nehta

# Mapping requirements

# Australian Medicines Terminology

Revision 001

3 July 2012

Approved for external release

National E-Health Transition Authority

**National E-Health Transition Authority Ltd**
Level 25
56 Pitt Street
Sydney, NSW, 2000
Australia.
www.nehta.gov.au

# Document information

## Key information

| | |
|---|---|
| **Owner:** | National Clinical Terminology and Information Service (NCTIS), NEHTA |
| **Filename:** | NEHTA_926_2012_AMT_Mapping_requirements_rev001.docx |
| **Review date:** | 23 Feb 2013 |
| **Contact for enquiries:** | e: nehtasupport@nehta.gov.au |

## Approvals

| Name | Position | Date |
|---|---|---|
| Elizabeth Donohoo | Clinical Terminology Manager | 23 Aug 2012 |
| | | |
| | | |

## Quality reviews

| Revision | Version | Reviewer(s) | Role | Purpose |
|---|---|---|---|---|
| 001 | ---- | Vendors, health jurisdictions and clinical leads | Stakeholder review | To check the accuracy, feasibility and practicability of these requirements. |
| | | | | |
| | | | | |
| | | | | |

# Table of contents

# 1 Introduction

## 1.1 Purpose

This document specifies requirements for the process of mapping the Australian Medicines Terminology (AMT). The AMT mapping requirements apply to the processes and methods followed to produce the maps between the AMT and another coding system, for implementation and use in health software systems. These requirements have been developed with the intent to minimise patient safety-related risks, and maximise the benefits associated with usage of the AMT.

## 1.2 Intended audience

The intended audience is any organisation mapping a local or proprietary coding system to the AMT concepts including:

- Health software vendors;
- Vendors of proprietary terminology products; and
- Health jurisdictions and healthcare providers.

## 1.3 Scope

This document is applicable to those:

- Mapping local or proprietary medicines terms to the AMT; and
- Wanting to claim conformity for the developed AMT maps.

It is not relevant for those implementing the AMT natively (as an interface terminology) and for those implementing the AMT maps, developed by another organisation, in health software systems.

## 1.4 Development of mapping requirements

The AMT mapping requirements in this document have been derived from the AMT mapping guidelines [NEHTA2012c] and terminology licence agreements [IHTSDO2009, NEHTA2009]. In addition, these requirement have been modified based on external stakeholder consultation (refer to Section 1.6).

## 1.5 Background

The Australian Medicines Terminology (AMT) delivers standardised identification of brand (trade) products, and equivalent generic medicines along with associated components that are supported through standard naming conventions that accurately describe medications [NEHTA2012a]. If the AMT is not mapped appropriately, patient safety hazards may be introduced potentially affecting patients with inappropriate, missed or delayed clinical care and treatment. To mitigate these risks and maximise the benefits of AMT adoptions through mapping, the following documents have been developed:

- *AMT Mapping Guidelines* [NEHTA2012c]; and
- *AMT Mapping Requirements* (i.e. this document).

Specifications for various eHealth initiatives, such as those for Shared Health Summary, Event Summary, Electronic Transfer of Prescriptions, eReferral, Specialist Letter and Discharge Summary, indicate the use of the AMT to describe relevant clinical information. While the adoption of the AMT in the context of these eHealth initiatives is not compulsory, AMT mapping requirements need to be met if the AMT is used through mapping from local or proprietary coding systems in the context of these eHealth specifications .

## 1.6 Acknowledgements

NEHTA would like to acknowledge the time and efforts of the following stakeholders for their valuable contributions by participating in webinars, meetings and submitting feedbacks on the mapping requirements in this document:

- State and territory health jurisdictions (ACT Health, NSW Health & VIC Health);
- Commonwealth Scientific and Industrial Research Organisation (CSIRO);
- Pharmaceutical Society of Australia;
- National Coalition of Public Pathology;
- Clinical leads;
- Medical Software Industry Association;
- Organisations mapping the AMT:
    - Health Communication Network;
    - MIMS Australia;
    - Cerner Corporation;
    - FRED IT Group; and
    - St Vincents & Mater Health Sydney.

