Classification fundamental to the future of healthcare outcomes

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Abstract
Delivering healthcare in the current and future environment requires clinicians to have a comprehensive understanding of classification. This will assist care to be patient focused and meet safety and quality standards.

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There have only really been two books in my health service life that have had an enormous impact on me. The first one was in my first year of nursing when I read The cry and the covenant, which is a fictionalised story of Ignaz Semmelweis, the Austrian-Hungarian physician who clearly saw the link between maternal mortality from cadaver-contaminated puerperal fever and hand hygiene. Due to disbelief of his theories by his colleagues, his sanity was affected and he eventually died of septicaemia within 14 days of admission to an asylum. His legacy is however prevalent today, with hand washing practices accepted as a basic activity by all working in healthcare organisations today. The difficulties of embedding evidence based procedures however still prevail, but with less need to commit innovators to mental health facilities.

The other book was encountered in the second year of my doctorate, and it was required reading for the subject Health Classification Systems. The book was Sorting things out by Bower and Star. Its authors perceived classification as the scaffolding of information infrastructures and also a human pursuit (Bower & Star, 1999). The wording on the inside cover enticed me, as it highlighted the invisibility component within classification, and how people alter this invisibility when necessary (Bower & Star 1999). I ended up reading the book in two days, with each chapter more intriguing than the previous and the collection of cases reinforcing the incredible pervasiveness of classification in modern day life.

Here I am in 2014, after 40 years in the healthcare environment, reflecting on the past and looking towards the future, and I am now more certain than ever about the prominence that classification will be taking in the delivery of healthcare. Nearly a decade ago, Grain (2005) indicated that data collection was now a clinical rather than administrative activity, and it can now be said that classification has finally become more pronounced in the clinician’s daily activities. Two constructs that are looming large in the clinician’s world that have a direct relationship with classification are the safety and quality of healthcare and the delivery of evidence based practice. Clinicians need to appreciate how classification systems can support the attainment of these two goals through linking activity based funding to safety and quality metrics and analysing large volumes of clinical data through data analytics. I will herein be focusing on the first goal and what are the challenges of attaining that goal from a clinician’s perspective.

Delivering nursing care in the 1970s required no knowledge of classification systems or computer skills. Care was simply delivered and a handwritten entry was made per shift in the ‘Nursing Notes’, which were separate from the medical record. A plethora of banal statements were written such as ‘good day’, ‘slept well’, ‘cheerful disposition’, ‘sat out of bed’ and so on. Eventually the medical record contained notes from all clinicians involved in the patient journey, reporting by exception prevailed and research began to take a more prominent position in the overall perspective on healthcare delivery. It soon became apparent that descriptive narration within various forms of documentation made it difficult to identify patterns or trends or even locate similar patient trajectories. Additionally, in the same vein as the American baseball player Mickey Mantle’s view on longevity (“If I knew I was going to live this long, I’d have taken better care of myself”), if I knew that a third person far removed from the patient was required to read my clinical notes in order to establish a picture of healthcare delivery for reimbursement purposes, I’d have taken much more care in order to clearly establish clarity, granularity and integrity of information.
Delivering healthcare within the coming decade implies that the majority of health information will be collected and processed within an information system, with each professional discipline clearly able to demonstrate their contribution to the patient journey. To this end, each discipline has been involved in developing terminologies that support the codification of clinical knowledge so that comparable consistent data is available for clinical research. Moving forward to when all healthcare organisations will be utilising an electronic medical record to document care, all clinicians will need to ensure that they are proficient in information management constructs such as data structures, standards, integrity and security.

Certainly, an understanding of the International Classification of Diseases, diagnosis related groups and the Systematized Nomenclature of Medicine-Clinical Terms (SNOMED-CT) will be crucial.

The safety and quality agenda has gained more prominence in the last few years, highlighted as a key element of the Council of Australian Governments National Health Reform Agreement 2011. With the advent of the National Health Performance Authority providing impartial information about the performance of local healthcare organisations, the Independent Hospital Pricing Authority implementing activity based funding and calculating an annual national efficient price, and the Australian Commission on Safety and Quality in Health Care leading and coordinating national improvements in safety and quality in healthcare, the boundaries of healthcare information use and management to sustain clinical practice in safety and quality outcomes to activity based funding pricing mechanisms.

It is often claimed that healthcare is far too complex and with too many variables to commit to any specified guarantee of service. This has led clinicians and healthcare organisations to implement a myriad of local, statewide, national and international strategies which attempt to increase the safety and quality of health care. Last year the Deeble Institute (Sansoni et al. 2013) investigated the possibility of incorporating quality into the four available hospital pricing systems – best practice pricing, normative pricing, structural models of pricing quality, and payment for performance or quality pricing – and provided considered guidance on the factors needed for an effective pricing model.

Some researchers have also proposed new models that have drawn much comment, such as attempting to use market based control mechanisms similar to emissions trading to enhance patient safety (Coiera & Braithwaite 2009). Coiera and Braithwaite (2009) highlight the difficulty in applying both pressure and encouragement in order to improve patient safety. Given that progress in improving the safety and quality of healthcare in most countries has been at a glacial pace, it appears that new models will need to be considered that embrace both regulation and self-enforcement.

Clinicians will therefore need to understand their clientele in all possible attributes, including admission characteristics, average length of stay, comorbidity patterns, common procedures and activities. Analysing patient attributes will require a familiarity with a range of classification systems in order to interrogate aggregated patient information, identify trends and predict activity. Delivering healthcare in this century means considering future needs as well as current requirements. A thorough knowledge of patients at the local level will be the first step in attempting to identify a model that will provide sustainable funding whilst guaranteeing the public that safety and quality of service will be guaranteed. It will also be fundamental in embarking on big data analysis, but that is another story for the future.

References: