

nehta

Observation Data Specification

Version 2.0 — 7 Sep 2009

Final

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Document Information

Change history

Version	Date	Comments
1.0	29 Jun 2007	Initial public release
1.1	29 Feb 2008	<ul style="list-style-type: none">• minor typographical corrections and wording changes in Introduction• Figure 1 in Introduction updated to show more comprehensive information• there are no significant alterations that affect the data structure or use of this document
2.0	7 Sep 2009	Updated to incorporate changes made in the version 2.0 of the Discharge Summary Specification.

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- Standards Australia;
- Royal Australian College of General Practitioners;
- Society of Hospital Pharmacists of Australia;
- Members of the Australian DataTypes Project;
- Australian Institute of Health & Welfare; and
- Ocean Informatics.

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1 Introduction

1.1 Purpose and Scope

The Observation data group specification forms part of a suite of data specifications that NEHTA is developing for the Australian Health Informatics Community. The suite comprises specifications for a range of health topics (represented as “data groups”), which are generally agreed to be of high priority to standardise in order to achieve the benefits brought about by Level 4 (semantic) interoperability in the Australian health care setting.

1.2 Intended Audience

This document is intended to be read by jurisdictional ICT managers, clinicians involved in Clinical Information System specifications, software architects and developers, and implementers of Clinical Information Systems in various health care settings.

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

1.3 Background

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

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

Data specifications have been developed:

- Based on jurisdiction and clinician identified priorities;
- Specifically to suit the Australian model for a shared EHR;
- To define collections of related information, i.e. 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 shared EHR is referred to in these documents the implementation of the shared EHR is not dealt with here.

1.4 Terminology

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

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

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

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

1.5 Related Documents

The following documents are companion documents to this Data Specification:

[NEHTA Data Specification and Structured Document Template Guide for Use](#)¹

Version No.: 1.0, Issued: 07 August 2009

This guide describes the generic data structures, data types, keywords and icons used within this Data Specification.

[NEHTA Participation Data Specification](#)²

Version No.: 1.0, Issued: 16 July 2009

This document contains the full specification of the participation data type used within this Data Specification.

[NEHTA Acronyms, Abbreviations & Glossary of Terms](#)³

Version No.: 1.2, Issued: 25 May 2005

A complete listing of all relevant acronyms and abbreviations, and a glossary of terms.













¹ http://www.nehta.gov.au/component/docman/doc_download/771-data-specifications-and-sdt-guide-for-use-20090807

² http://www.nehta.gov.au/component/docman/doc_download/754-participation-data-specification-v10

³ http://www.nehta.gov.au/dmdocuments/Glossary_v1-2.pdf

2 Specification

2.1 Data Hierarchy

	OBSERVATION		
	Observation Description		!
  	Observation Result		!
 	Reference Range		0
	Observation Abnormal Indicator		0
	Observation Note		0
	DateTime of Observation		0
	Information Provided by		0
	OBSERVER		0

2.2 OBSERVATION

Identification









Name	OBSERVATION
Meta-data Type	Data Group
Identifier	DG-15529
Version	1.0

Definition

Definition	Describes the health or physical assessment and/or observation undertaken on the subject of care. The assessment or observation may be subjective, e.g. description of symptoms, appearance; or it may be objective, e.g. body weight, height, heart rate.
Definition Source	NEHTA
Synonymous Names	Clinical observation Measurement
Notes	Captures detailed information on Investigations excluding pending investigations, Pathology/Laboratory and Diagnostic Imaging tests.

Relationships

Children

Data Type	Name	Version	Obligation	Condition	Occurrence
	Observation Description	1.0	Essential		Single
	Observation Result	2.0	Essential		Single
	Reference Range	3.0	Optional		Single
	Observation Abnormal Indicator	1.0	Optional		Single
	Observation Note	1.0	Optional		Single
	DateTime of Observation	1.0	Optional		Single
	Information Provided by	2.0	Optional		Single
	OBSERVER	1.0	Optional		Single

2.3 Observation Description

Identification

Name	Observation Description
Meta-data Type	Data Element
Identifier	DE-15515

Definition


Definition	The description of the observation taken (on the subject of care).
Definition Source	NEHTA
Synonymous Names	
Notes	Captures the name of the investigation, or the entity or level of function being observed. For each observation description, there is a corresponding finding or value - see Observation Result.
Data Type	CodeableText
Value Domain	Not specified - Use existing code sets until NEHTA determines a suitable common reference set.

Usage

Examples	<ol style="list-style-type: none"> 1. Blood Pressure 2. Apgar 1 minute 3. Temperature
-----------------	--

Relationships

Parents

Data Type	Name	Version	Obligation	Condition	Occurrence
	OBSERVATION	1.0	Essential		Single

2.4 Observation Result

Identification

Name	Observation Result
Meta-data Type	Data Element
Identifier	DE-15516

Definition

Definition	The outcome of the observation undertaken.
Definition Source	NEHTA
Synonymous Names	
Notes	This item can be any data type such as text, quantity number etc. In the examples provided the result groups together the value and unit of measure for the observation.
Data Type	CodeableText or QuantityRange or Quantity
Value Domain	Not specified - Use existing code sets until NEHTA determines a suitable common reference set.