# 2 Mapping requirements

## 2.1 Assessor requirements

An assessor inspects the processes and the methods followed to produce the maps between the AMT and another coding system for conformity. Inspection is the process of using professional judgement to examine a system or a process to assess its conformity to requirements. The assessor may belong to the same organisation as the developer or may be an independent assessor. In both cases, the assessor must meet the requirements in Table 1.

*Table 1: Assessor requirements*

| Requirement | Additional information |
|---|---|
| The assessor **shall** possess relevant clinical and quality assurance experience. | The assessment requires a high level of sound professional judgement. The assessor's knowledge and experience are critical to the assessment process. |
| The assessor **shall not** be involved in the mapping process. | This requirement minimises bias. |
| The assessor **shall** possess knowledge of the AMT mapping requirements. | The assessor needs to be familiar with the requirements in this document, in order to form a reasonable judgement on the assessment outcomes. |

## 2.2 Issue and conflict resolution

| **Req No** | 010843 | **Priority** | Mandatory |
|---|---|---|---|
| **Issue resolution** | | | |
| Issues encountered and how they are resolved during the mapping process **shall** be recorded. | | | |
| **Additional information** | Refer to Section 3.11 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

| **Req No** | 010844 | **Priority** | Mandatory |
|---|---|---|---|
| **Conflict resolution** | | | |
| Conflict resolution process followed during the mapping process and related decisions made **shall** be recorded. | | | |
| **Additional information** | Refer to Section 3.11 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

## 2.3 Purpose of the maps

| **Req No** | 010826 | **Priority** | Mandatory |
|---|---|---|---|
| **Purpose of mapping** | | | |
| The purpose of mapping **shall** be clearly defined and documented. | | | |
| **Additional information** | Refer to Section 3.5 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

| **Req No** | 010827 | **Priority** | Recommended |
|---|---|---|---|
| **Relevance of the purpose of mapping** | | | |
| The purpose of mapping **should** be consistent with the intent of the AMT. | | | |
| **Additional information** | Refer to Section 3.5 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

| **Req No** | 010828 | **Priority** | Mandatory |
|---|---|---|---|
| **Scenarios of intended use of the maps** | | | |
| Specific scenarios describing the intended use of the maps **shall** be clearly defined and documented. | | | |
| **Additional information** | Refer to Section 3.5 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

| **Req No** | 010829 | **Priority** | Mandatory |
|---|---|---|---|
| **Relevance of the scenarios** | | | |
| The scenarios of intended use of the maps **shall** be consistent with the defined purpose of mapping. | | | |
| **Additional information** | Refer to Section 3.5 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

| **Req No** | 010830 | **Priority** | Mandatory |
|---|---|---|---|
| **Intended users of the maps** | | | |
| Intended users of the maps **shall** be clearly identified based on the scenarios of intended use of the maps. | | | |
| **Additional information** | Refer to Section 3.5 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

## 2.4 Scope of the maps

| Req No | 010831 | Priority | Mandatory |
|---|---|---|---|
| **AMT concept levels** | | | |
| The AMT concept level(s) that have been chosen to be mapped **shall** provide the precision and the granularity required for the scenarios of intended use of the maps. | | | |
| **Additional information** | Refer to Section 3.6 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

| Req No | 010832 | Priority | Mandatory |
|---|---|---|---|
| **Documentation on the AMT concept levels** | | | |
| The AMT concept level(s) that have been chosen to be mapped **shall** be documented with relevant justifications. | | | |
| **Additional information** | Refer to Section 3.6 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

| Req No | 010833 | Priority | Mandatory |
|---|---|---|---|
| **Source concepts** | | | |
| The decisions on which source concepts to include or exclude in mapping **shall** be based on the specific scenarios of the maps. | | | |
| **Additional information** | Refer to Section 3.6 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

| Req No | 010834 | Priority | Mandatory |
|---|---|---|---|
| **Documentation on the source concepts** | | | |
| The decisions on which source concepts to include or exclude in mapping **shall** be documented. | | | |
| **Additional information** | Refer to Section 3.6 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

