Mapping from ICD-9-CM/ICD-10-CM to SNOMED CT® for Meaningful Use Compliance

By Brian Levy, M.D.

Achieving Meaningful Use (MU) with certified electronic health record (EHR) technology remains a top priority for healthcare organizations that want to qualify for federal incentive payments and avoid penalties for noncompliance. In order for disparate organizations to seamlessly exchange data, EHRs and other IT systems must first be able to communicate using common terminologies.

Since January 1, 2014, one of the common terminologies dictated by Meaningful Use (MU) is the Systematized Nomenclature of Medicine – Clinical Terms (SNOMED CT®). This proven standard is required to document problem lists, family history, drug/allergy reactions, smoking status and hospital procedures in the EHR. Simultaneously, hospitals and providers must also prepare to make the transition to ICD-10-CM, which on October 1, 2014, became the only acceptable coding language for billing and reimbursement within the scope of MU Stage 2 attestation. Hospitals and providers not complying with the requirements to use SNOMED CT and ICD-10-CM will face sanctions in the form of reduced Medicare and Medicaid reimbursements.

SNOMED CT is one of the most widely used healthcare terminologies in the world. It is owned, maintained and distributed by the International Health Terminology Standards Development Organization (IHTSDO), and currently is used by the healthcare systems of 22 countries, including the U.S.

In contrast to the ICD-9-CM codes that are more familiar to most U.S. healthcare organizations, SNOMED CT is a multi-axial hierarchical nomenclature. As of its July 2013 release, SNOMED CT comprises more than 310,000 concepts, 794,000 descriptions, 19 hierarchies and 1.3 million relationships used to capture the detailed clinical information necessary for providers to deliver appropriate and timely care. Because of its clinical depth, SNOMED CT is much better suited than ICD-9-CM or ICD-10-CM for documenting problem lists.

CURRENT TERMINOLOGIES USED TO CAPTURE PROBLEM LISTS AND DIAGNOSES

Since 1979, providers in the U.S. have used the ninth revision of the International Classification of Diseases – Clinical Modification (ICD-9-CM) to document patient problem lists and diagnoses. ICD-9-CM has just over 14,000 diagnosis codes. Hospitals also use some 4,000 codes found in ICD-9-CM Volume 3 to document inpatient procedures.
Interestingly, the code set originally was intended to be used solely as a classification system for the tracking of disease morbidity and mortality. In the U.S., this classification system has evolved into a terminology standard for classifying diseases, as well as for billing U.S. payers after delivery of healthcare services.

The updated ICD-10-CM code set contains over 68,000 diagnosis codes and 72,000 hospital procedure codes. While it will add a welcome level of granularity not found in ICD-9-CM, it is still oriented primarily toward the diagnosis codes used in the billing process in the U.S. As a result, ICD-9-CM does not support the expressiveness of clinical information as well as SNOMED CT. At the end of the day, neither ICD-9-CM nor ICD-10-CM is really designed to capture detailed clinical data, which is where SNOMED CT emerges. SNOMED CT terminology provides a level of detail needed by providers to create useful problem lists that inform clinical decisions.

ADVANTAGES OF LEVERAGING SNOMED CT FOR MEANINGFUL USE COMPLIANCE

Whereas ICD-9-CM and ICD-10-CM are designed to be a classification system, SNOMED CT was created with a different intent: SNOMED CT’s nearly 800,000 descriptions encourage clinical documentation at a level of specificity that allows more precise response to patients’ medical needs. There are many compelling benefits of leveraging SNOMED CT to capture problem lists instead of ICD-9-CM or ICD-10-CM. First, the use of SNOMED CT puts hospitals and providers on the path to complying with MU Stage 2 criteria and receiving bonus payments from the government. Perhaps more importantly, however, SNOMED CT’s extensive and granular code set encourages more complete and accurate documentation, which should help providers deliver better quality patient care. Furthermore, by standardizing important clinical detail, it serves to enhance interoperability and care coordination among providers and payers.