Usage

Examples	<ol style="list-style-type: none"> 120/70 mm Hg (Blood Pressure) 38.6 C (Temperature)
-----------------	---

Relationships

Parents

Data Type	Name	Version	Obligation	Condition	Occurrence
⌘	OBSERVATION	1.0	Essential		Single

2.5 Reference Range

Identification

Name	Reference Range
Meta-data Type	Data Element
Identifier	DE-15571

Definition


Definition	The upper and lower reference values for a pathology observable test result as determined from an appropriate reference population. It should be noted that reference ranges are sometimes laboratory specific. The reference range is selected by the laboratory to match the patient's demographics - particularly age and sex.
Definition Source	NEHTA
Synonymous Names	
Notes	For use with quantitative pathology tests to serve as an indicator of the expected quantitative result for a healthy person, providing indication of direction and relative level of change from the reference population.
Data Type	QuantityRange or Text
Value Domain	

Usage

Examples	<ol style="list-style-type: none"> 15 -58 g/L. < 15 mmol/L.
-----------------	--

Relationships

Parents

Data Type	Name	Version	Obligation	Condition	Occurrence
	OBSERVATION	1.0	Optional		Single

2.6 Observation Abnormal Indicator

Identification

Name	Observation Abnormal Indicator
Meta-data Type	Data Element
Identifier	DE-15505

Definition


Definition	Indicates the degree of abnormality from the normal limits of the result.
Definition Source	Standards Australia
Synonymous Names	Abnormal Flag
Notes	Condition If OBSERVATION RESULT is out of normal range then Abnormal Observation Indicator information is essential. If OBSERVATION RESULT is not out of normal range then Abnormal Observation Indicator information is optional.
Data Type	CodeableText
Value Domain	Not specified - Use existing code sets until NEHTA determines a suitable common reference set.

Usage

Examples	
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Relationships

Parents

Data Type	Name	Version	Obligation	Condition	Occurrence
	OBSERVATION	1.0	Optional		Single

2.7 Observation Note

Identification

Name	Observation Note
Meta-data Type	Data Element
Identifier	DE-15600

Definition

Definition	Additional comments relevant to the observation in question.
Definition Source	NEHTA
Synonymous Names	
Notes	Used to provide additional information not included in or catered for by the Observation Result data elements.
Data Type	Text
Value Domain	

Usage

Examples	
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Relationships

Parents

Data Type	Name	Version	Obligation	Condition	Occurrence
⌘	OBSERVATION	1.0	Optional		Single

2.8 DateTime of Observation

Identification

Name	DateTime of Observation
Meta-data Type	Data Element
Identifier	DE-15561

Definition

Definition	The datetime when the health assessment/observation is performed.
Definition Source	NEHTA
Synonymous Names	
Notes	
Data Type	DateTime
Value Domain	

Usage

Examples

Relationships

Parents

Data Type	Name	Version	Obligation	Condition	Occurrence
⌘	OBSERVATION	1.0	Optional		Single

2.9 Information Provided by

Identification

Name	Information Provided by
Meta-data Type	Data Element
Identifier	DE-15503

Definition

Definition	A category of the source of the health information in this record.
Definition Source	NEHTA
Synonymous Names	
Notes	
Data Type	CodeableText
Value Domain	Not specified - Use existing code sets until NEHTA determines a suitable common reference set.

Usage

Examples	<ol style="list-style-type: none"> 1. Subject of care. 2. Carer. 3. Other.
-----------------	---

Relationships

Parents

Data Type	Name	Version	Obligation	Condition	Occurrence
⌘	OBSERVATION	1.0	Optional		Single

2.10 OBSERVER

Identification


Name	OBSERVER (Reuse of Participation Data Group)
Meta-data Type	Data Group
Identifier	DG-10296
Version	1.0

Definition

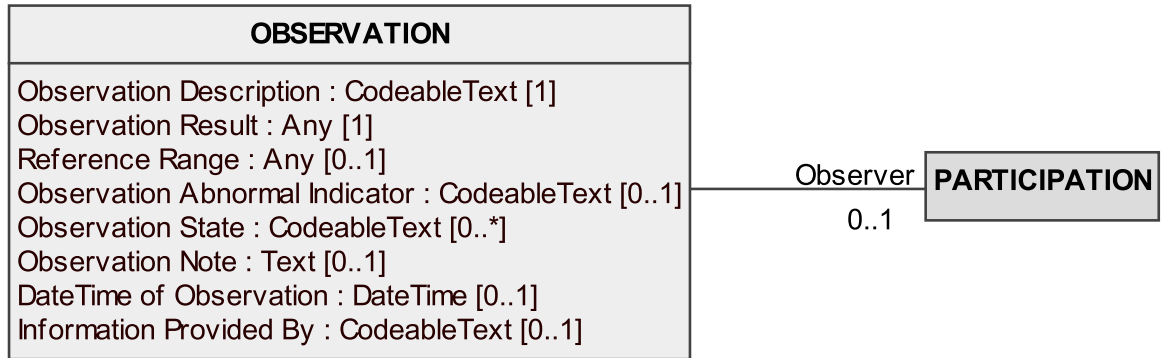
Definition	Details pertinent to the identification of a healthcare provider individual who will make, is making, or has made the observation.
Definition Source	NEHTA
Synonymous Names	
Notes	

Relationships

Parents

Data Type	Name	Version	Obligation	Condition	Occurrence
	OBSERVATION	1.0	Optional		Single

3 UML Diagram



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