

Editorial: Knowledge Management in Health Care- The Third Age

I am delighted to introduce the March 2008 edition of Health Care and Informatics Review Online. For the third year running we are able to include in our edition papers submitted by participants in the Health Knowledge Management course from the School of Population Health at The University of Auckland in New Zealand. Course participants all hold senior positions in the health service in New Zealand and have an active interest in innovative technology applications in health.

The health sector in New Zealand is one of the most electronically assisted in the world. Interestingly, the shift to a highly technology enabled sector has not been technology driven. Rather there has been a focus on the traditional knowledge-management approach: "identifying key current and strategic needs, examining the processes that may best meet those needs, then considering how technology could help" [1].

The knowledge management course at The University of Auckland aims to assist participants to develop an ability to analyse the role and dynamics of knowledge in the working environment in the health sector, and to develop aspects of knowledge infrastructure. As such it will serve to further advance New Zealand's position internationally.

The edition opens with a guest editorial from Karen Day, School of Population Health, The University of Auckland, Auckland, New Zealand and Dr Martin Orr, Senior Lecturer in Health Knowledge Management, Section of Epidemiology & Biostatistics, School of Population Health, The University of Auckland, Auckland, New Zealand.

In "Coming of Age for Healthcare Knowledge Management", Day and Orr highlight the complexity of harnessing and reusing knowledge constructively in healthcare settings. They consider the so-called "ages" of knowledge management in health care and relate the two student papers to this construct.

It is these observations that have provided the edition title "Knowledge Management in Health Care: The Third Age".

While the four papers presented in this edition are broad reaching in their content, all refer to knowledge management projects that can be interpreted as having an ultimate aim of providing higher quality and more effective and efficient health care.

The first of the student papers is presented by Muhammad Mousa, Anaesthetist and Postgraduate Health Science Student at The University of Auckland, Auckland, New Zealand. In Information, Knowledge and Technology: Role in Anaesthesia Patient Safety, Mousa presents a comprehensive review of the development of knowledge management in anaesthetics practice. Mousa considers the impact of advances in knowledge improved patient safety and ponders ambitions for the future from further progress in this area. In Mousa's own words:

"The data-information-knowledge continuum in anaesthesia is a thread started over 160 years ago, and is still being knitted into a protective cover to make the conduct of anaesthesia as vigilant and as knowledge-based as possible."

How do Health Informatics Systems Improve Quality and Cost Efficiency in ACC Contracted Community Rehabilitation Teams is the second of the student papers presented by Simone Newsham, Manager, PELIM Ltd, Nelson/Marlborough, New Zealand. In this paper, Newsham considers an approach for evaluating the diverse range of health informatics systems used by various companies in New Zealand which provide community rehabilitation services to people with injury related disabilities. The aim of such evaluation is to help to identify the features of a health informatics system that would facilitate the greatest cost efficiencies for both the private companies and the Accident Compensation Corporation (ACC), which contracts the rehabilitation services.

The paper highlights and explores the specific informatics challenges, both clinical and administrative, that are faced by private rehabilitation companies providing community rehabilitation services for ACC claimants. Community rehabilitation increases the issues for health informatics because it often involves several disciplines working with a client at different times.

Newsham's proposed evaluation will both guide companies developing health informatics systems, thus improving cost efficiency and quality service delivery, and will fill a gap in published assessment of the health informatics requirements for community rehabilitation in New Zealand.

We are delighted to include in this edition Audit of Health Data Captured Routinely in Primary Healthcare for the Clinical Decision Support System PREDICT (PREDICT CVD-4). PREDICT-CVD is a clinical decision support program for supporting the assessment and management of cardiovascular disease risk.

Tania Riddell, Section of Epidemiology & Biostatistics, School of Population Health, The University of Auckland, Auckland, New Zealand is the lead author for this paper along with University of Auckland colleagues Associate Professor Tim Kenealy, Faculty of Medicine and Health Sciences, and Dr Sue Wells, Professor Rod Jackson and Mrs Joanna Broad from the Section of Epidemiology & Biostatistics, School of Population Health.

Riddell and colleagues present the results of a critical study which assessed the accuracy of health data captured routinely in primary care practice by PREDICT-CVD. Ensuring data consistency is essential in the quality assurance of clinical decision support systems, yet there is limited published information comparing data in clinical decision support systems with data from electronic medical records.

The audit showed good agreement between the data stored within PREDICT and that held within the patient management system. It was also noted that the use of PREDICT-CVD improved the completeness of cardiovascular risk factor documentation.

Riddell and colleagues highlight the importance of this consistency, both for reassuring system users and allowing health researchers to meaningfully collate and analyse CVD risk factor data at a population level.

Our final paper is from Pratima Acharya, Research Assistant, The University of Auckland, Auckland, New Zealand and PhD candidate, Central Queensland University, Queensland, Australia. In Reduction in Diabetes-Related Hospital-Bed Days for Adults Using Wireless Technology: A Case Report, Acharya considers the application of wireless technology to assist effective care co-ordination between health care providers in the community-based management of Type II diabetes. Using a case study set in the rural Northland community in New Zealand, the paper presents as background the extent of diabetes-related bed days in Northland hospitals.

Acharya considers the potential benefits of wireless technology in co-ordinating primary and secondary providers in the community in an effort to avert hospital admissions. Importantly, she highlights that a better communication infrastructure would enhance awareness and support for patients managing their own health care more proactively.

References

- [1] Orr M. Evolution of New Zealand's health knowledge management system. Br J Healthcare Comput Info Manage 2004; 21(10): 28-30.