Through its granularity and comprehensive concepts, terms and relationships, SNOMED CT also promises to strengthen data reporting and analytics capabilities. For example, its terms support many diverse applications and simplify the process of performing queries without compromising the quality of the data retrieved. In addition, it documents semantics, relationships between concepts and hierarchies, making clinical quality measures easier to capture and report. For example, it is much easier with SNOMED CT to find all codes related to asthma, diabetes, or more general questions like all diseases of the liver. The documentation of clinical information using SNOMED CT will ensure that stored data can be consistently retrieved, transmitted and analyzed, as structured SNOMED CT codes and associated metadata can be used for research, analytics and business intelligence even if they are not recorded at the point of care.

Much of the initial enthusiasm surrounding SNOMED CT has been driven by providers. However, payers, too, will eventually begin to reap the benefits of SNOMED CT. SNOMED CT enables a more meaning-based retrieval of data so providers can send thorough attachments or follow up information to payers quickly in order to enhance claims processing and disease management.

For a number of healthcare organizations, the conversion using both ICD-9-CM or ICD-10-CM and SNOMED CT represents a large and time-consuming project for already-strained IT resources.

ADVANCED MAPPING SOLUTIONS SIMPLIFY THE PROCESS

Mapping is the process of linking one terminology to another. It is done for many purposes, including data collection, the prevention of data loss during migration, and the avoidance of redundant data entry.

Essentially, the terminology mapping process is an intensive exercise in language matching. Powerful terminology mapping software can do the lion’s share of the work by providing rules-based translations between ICD-9-CM or ICD-10-CM and SNOMED CT. These automated tools help remove the burden of code conversion from providers by converting codes quickly and efficiently.

The use of terminology mapping software also minimizes the behavioral changes providers need to make as they adjust to creating problem lists using SNOMED CT. The more advanced mapping solutions perform
one-to-one matches of ICD-9-CM/ICD-10-CM codes to SNOMED CT codes. As a result, rather than forcing providers to document in an entirely new way in support of SNOMED CT, they can continue to document in the manner already familiar to them. Behind the scenes, a mapping tool can be used to turn ICD-9/ICD-10 based documentation into the proper SNOMED CT or start from SNOMED CT and go to ICD codes. Such functionality allows providers to make a gradual transition by letting them continue to use ICD-9-CM/ICD-10-CM codes in the short-term as they familiarize themselves with SNOMED CT.

Because terminology mapping software links ICD-9-CM or ICD-10-CM codes to the corresponding SNOMED CT codes, searching for either problem list codes or diagnosis codes also becomes much easier. Providers do not need to conduct separate searches for each; rather, the mapping tool streamlines the process.

The rationale for deploying terminology mapping software to convert the ICD-9-CM/ICD-10-CM code sets to SNOMED CT is therefore a fairly straightforward one. A proven terminology mapping solution helps organizations meet MU Stage 2 criteria, achieve interoperability for data sharing and improve the quality of analytics and reports.

Still, terminology mapping solutions must be carefully vetted. Healthcare organizations must determine not only which products offer the functionality necessary to ensure compliance with MU, but also which ones will best help achieve internal business requirements.

**SNOMED CT’S IMPACT ON MEANINGFUL USE AND HEALTHCARE DELIVERY**

To attest to MU Stage 2, healthcare organizations are required to use both ICD-9-CM and ICD-10-CM for billing and SNOMED CT for the problem list. To maximize the full value of the clinical data captured in the EHR, it is essential to consider tools that allow for synergy between the two code sets.

As a standalone reference terminology, SNOMED CT is inarguably the most robust and meaningful language available for capturing clinical data in the EHR. When linked to ICD-9-CM or ICD-10-CM, SNOMED CT further supports the generation of data which can be used for statistical analyses, billing and reimbursement and other data-driven activities. A best-in-class terminology mapping software solution can help healthcare organizations maximize the unique clinical and administrative characteristics of both SNOMED CT and ICD-9-CM/ICD-10-CM.

Clearly, the value of using SNOMED CT to capture problem lists extends beyond MU Stage 2 compliance. The main objective of any terminology mapping project is to achieve the interoperability needed to support provider collaboration in delivering the level of care necessary to improve patient outcomes. By leveraging SNOMED CT and ICD-9-CM/ICD-10-CM in parallel, the industry can gain additional momentum toward realizing healthcare’s primary objectives: streamlined efficiencies, reduced costs and enhanced patient care and safety.

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