## 2.5 Personnel

| Req No | 010835 | Priority | Mandatory |
|---|---|---|---|
| **Knowledge and experience** | | | |
| Any personnel who determine the semantic equivalence of clinical terms as part of developing the auto-mapping rules or perform validation of the maps **shall** possess knowledge of the map source and the map target, and clinical experience as a healthcare professional relevant to the scenarios of intended use of the maps. | | | |
| **Additional information** | Refer to Section 3.6 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

## 2.6 Tools

| **Req No** | 010837 | **Priority** | Recommended |
|---|---|---|---|
| **Tools used** | | | |
| Tools used in mapping **should** be evaluated for any limitation against expected requirements. | | | |
| **Additional information** | Refer to Section 3.7 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

| **Req No** | 010838 | **Priority** | Recommended |
|---|---|---|---|
| **Use of the tools in the mapping process** | | | |
| An explanation of how the tools have been used throughout the mapping process including pre-processing **should** be documented. | | | |
| **Additional information** | Refer to Section 3.7 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

## 2.7 Risk management

| **Req No** | 010839 | **Priority** | Mandatory |
|---|---|---|---|
| **Risk management** | | | |
| Steps to mitigate the risk of incorrect maps **shall** be undertaken and documented. | | | |
| **Additional information** | Refer to Section 3.8 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

## 2.8 Pre-processing the map source

| **Req No** | 010840 | **Priority** | Conditional |
|---|---|---|---|
| **Documentation on pre-processing** | | | |
| If the pre-processing is undertaken on the source concepts as part of the mapping process, the following information **shall** be recorded:<br>• Type of change (rule-based automated changes or individual manual changes);<br>• Descriptions of the changes;<br>• Attributes the changes are made to; and<br>• Reasons for the changes made. | | | |
| **Additional information** | Refer to Section 3.9 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

| **Req No** | 010841 | **Priority** | Conditional |
|---|---|---|---|
| **Meanings of the source concepts after pre-processing** | | | |
| If the pre-processing is undertaken on the source concepts as part of the mapping process, the changes made **shall not** alter the meaning of the source concepts. | | | |
| **Additional information** | Refer to Section 3.9 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

## 2.9 Matching the source to the target

| Req No | 010842 | Priority | Mandatory |
|---|---|---|---|
| **Acceptable matches** | | | |
| Only the following types of match between the map source and the map target shall be released for implementation in clinical systems:<br>• Lexical and semantic match (same words used and same meaning); and<br>• Semantic match and no lexical match, but words that are not misleading or confusing. | | | |
| **Additional information** | Refer to Section 3.10 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

## 2.10 Validation of the maps

| Req No | 010845 | Priority | Mandatory |
|---|---|---|---|
| **Validation** | | | |
| The developed maps shall be validated using a validation approach relevant to:<br>• The purpose of mapping; and<br>• Patient safety risks associated with using the developed maps. | | | |
| **Additional information** | Refer to Sections 3.5, 3.8 and 3.12 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

## 2.11 Release to the implementers of clinical systems

| Req No | 010846 | Priority | Mandatory |
|---|---|---|---|
| **Release data** | | | |
| As a minimum, the data released to the clinical system implementers shall contain:<br>• Identifier of the map set (uniquely identifying the release version, the purpose and the scope of the map set);<br>• Identifier of the map entry;<br>• Identifier of the source concept;<br>• Source concept description;<br>• AMT concept ID; and<br>• AMT Preferred Term. | | | |
| **Additional information** | Refer to Section 3.16 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

| Req No | 010847 | Priority | Mandatory |
|---|---|---|---|
| **Release documentation** | | | |
| The release documentation shall contain:<br>• The purpose of the maps (how the map should be used);<br>• The format of the release data (including description for each field);<br>• Details of any rules, algorithms or processes to be applied by the clinical systems, if such an application is required before using the maps; and<br>• Details of the source and the target coding systems:<br>o Name of the source coding system;<br>o HL7 registered Object Identifier (OID) of the source coding system (http://www.hl7.org/oid/index.cfm) if the maps are to be encoded in a clinical document;<br>o Version or release date of the source coding system;<br>o 'Australian Medicines Terminology (AMT)' as the name of the target coding system;<br>o '1.2.36.1.2001.1004.10' as the OID of the target coding system; and<br>o Release number of the AMT (e.g. v2.24, v2.25). | | | |
| **Additional information** | Refer to Section 3.16 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

