Understanding the Meaningful Use Vocabulary Standards

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The vocabulary standards adopted in the meaningful use final rule provide the language to capture primary health data required for the meaningful use objectives. It is through these standards that health information will be captured and transmitted. Knowing the vocabulary standards and understanding the rationale for utilizing specific vocabularies is vital for not only stage 1 but for the stages that follow.

Semantic Interoperability Required

The stage 1 criteria focus on "electronically capturing health information in a coded format, using that information to track key clinical conditions, communicating that information for care coordination purposes, and initiating the reporting of clinical quality measures and public health information."

In order to do this, EHRs must be capable of providing semantic interoperability. Semantic interoperability refers to "The ability of computer systems to interchange data and to interpret and use the data according to its meaning, rather than just its surface form."[1]

This type of interoperability requires more than the ability to simply convey data; it requires that health information is interpreted in exactly the same way by the sender and recipient.

In order for semantic interoperability to take place, systems must "speak the same language"—that is, they must use standardized vocabulary so that terms have the same meaning. Vocabulary standards must be defined and employed to ensure the information exchanged is consistent and understood. EHR systems that use nonstandard vocabularies or proprietary, vendor-created code sets could have difficulty with this exchange.

The benefits of using EHRs will be directly related to the manner in which health data are stored electronically. Interoperability, decision support, quality reporting, and improvements in care all depend on the vocabulary standards that will be used to encode data.

It is for this reason that ONC adopted standards for systems employed in the meaningful use program. The meaningful use final rule provides guidance on the interoperability standards that should be implemented in order to achieve meaningful use. It includes content exchange and vocabulary standards necessary for a certified EHR. The vocabulary standards listed will form the data structure to enable semantic interoperability.

Encoding Data for Meaningful Use

Within the meaningful use program capturing data in "coded format" does not refer to the manual assignment of codes, but rather to the automatic codification of data through codes that are embedded in the EHR software. It is a "behind the scenes" function that an EHR user does not see. According to the stage 1 criteria, EHR systems may use several vocabulary standards, depending on the purpose for which the data is being captured and used.

The vocabulary standards included in the final rule allow the use of either ICD-9-CM or SNOMED CT for encoding problem lists. The proposed stage 2 standards include ICD-10-CM or SNOMED CT.

Because ICD-9-CM and ICD-10-CM are classification systems, they "lack the granularity necessary to fully describe a health condition."[2] SNOMED CT provides a high level of granularity and "when implemented in software applications, SNOMED CT can be used to represent clinically relevant information consistently, reliably and comprehensively as an integral part of producing electronic health records."[3]

Clearly SNOMED CT would be preferable to encode the clinical data for a problem list; however, at this time either ICD or SNOMED CT may be chosen.

The Importance of Vocabulary Standards

Each stage of meaningful use will become progressively more complex as technology advances and provider experience grows. Eligible providers and hospitals should understand that the success of these types of exchanges partially depends on the vocabulary standards employed in the EHR.

Providers must decide which vocabulary standards will best serve their needs given their specific situation. No one vocabulary or classification system can perform all of the functions necessary for an EHR. It will take multiple standards working together to create a truly meaningful system. Long-range planning is essential when making decisions about these standards.

As the milestones and timeline for implementation of meaningful use become clear, the need for qualified HIM professionals becomes more evident. The aggressive timeline coupled with indications that CEOs are planning to implement certified EHR technology means HIM professionals should prepare to answer questions about these vocabularies and guide health systems in data integration projects.

HIM Standard Vocabulary Opportunities

Providing good guidance on standard vocabularies includes understanding how vocabularies:

- Support the stage 1 meaningful objectives for eligible professionals and hospitals.
- Provide a comprehensive data platform necessary for use in capturing, transmitting, and reporting clinical information at the point of care.
- Facilitate efficient organization of EHR data.
- Provide the most robust standards for use in meeting the meaningful use stage 1 requirements seamlessly and efficiently.
- Provide the data necessary to demonstrate meaningful use objectives, report associated measurements, and potentially qualify for incentives.
- Provide the comprehensive foundation necessary for secondary data mapping. As objectives and time tables for implementation of latter meaningful use stages are finalized, implementation of meaningful use terminology will facilitate efficient secondary data capture.
- Supply the necessary standard vocabulary used in primary data capture internally in EHRs and support structured external communication for health information exchange, paving the way for more comprehensive semantic interoperability.

As healthcare clinical delivery becomes more driven by and dependent upon data, opportunities for HIM professionals to support the implementation of standard vocabularies will emerge.

HIM professionals will be more involved in recommending the most appropriate clinical vocabularies to meet reporting needs, managing vocabularies used in healthcare information systems, developing and delivering education on the use of clinical vocabularies, developing policies and procedures, and monitoring standards requirements and technology developments in the field of clinical vocabularies.

Implementing meaningful use objectives, criteria, and metrics will require that HIM professionals understand the use of these non-ICD vocabularies used in both primary and secondary data capture.

As a result, HIM professionals may take on the role of terminology asset manager, tasked with leading organizational efforts in the implementation of appropriate clinical and financial vocabularies to ensure consistent encoding of clinical data for primary and secondary data capture. They may also take on the role of data analyst, tasked with terminology or vocabulary analytics and reporting.

In either instance, HIM professionals will be needed to ensure clinical vocabularies are accurate, complete, and usable and conform to applicable use case.

For more information on this topic including a sample job description, read AHIMA's "Meaningful Use Vocabulary Code Sets Toolkit" available online at www.ahima.org/resources/infocenter/clinicalterms.aspx.

Notes

1. International Health Terminology Standards Development Organization. "SNOMED Clinical Terms Overview." Webinar, August 2008. Available online at www.ihtsdo.org/fileadmin/user_upload/Docs_01/Recourses/Introducing_SNOMED_CT/SNOMED_CT_Overview_IHTSDO_Taping_Aug08.pdf.
2. AHIMA. "Best Practices for Problem Lists in an EHR." *Journal of AHIMA* 79, no. 1 (Jan. 2008): 73–77. Available online in the AHIMA Body of Knowledge at www.ahima.org.
3. International Health Terminology Standards Development Organization. "SNOMED Clinical Terms Overview."

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