been renamed: a. Renamed *Tree Comment* to *Medication Instruction Comment*. b. Renamed *Timing* to *MEDICATION TIMING*. c. Renamed *Structured Timing* to *TIMING*.
Added a misuse statement to *MEDICATION INSTRUCTION*.
Added a further entry to the list of examples of AMT ConceptID and AMT Preferred Term in *Therapeutic Good Identification*.
Corrected “must not” to “ **SHALL NOT** ” in the conditions of use of *Directions*.
Corrected the OID and identifier of: a. *ACTIVE INGREDIENT* b. *MEDICATION TIMING* c. *DateTime Medication Instruction Expires*
Corrected the presentation of examples in *Active Ingredient Role*.
Replaced “Dilutant” with “Diluent” and “Propellent” with “Propellant” in *Inactive Ingredient Role*.

The definition of *AMOUNT OF MEDICATION* amended to align with the definition of *MEDICATION INSTRUCTION*.
Added a condition of use to *Intervention Time*.
Corrected wording of the note in *Intervention Day of Month*.
Corrected the case of the synonymous names for: a. *Clinical Indication* b. *Brand Substitution Permitted* c. *ACTIVE INGREDIENT* d. *Route*
Corrected “and/or” to “or” in the notes of *Quantity*.
Improved wording of the note of *Route*.
Corrected “dispensed/supplied” to “dispensed or supplied” in the definition of *Brand Substitution Permitted*.
Corrected “neubliser” to “nebuliser” in the examples of *Medication Delivery Method*.
Replaced the comma (`,`) with a semicolon (`;`) in the example of *Dispensing Instructions*.
Corrected the presentation of the list of permissible values for *Change Type Values* and *Change Status Values*.
Corrected “recommendation” to “recommendation” in the definition of *Change Status*.
Amended the note of *INFORMATION PROVIDER*.

Chapter 3 Medication Action Detailed Clinical Model

The Medication Action UML Class Diagram has been moved to this chapter and updated to reflect the changes in the included data components; the explanative text has been slightly revised.
Removed all notes and the synonymous name “Prescribed Item Detail” from the definition section of *MEDICATION ACTION*.
Removed the usage section in toto from *MEDICATION ACTION*.
Primarily to support the Consolidated View in the PCEHR the following data components (sourced from the openEHR Reference Model) have been added: a. *Administrative Item Code* b. *Administrative Manufacturer Code* c. *Medication Action Instance Identifier* d. *LINK* i. *Link Nature* ii. *Link Role* iii. *Link Target* e. *Detailed Clinical Model Identifier*

Added a further entry to the list of examples of AMT ConceptID and AMT Preferred Term in *Therapeutic Good Identification*.
Corrected the case of synonymous names for *ACTIVE INGREDIENT*.
Corrected the presentation of the examples in *Active Ingredient Role*.
Replaced “Dilutant” with “Diluent” and “Propellent” with “Propellant” in *Inactive Ingredient Role*.
Corrected the OID and identifier of: a. *ACTIVE INGREDIENT* b. *Medication Action Instructions* c. *Medication Action Comment*
Renamed *Quantity of Medication* to *AMOUNT OF MEDICATION*.
Renamed *Comment* to *Medication Action Comment*.
Corrected “and/or” to “or” in the notes of *Quantity*.
Inserted “a” into the notes of *Sequence Number*.
Corrected the case of the synonymous names and improved wording of the note in *Route*.
Corrected “neubliser” to “nebuliser” in the examples of *Medication Delivery Method*.
Amended the note of *INFORMATION PROVIDER*.

Chapter 4 Exclusion Statement – Medications Detailed Clinical Model

The Exclusion Statement - Medications UML Class Diagram has been moved to this chapter and updated to reflect the changes in the included data components; the explanative text has been revised.
Corrected “record.It” to “record. It” in the conditions of use of *EXCLUSION STATEMENT - MEDICATIONS*.
Primarily to support the Consolidated View in the PCEHR the following data components (sourced from the openEHR Reference Model) have been added: a. *Exclusion Statement - Medications Instance Identifier* b. *LINK* i. *Link Nature* ii. *Link Role* iii. *Link Target* c. *Detailed Clinical Model Identifier*
Corrected the list of permissible values for *Global Statement Values*.
Amended the note of *INFORMATION PROVIDER*.

Reference List

Added an entry for the reference cited in footnote added to section 1.1.

Added an entry for ISO 13606-3:2009.
Added an entry for NEHTA Interoperability Framework.
Removed the uncited reference [TGA2011a].

Appendix A Known Issues

Added an entry for *Therapeutic Good Identification*.
Added a data hierarchy entry in line with the set of DCM Specifications.
Removed the Identifiers for Medication Action entry in line with the changes made to the DCMs.
Added an entry for *Change Description*.
Added an entry for *Quantity*.
Corrected the entry for undefined value domains to include all applicable data components.
Added an entry for undefined data structures to indicate the data elements that lack a defined data structure.

Appendix B Guide for Use

In 'Value Domain' in B.2 “To Be Advised” replaced with “Individual Pathology Test Result Name”.
Added ‘Obligation Legend’ in B.3.
Reworked ‘Data Hierarchy’ in B.4 to explain 'Core Requirement'.
Reworked ‘Relationships Section Legend’ in B.4 to include further explanative text, and improved tables.

Appendix C Change History

This is a new appendix included to provide detailed information of the changes between the previous version of this specification and the current version of this specification.

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