Editorial Preface

Healthcare Information Technology Acceptance and E-Health

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This issue of IJHISI delivers a set of articles that further expand the breadth and depth of our understanding of key issues in health information systems and informatics. As with authors of papers appearing in previous issues, the assembled contributors also use a range of research methodologies, from conceptual modeling and framework development to survey-based statistical analyses.

In the first article, “Computerization of Primary Care in the United States,” Anderson and Balas use a survey-based approach to assess information technology (IT) usage among primary care physicians. As these physicians represent a major stakeholder group in the U.S. healthcare system, insights into the adoption and diffusion patterns of IT among them will enhance our knowledge of how IT is being deployed in primary healthcare delivery. With increased productivity and improved quality being the prime goals in the use and deployment of IT in healthcare delivery, many questions arise that need our attention, for example: What types of IT are being used by physicians? What are their perceived benefits? What are the major barriers to IT acceptance? These and other questions are among those investigated in this research. One interesting though puzzling result is that a high number of physicians did not indicate any interest at all in the types of IT applications being surveyed. Overall, the authors find that perceived benefits and barriers are important predictors of IT implementation. The study has significant implications for developing strategies as well as interfaces in the introduction of IT applications into healthcare settings.

As for the second article, “Telehealth Organizational Implementation Guideline Issues: A Canadian Perspective,” Yeo and Jennett conduct a comprehensive review of the policies, guidelines, and standards vis-à-vis the organizational settings of telehealth practices in Canada. To develop theoretically sound and empirically based perspectives, their research uses a triangulation of common methodologies, including literature review, stakeholder survey and questionnaire, and interviews. Results of their study are categorized into the four major themes of organizational readiness, quality assurance, accountability, and continuity. The authors point out that a vast number of their findings relate mostly to the themes of organizational readiness and accountability whereas quality of care and patient safety have gained only scattered attention. The findings and recommendations are useful in the evolution of telehealth services and their successful management.

The Lichtenberg et al. article, “Enhancing Cognitive Screening in Geriatric Care: Use of an Internet-Based System,” addresses major implications of computerized cognitive screening tests in the diagnosis, evaluation, and treatment
of dementia in a geriatric practice. As the population ages, and large numbers of individuals have to be screened, these kinds of applications can help overcome some of the limits and problems associated with traditional screening methods. The authors conduct statistical analysis of the data collected in the real setting of a specialized geriatric clinic. Their findings suggest the computerized cognitive screening test was easily administered and a high rate of concordance with expert geriatrician diagnosis was achieved at a hit rate of 83%. These applications, then, have the potential to reduce clinician burdens of time and expertise availability while improving the accuracy of the screening tool.

The next article, “The Impact of Professional Certifications on Healthcare Information Technology Use,” by Hikmet and Bhattacherjee takes a novel approach to examining healthcare information technology (HIT) usage and user satisfaction in healthcare organizations. The authors look at the effect of professional certifications such as that of the Joint Commission of Accreditation of Healthcare Organizations (JCAHO) in motivating HIT use among healthcare administrators. Their survey-based approach concludes that these types of certifications indeed enhance HIT usage and user satisfaction. Furthermore, HIT usage increases with facility size, especially in larger hospitals. The study raised potentially interesting questions regarding the effect of external entities and factors on HIT use. Results can be generalized to other industrial settings with additional studies.

The last article is an invited piece by E. Vance Wilson, focusing on e-health. The article, “Building Better E-Health Through a Personal Health Informatics Pedagogy,” reviews and compares the current alternative paradigms to e-health pedagogy. While some readers would disagree with Wilson’s use of the word “paradigm,” the article is presented from the author’s perspective on what he believes to be the coming evolution of health informatics education. In this light, the author attempts to develop a conceptual model of a new paradigm, called the Personal Health Informatics (PHI). Accordingly, this paradigm incorporates the significant features of previous paradigms by the integration of multiple perspectives of informatics, personal, and healthcare. The significance of this research lies in providing a model for enhancing instruction in e-health design, development, and management. The author recommends the incorporation of PHI in the undergraduate and graduate curriculum of current health informatics programs. Overall, the articles help further advance our contemporary understanding of the various health informatics issues as well as point out future directions for research. One can build on these research findings and methodologies.

Finally, this issue, like the preceding ones, closes with a book review. Phillip Olla reviews the “Handbook of Informatics for Nurses & Health Care Professionals, 3rd Edition,” a book authored by Toni Lee Hebda, Patricia Czar, and Cynthia M. Mascara. In general, the handbook serves as a timely and useful guide to the range of concepts and technologies relating to Nursing Information Systems by incorporating various contemporary healthcare applications within the context of the rapidly changing Internet and wireless-based environments for nursing informatics practices. It provides an array of pertinent information about current and future Nursing Information Systems. The authors not only summarize multiple applications that are of value to nursing practitioners but they have also managed to maintain an important balance that ensures the book will be valuable to other healthcare professionals. For example, the reader is not only enlightened on current healthcare applications, but is also challenged by the use of these applications within globally changing environments due to the growing popularity of the Internet, wireless evolution, and rapid advances in computing and networking technologies. Yet, Olla observes that, “As a teaching text, the book would benefit from more supplementary teaching material within the book as opposed to solely on the Web site. Another minor pedagogical issue that would improve the text as a teaching aid is the use of numbers to identify the case study questions at the end of each chapter. This book would also gain from a section that describes how to evaluate health information systems.”

We hope IJHISI readers will enjoy the variety of articles and a sampling of works from various parts of the globe in this issue, as in preceding ones.
Professor Wullianallur “RP” Raghupathi is presently associate professor of information systems in the graduate School of Business, Fordham University, New York. Prior to that, he was professor of information systems at California State University, Chico, California. He is co-editor for North America of the International Journal of Health Information Systems and Informatics. He has also edited a special issue of Topics in Health Information Management (1999) and guest edited a special section on healthcare information systems for Communications of the ACM (1997). He was the founding editor of the International Journal of Computational Intelligence and Organizations (1995-1997): http://www.ecst.csuchico.edu/~ijcio/ He also served as an ad hoc editorial review board member, Journal of Systems Management of the Association for Systems Management, 1996-1997. Professor Raghupathi has published over 80 papers in referred journals, conference proceedings, abstracts in international conferences, book chapters, editorials and reviews, including several in the healthcare IT field. Recently he served as the technology chair in the AMCIS’04 program committee. Prof. Raghupathi received his doctorate in information systems from The University of Texas at Arlington in 1991.

Joseph Tan holds a professional diploma in civil engineering from Singapore Polytechnic, an undergraduate degree in mathematics and computer science from Wartburg College, IA, a master’s degree in industrial & management engineering from the University of Iowa, and a PhD in management information systems from the University of British Columbia (UBC). He has been a tenured associate professor, teaching in the Department of HealthCare & Epidemiology, UBC, for many years prior to serving as a professor and head of the Information System and Manufacturing (ISM) Department, School of Business, Wayne State University. Professor Tan publishes widely in numerous computing, ergonomics, information systems, health education, e-health, and e-business journals and has served as a guest editor and member of various journal editorial boards. He sits on key organizing committees for local, national, and international meetings and conferences. Professor Tan’s research, which has enjoyed significant support in the last several years from local, national, and international funding agencies and other sources, has also been widely cited and applied across a number of major disciplines, including healthcare informatics and clinical decision support, human processing of graphical representations, ergonomics, telehealth, mobile health, and e-health promotion programming.