## 2.12 Traceability

| Req No | 019169 | Priority | Mandatory |
|---|---|---|---|
| **Traceability of map entries** | | | |
| The developer shall demonstrate the ability to identify who, when and how each released map entry was created or modified. | | | |
| **Additional information** | Refer to Section 3 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

## 2.13 Maintenance

| Req No | 010848 | Priority | Recommended |
|---|---|---|---|
| **Regular maintenance** | | | |
| The developer **should** review and update their maps with each release of the map source or the map target. | | | |
| **Additional information** | Refer to Section 3.17 of *Australian Medicines Terminology Mapping Guidelines* [NEHTA2012c]. | | |

# 3 References

This section lists documents that provide information for or about this document. At the time of publication, the document versions listed below were valid. However, as all documents are subject to revision, readers are encouraged to use the most recent versions of these documents.

[AS5021] Standards Australia 2005, *AS 5021:2005 – The language of health concept representation*, http://infostore.saiglobal.com/store/Details.aspx?productid=320455

[IHTSDO2009] International Health Terminology Standards Development Organisation 2009, *SNOMED CT Affiliate License Agreement*, https://nehta.org.au/aht/index.php?option=com_docman&task=cat_view&gid=14&Itemid=40

[NEHTA2009] NEHTA 2009, *Australian National Terminology Release Licence Agreement*, https://nehta.org.au/aht/index.php?option=com_docman&task=cat_view&gid=14&Itemid=40

[NEHTA2012a] NEHTA 2012, *Australian Medicines Terminology Release Note, v2.31*, https://nehta.org.au/aht/index.php?option=com_docman&task=cat_view&gid=21&Itemid=40

[NEHTA2012b] NEHTA 2012, *Common Conformance Profile for Clinical Documents v1.2*, https://vendors.nehta.gov.au/public/fileServer.cfm?activityContentId=100

[NEHTA2012c] NEHTA 2012, *Australian Medicines Terminology Mapping Guidelines, rev 001*, https://nehta.org.au/aht/index.php?option=com_docman&task=cat_view&gid=21&Itemid=40

# Glossary

| Acronym | Term | Meaning |
|---|---|---|
| | **Assessment** | Determining if specified requirements related to a product, process, system, person or body are fulfilled. |
| AMT | **Australian Medicines Terminology** | |
| | **Coding system** | A system of code sets, coding standards and code maintenance procedures for allocating a code to represent a concept [AS5021]. |
| | **Conformity** | A term that encompasses both conformance and compliance.<br>When applied to software systems, the term 'conformity' may be replaced with the term 'conformance', in accordance with common practice in the information technology industry.<br>When applied to management and business processes, the term 'conformity' may be replaced with the term 'compliance'. |
| | **Developer** | An organisation that creates an implementation of an eHealth specification. A developer may be an organisation that develops a software product, or a provider of eHealth services. Health jurisdictions, healthcare providers and systems integrators may also be developers of eHealth systems. |
| IHTSDO | **International Health Terminology Standards Development Organisation** | |
| | **Map** | A relationship between a code or a term used to represent a health concept in one system and the code or term that is used to represent the same concept in another system [AS5021]. |
| | **Map source** | A terminology, coding scheme or classification used as the source for map production (in the context of mapping). |
| | **Map target** | A terminology, coding scheme or classification to which some or all of the concepts in a source terminology, coding system or classification are mapped. |

| Acronym | Term | Meaning |
|---|---|---|
| NCTIS | **National Clinical Terminology and Information Service** | The function of the NCTIS within NEHTA is to develop the terminology and information products that support the eHealth requirements of the Australian healthcare community. |
| PCEHR | **Personally Controlled Electronic Health Record** | |
| | **Shall** | This verb '**shall**' when appearing in a requirement indicates a mandatory requirement. Its negative form '**shall not**' indicates a prohibition. |
| | **Should** | The verb '**should**' when appearing in a requirement indicates a recommendation. Its negative form '**should not**' indicates an option that should not be supported. |
| SNOMED CT | **Systematized Nomenclature of Medicine – Clinical Terms** | |