Implementing SNOMED CT in England: Health Information Managers in New Role as Terminology Facilitator

by Anthea Ward

The National Programme for Information Technology is the biggest civil IT program in the world. It promises to revolutionize England's National Health Service (NHS). Complicated? Very. Opportunities for professional growth? Definitely.

There are numerous strands to the program, so nearly all aspects of healthcare will be involved. From hospitals to general practitioners, radiology to prescriptions, operating theaters to community care, providers will transition to a standard reference terminology in an electronic health record.

The program's scope is massive. In an average work day in England:

- 830,000 patients visit their general practitioners or practice nurses
- 50,000 patients attend accident and emergency (emergency rooms)
- 114,000 patients are emergency admissions
- 124,000 patients have outpatient appointments
- 1.3 million paper prescriptions are issued
- 2,000 babies are delivered

There are almost 120,000 clinicians and nearly 400,000 nurses working in NHS, so there is a wealth of information to capture, store, and manage. New technology is creating new roles. This means that health information managers are a key factor in providing quality care as they use new methods and code sets to create the framework for data storage.

Divide and Implement

England covers a considerable land area, comparable to the state of California, with a population of approximately 60 million people. The country has been divided into five clusters, each with a local service provider (LSP) that subcontracts the IT element to various providers for specific healthcare activities such as primary care, secondary care, and radiology. Taking into account that nothing so radical has been done on such a scale since the creation of NHS more than 60 years ago, it would be nearly impossible to deploy a single solution across the country.

Above the LSPs there are national solutions, which will allow patient information to be securely held and shared across the country. This is referred to as the "spine." The spine is made up of the personal demographic service-which is currently live-and the soon-to-be-implemented patient summary information service, which will hold clinical information.

These national services will ensure patient safety by preventing duplicate records and will allow clinicians hundreds of miles apart to view the healthcare information that a patient consents to share. The patient summary information service will be populated with SNOMED CT codes as a controlled medical vocabulary structure that enables data sharing between organizations and providers.

Learning a New Language

The biggest change for HIM is the way clinical information will be recorded using an embedded terminology in electronic media. Perhaps the day of the paperless workplace is just around the corner?

The existing health service allows for two main methods of collecting clinical patient information. Read codes are used in the general practice setting. ICD-10 (for diagnoses) and OPCS 4 (for procedures) are used in hospitals. Together they comprise more than 300,000 codes. These methods are useful, but in the NHS program SNOMED CT is expected to eventually supersede them both.

A joint collaborative between the American College of Pathologists and the NHS Information Authority provides the foundation for this use of a controlled medical vocabulary and reference terminology to promote the exchange of health data between sites of care. SNOMED CT has been tailored specifically for the program and holds about 800,000 terms for use in electronic health record infrastructure.

The challenge? There are a few, as anyone with HIM expertise will realize when the changes in procedures and workflows are considered. As the terminology facilitator for the Eastern cluster, overcoming the prevailing attitude that "clinicians don't have time to worry about codes" and making SNOMED CT appear more user-friendly to everyone affected by the implementation are right at the top of my list. A reference terminology is a powerful tool for data capture, but it is quite different than the code sets traditionally used for reporting and is, of course, much larger in size.

Creating Subsets for Specialties

The first step is to process SNOMED CT into bite-size pieces, making it more palatable to the end user. Subsets collect an appropriate selection of codes for a particular specialty-such as allied health or radiology, and even as specific as neuro-imaging radionuclide procedures. The role of the terminology facilitator is to engage with clinicians and assist in creating the appropriate subsets for their specialties. This allows clinicians to buy in to the new method at an early stage, and it increases their confidence that the terminology will meet the specific clinical data storage and retrieval needs for their practice specialty.

Terminology facilitators work within their own clusters, but the program has endorsed the method of "do once and share." Thus we all don't continue to fall at the same hurdle, instead sharing what we know and learn along the way. We are, after all, working toward the same goal.

As HIM professionals with a global focus, implementation of an international reference terminology creates exciting new opportunities to share lessons learned, solutions to common problems, and best practices for others who will follow as use of terminologies expands around the world.

Although subsets may be initiated within a specific cluster, they will be open for contribution from any interested person in the country, as it will be possible to apply subsets nationally via the various LSPs. However, the possibility exists that a subset may be so specialized that it may serve the needs of only a single cluster. It has been suggested that around 350 subsets need to be created, and this could be a daunting task with only one terminology facilitator per cluster.

The first step in creating one particular subset is to build on an existing collection of codes currently used, map them to SNOMED CT codes (i.e., link the codes to corresponding concepts in the terminology), and present them to the clinical expert reference group.

From my experience, it's best not to turn up with a blank piece of paper and ask that the group fill it in with a scheme, where the intricacies are more or less unknown. Using the existing codes reflects what is already being captured for healthcare services, and it makes it easier to identify where gaps exist in what is being recorded.

Subsets in development may be registered to avoid duplication of effort and encourage pooled resources. In registering a subset, the user is asked to clarify important elements such as the purpose, target audience, stakeholders, management and quality assurance arrangements, and technique or tools required. By requiring this level of detail, it may urge creators to reassess why they want to create a subset.

Never a Silly Question

A small, national team supports the nontechnical aspects of the implementation. One of the team's endeavors is creating stronger links between clusters so that knowledge and experience can be shared. At the group's first meeting it was clear that the clusters are in different situations due to their different system deployment timescales, but the team was clearly in

agreement that a lot of work needs to be done. No step-by-step guide exists yet. The team creates a wonderful opportunity to showcase the knowledge base that HIM professionals possess.

In my role as terminology facilitator, I have discovered that terminology taps into several elements of the program's work streams, such as technical architecture, education, training and development, and service improvement. This requires collaboration with a number of organizational divisions to be successful. Currently, my job is to gather all the information, put it into context, locate the relevant people to find out more, and finally determine the process to advance the use of a new terminology structure.

Due to the dynamic nature of the NHS program this will be an ongoing cycle for quite some time, as nothing is static and each day brings more challenges and opportunities for HIM. Though I've only been involved with the program a short time, I can pass on the wisdom that there is never a silly question concerning terminology use.

Use of a reference terminology and electronic data exchanges is a new process in HIM professional practice, so each question provides new insight and a challenge of preconceptions about the way things might work.

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To Learn More…

For more information about the National Programme for Information Technology, visit www.connectingforhealth.nhs.uk. For details concerning SNOMED CT around the world, visit www.snomed.org. AHIMA will host a clinical terminology institute on July 17, 2006, in Chicago, IL. Details on the institute are available at www.ahima.org/meetings. [page no longer available]

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