SNOMED CT and its place in health information management practice

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The Systematized Nomenclature of Medicine-Clinical Terminology (SNOMED CT®) has been endorsed as an international standard reference terminology to facilitate e-health initiatives. SNOMED CT is developed and supported in an international collaborative effort through the International Health Terminology Standards Development Organization (IHTSDO) and the member countries (approximately 15) function as partnered National Release Centres. Australia, through our National E-Health Transition Authority (NEHTA) is a charter member, joining this international community early and dedicating resources to development and adoption strategies. There is an eagerness to drive the uptake of SNOMED CT in order to facilitate electronic health records (EHRs) and exchange of health information, to ensure patient safety and quality care delivery, to provide decision support functionality and to achieve health system efficiencies through interoperability.

SNOMED CT and ICD-10-AM/ACHI are very different; they have different purposes, and are intended for different system deployments and for different users:

- SNOMED CT is a clinical terminology. It describes and defines clinical entities such as diseases, procedures, substances, organisms. It is designed to facilitate clinician recording of clinical information in an electronic health record. Essentially, it facilitates input.
- ICD-10-AM and ACHI are statistical classifications. They also describe clinical entities but in a much more aggregated way. They are designed for statistical analysis – the output.

Because SNOMED CT and ICD-10-AM/ACHI are used for different purposes and at different stages of information collection, they are both necessary and are complementary.

Below are two examples showing how SNOMED CT and ICD-10-AM/ACHI represent the same ‘thing’ differently.

There is a view that building ‘maps’ between SNOMED CT concepts and ICD-10-AM/ACHI concepts will make the journey from clinical reporting to statistical data collection more accurate and somewhat ‘seamless’. It is acknowledged internationally that this ‘map’ cannot be fully automated due to the complex differences between the two systems. Health Information Managers (HIMs) and clinical coders know that assigning an ICD-10-AM/ACHI code requires a great deal more abstraction, analysis, judgment and compliance with rules and conventions than just ‘picking the right word’. The mapping exercise currently underway at the IHTSDO has involved many experts over the past five years or more. Maps are not yet available or endorsed.

When Australia has widely implemented EHR systems, it is expected that these will be structured and deployed with SNOMED CT content as the national standard clinical terminology. Like clinical records now, these EHRs will be completed by clinicians, and with SNOMED CT content supporting the EHR the clinician will be routinely selecting and entering SNOMED CT terms (where appropriate). In this way, we can regard SNOMED CT as the scheme for clinical information input.

This will have an impact upon the health information management and coder workforce because there will be a significant change in the uniformity and predictability of the clinical records they work with and rely upon. Clinical records will contain unambiguous, formal, standard terms describing clinically important information, all will be legible and spelt correctly – drawn directly from SNOMED CT. These features alone should contribute to increased coded data reliability, adding clarity and consistency to documentation and coding practices and reducing miscommunication. Electronic completion, transmission and delivery of clinical records to the health information management and coder workforce could also achieve further efficiencies (through-put and timeliness). At least for the next five years or so, health information management and coding practice using ICD-10-AM/ACHI for data collection and reporting purposes will probably proceed much as it does now,
producing coded data outputs (but the process will be easier and the results better, we all hope).

Nationally and internationally we see significant concerns that the health information workforce needs to be fostered and expanded to help with the transition to e-health and interoperability. The USA has taken some proactive steps, attempting an ambitious program to train 10,000 health informatics workers by 2010 (American Medical Informatics Association n.d.). The AHIMA is likewise encouraging its members and workforce to undertake career development and diversification training, particularly focusing on SNOMED CT and EHR topics (American Health Information Management Association n.d. a,b).

Recent reviews in both Canada and Australia (Health Informatics Society of Australia 2009) have also identified an alarming shortage of skilled workers in the health information arena. National health information professional associations (HISA, HIMAA) were successful in urging the National Health and Hospital Reform Commission (NHHRC) to highlight workforce capacity building as a key component of the reform agenda.
There is recognition that the health information management and clinical coder workforce comprises the indispensable intellectual capital needed to achieve e-health initiatives. The Australian health information management and clinical coder workforce is well trained and supported in traditional roles. We note the HIMAA submission to NHHRC emphasises the opportunities for this workforce to support health information initiatives in primary and non-acute health care settings.

New opportunities are emerging, and new roles and responsibilities will evolve. Recent recruits and new graduates beginning a career in health information are likely to encounter a range of tasks and duties not previously performed in health information management or coding roles. We speculate that the future will demand that this workforce be able to understand and use clinical data captured in SNOMED CT (not just ICD/ACHI statistical data). Data extraction and analysis skills, health outcomes research and service performance monitoring are already becoming prominent demands. Our more experienced HIMs and clinical coders have a wealth of knowledge; their comprehensive understanding of medical terms and clinician use of vocabulary and documentation practice is priceless. We imagine that this workforce sector could make significant contributions to specifying EHR content, selecting and testing relevant SNOMED CT content suited for particular clinical specialties, and for expert assistance and support of adoption and implementation strategies.

References
American Medical Informatics Association (n.d.). AMIA 10 x 10 Program. Available at: https://www.amia.org/10x10 (accessed 8 Feb 2010).

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