5. Mapping Assumptions

The following subjections state the assumptions that are central to the construction of the ICD-10 map.

Exclusion of Implied Context

The SNOMED CT concept or statement taken from the health care record will be evaluated for meaning within the guidelines of the SNOMED CT Editorial Guide. No assumed context or modifying semantics will be inferred beyond the definition asserted by the fully specified name and the SNOMED CT defining relationships, excluding qualifiers. Identification of inconsistency between the fully specified name and the synonyms, or between the fully specified name and the defining relationships will constitute a case for ambiguity. This will cause a Map member to be flagged for editorial review by the SNOMED International terminology staff. An understanding of the meaning (semantics) of the SNOMED CT concept is a necessary first step to an understandable, reproducible, and useful map.

Reference Terminologies and Classifications

The organization, structure, and conventions of the ICD-10 classification are different than SNOMED CT, and meaning (semantics) within the classification is specified by the order and relationship of the chapters, blocks and categories. The position of a classification code within the axis, the title of the code and the associated conventions and guidance provided by the authoritative source further contribute to the specification of meaning of a classification code. Finally, since ICD-10 is an exhaustive classification, the semantic space of a particular classification code depends upon the definition of sibling codes and others within the same category. Since ICD-10 is designed for statistical and epidemiological purposes, one ICD-10 classification code may include many SNOMED CT concepts within its semantic space.

SNOMED CT is a reference terminology that expresses the semantics of concepts within its domain by means of a controlled vocabulary and use of an extensive set of defining relationships. The relationships are employed in concept definition within a constrained and defined model of meaning applicable to each SNOMED CT semantic root. Understanding the meaning of a SNOMED CT concept requires evaluation of the vocabulary term as well as the defining relationships.

Full Semantic Mapping of Concepts

The goal of the mapping process is to identify the meaning of a SNOMED CT concept, determine the best location of that concept in the ICD-10 semantic space as identified by one or more ICD-10 classification codes, and to create a link between the SNOMED CT concept identifier and the correct ICD-10 code(s). Since SNOMED CT is a reference terminology, this process cannot proceed reproducibly using only naming (terms or descriptions) conventions. A full understanding of both SNOMED CT and ICD-10 semantics, as specified in Section 6 Mapping Heuristics, is required for success.

As an example, the SNOMED CT concept 235991007 Peritoneal eosinophilia (disorder), may be identified as a type of blood disorder by some lexical (terming) coding tools and mapped to D72.8, Other specified disorders of white cells, in ICD-10. However, the concept 235991007 Peritoneal eosinophilia (disorder) has defining relationships 213293008 is a (attribute) = 213293008 Aseptic peritonitis(disorder) with 116676008 associated morphology (attribute) = 23583003 Inflammation(morphologic abnormality) and 363698007 finding site (attribute) = 15425007 Peritoneum(serous membrane) structure. From these relationships, the Map Terminologist identifies that the SNOMED CT concept is an inflammation of the peritoneum and appropriately maps the concept to the ICD-10 semantic space K65.8, Other peritonitis.