

SNOMED International Position Statement

SNOMED CT to International Classification of Diseases for Mortality and Morbidity Statistics (ICD-11-MMS) Map

| Version | Changes and Additions |
|------------------------|---|
| Version 1.0 2017-11-01 | Initial statement. To be updated as project progresses. |

1. Introduction

SNOMED CT® is a global clinical terminology, created for use in health records for recording relevant clinical information to support patient care, sharing and analysis of information. SNOMED CT® is a terminology that can be cross-mapped to other international terminologies, classifications and code systems where there is a requirement.

A key requirement is to link SNOMED CT® to the World Health Organization (WHO) International Classification of Diseases (ICD) to support the epidemiological, statistical and administrative reporting needs of the SNOMED International member countries and Affiliates and WHO Member States.

Following requests from Members and other stakeholders, SNOMED International provides this position statement describing the proposed SNOMED CT to the *International Classification of Diseases Eleventh Revision for Mortality and Morbidity Statistics (ICD-11-MMS) Map* and includes an overview for its development.

The goal of the project is to produce an understandable, reproducible and useful (URU) SNOMED CT to ICD-11-MMS map.

This *Position Statement* is for policy makers or equivalent agencies, SNOMED International stakeholder groups, Standards Development Organizations (SDOs), SNOMED CT® implementers, classification users, and software vendors.

2. Project Approach

SNOMED International is proceeding with a two-phase strategy for the development of the SNOMED CT to ICD-11-MMS alignment. Initial work will focus on the development of maps for the SNOMED CT Initial Translation Set concepts in scope of ICD-11-MMS. This is the Pilot phase. The second phase will map the remaining in scope SNOMED CT concepts.

A number of resources are being used to produce the SNOMED CT to ICD-11-MMS map including:

- SNOMED International Map Leads along with volunteers from the Member countries (the Map Team)
- SNOMED International mapping tool
- SNOMED International map documentation, e.g., Mapping Personnel Handbook
- WHO ICD-11-MMS tools: Coding Tool, Browser
- WHO ICD-11-MMS data: April 2017 Field-Test Release
- WHO ICD-11-MMS documentation: Reference Guide, Field Testing Training Manual

In addition, algorithms have been used to produce a candidate map. Algorithms leverage the following existing resources to identify links between SNOMED CT and ICD-11-MMS of relative strength to produce the candidate map. By identifying the quality of the strength of the map given the evidence of equivalence and algorithms, the candidate map is an efficient way for the Map Team to determine the final SNOMED CT to ICD-11-MMS map.

- Content alignment between SNOMED CT and ICD-11-MMS lead by SNOMED International resulting in equivalence where possible between the two systems
- SNOMED International SNOMED CT to ICD-10 map
- WHO ICD-10 to ICD-11 map
- WHO ICD-11 to ICD-10 map

3. Description, Use Case and Scope

Description

The SNOMED CT to ICD-11-MMS (to be released in 2018) map is a tabular, knowledge-based cross-link from SNOMED CT to ICD-11-MMS in which the ICD-11-MMS code or codes that best represents the meaning of the SNOMED CT concept as conceptualized by ICD-11-MMS are linked. The map is a link directed from the source SNOMED CT concept to the target ICD-11-MMS.

Use Case

The applicable mapping use case supported by the SNOMED CT to ICD-11-MMS map is:

MAP with patient context management: Patient Jones is being discharged from the hospital. The attending physician has maintained a diagnosis and health-related problem list coded in SNOMED CT during the stay and updates the entries at discharge. The vendor software employs the SNOMED CT to ICD-11-MMS map, which uses a knowledge-based algorithm of sequential computable Map Rules. These rules evaluate context (data recorded about the patient in the electronic health record) and co-morbidities in the electronic record to identify the most appropriate candidate ICD-11-MMS code list. Vendor software which cannot employ these knowledge-based features can employ the helpful mapAdvice to provide a readable and understandable list of step-by-step instructions for the physician to support a choice of an ICD-11-MMS code. The ICD-11-MMS coding professional later reviews and edits the classification code list prior to submission for statistical morbidity reporting. The mapAdvice data further guides them with information regarding additional WHO requirements.

Context and Scope

Source domain

SNOMED CT is a comprehensive reference terminology that supports both general and highly specific concepts. Each concept is defined by a set of attribute-value pairs (relationships), which uniquely define the concept distinct from all other concepts. SNOMED CT supports a model of meaning, which specifies correct attributes, and value sets for each domain of meaning. SNOMED CT is a comprehensive reference terminology that supports both general and highly specific concepts. Each concept is defined by a set of attribute-value pairs (relationships), which uniquely define the concept distinct from all other concepts.

The SNOMED CT to ICD-11-MMS map scope considers only domains of SNOMED CT which overlap in meaning with those of ICD-11-MMS. All pre-coordinated concepts issued by SNOMED International within the current international release of SNOMED CT with active status within the following SNOMED CT domains are within scope:

- Clinical finding (disorders and findings) Concept.id 404684003 and descendants
- Situation with explicit context Concept.id 243796009 and descendants excluding Procedure with explicit context Concept.id 129125009 and its descendants
- Event Concept.id 272379006

Target domain

ICD-11-MMS is a classification of diseases and related health problems with granularity of definition that has been chosen to provide utility for purposes of epidemiology and statistical reporting of mortality and morbidity. ICD-11-MMS was created to classify a clinical concept by defining the classes (or 'buckets' of meaning), which contain the concept within the universe of ICD-11 classes.

The scope of ICD-11-MMS is described in WHO's Reference Guide as follows: "The ICD is primarily designed for the classification of diseases and injuries. However, not every problem or reason for coming into contact with health services can be categorized in this way. Consequently, the ICD includes a wide variety of signs, symptoms, abnormal findings, complaints, and social factors that represent the content from health-related records. The ICD therefore can be used to classify data recorded under headings such as 'Diagnosis', 'Reason for admission', 'Conditions treated', and 'Reason for consultation', which appear on a wide variety of health records from which statistics are derived for treatment, prevention or patient safety."

All chapters of ICD-11-MMS are considered within scope for the SNOMED CT to ICD-11-MMS map except for the following:

- Chapter X Extension Codes: Type 2 and 3
- Chapter 27 Traditional Medicine conditions

4. Pilot Phase (December 2017)

The goals of the pilot phase will include an agile, risk adverse approach specifically to:

- 4.1. Focus on the SNOMED CT Initial Translation Set concepts in scope of ICD-11-MMS April 2017 Field-Test Release. The Initial Translation set describes a set of terms identified as commonly used and of high usage by existing SNOMED CT users globally. The aim of the Initial Translation set is to enable a larger user base to explore SNOMED CT usage. The approximate number of the concepts in scope for mapping from the Initial Translation set is 5,300 concepts.
- 4.2. Identify additional concepts to increase the number of concepts mapped to 6,000 (Pilot set). Additions will be from concepts not covered in the Initial Translation set based on chapter analysis, with a focus on those concepts considered algorithmically difficult to compute. These concepts will be added as resources allow and will be a priority for inclusion.
- 4.3. Create maps for the SNOMED CT Initial Translation set and additional concepts as defined by the use case thereby removing some barriers of SNOMED CT adoption.
- 4.4. Develop documentation based on international requirements and WHO reference resources to ensure consistent representation across global standards:
 - 4.4.1. Map Advice
 - 4.4.2. Mapping Personnel Handbook
 - 4.4.3. Map Training Material
- 4.5. Establish a Quality Assurance (QA) Plan and Process based on international requirements, e.g. ISO quality determinants.
- 4.6. Put in place a mechanism to engage with international stakeholders, including the WHO-FIC network.
- 4.7. Evaluate the results of the Pilot and make adjustments as necessary to algorithms, methodology, documentation, and QA plan and process before proceeding to the next phase.
- 4.8. Recommend long term plan to complete the map based on outcomes in 4.7.

5. Long Term

The following approach to producing a complete SNOMED CT to ICD-11-MMS map will be updated as the Pilot progresses and in line with resourcing, agreed scope, and implementation requirements:

1. Update all aspects of the mapping work to take into account the 2018

- release of ICD-11-MMS.
2. Determine criteria for the prioritization of SNOMED CT concepts to be mapped over time.
 3. Create maps for the remaining SNOMED CT concepts based on established criteria and timelines.
 4. Adjust the Quality Assurance (QA) Plan and Process where needed.
 5. Produce additional documentation, e.g., Implementation Guide.
 6. Engage with relevant international stakeholder groups.
 7. Prepare for Alpha release package by recruiting/engaging vendors/organizations.
 8. Alpha release package of the SNOMED CT to ICD-11-MMS map.
 9. Beta release package of the SNOMED CT to ICD-11-MMS map.
 10. Production release package of the SNOMED CT to ICD-11-MMS map.

6. Value Statement(s)

The SNOMED CT to ICD-11-MMS map will:

1. Facilitate a larger user base to explore SNOMED CT adoption.
2. Provide a more consistent and usable set of international concepts for member nations and other stakeholders.
3. Enable re-use of clinical data for additional statistical purposes.
4. Expedite submission and response to international and national reporting requirements.
5. Improve accuracy and reproducibility of code mapping.
6. Save time and improve efficiency for the coding professional.
7. Promulgate widespread comparable epidemiological data and statistical data.
8. Interoperability of data between systems and nations.

7. Collaboration

SNOMED International welcomes all opportunities to discuss partnerships in order to produce an understandable, reproducible and useful (URU) SNOMED CT to ICD-11-MMS map.