

Foreword

Growing interest in consumer health informatics on the one hand, and continuing advances in health information technology (HIT) on the other are setting the stage for the emergence of the Patient-Centered E-Health (PCEH) discipline. Expectedly, this specialization of e-health and emerging PCEH applications are directly benefiting patients and their caregivers. Indeed, given its appeal to both patients and their caregivers in recent years, PCEH promises to not only strengthen the patient-provider relationship, but also bridges their communication gaps in the twenty-first century and beyond. Herein lies the distinguishing contribution of this work to the broadening diversification found in the extant e-health literature. A major significance of this compendium, therefore, is in shaping the future and focus of e-health research in a domain that is aligned with a more informed patient population, a trend towards greater individual accountability for self-care, a cry for more public accessibility, improved availability and affordability of healthcare, and an effort to make delivery of e-health services on an increasingly global scale. In a nutshell, PCEH represents one of the paradigm shifts that I have noted in today's *e-Healthcare Information Systems Age* where not only is the role of healthcare providers being redefined, but where the expectation bar for consumers to participate actively in decisions leading to their own health, as well as the overall quality and acceptability of e-healthcare informatics and services are being raised.

How, then, should one go about accumulating and documenting the theories and methods underlying the structures and limitations, and the range of applications still waiting to be explored in the PCEH knowledge domain? In this light, Dr. Vance Wilson has provided us an excellent showpiece covering a wide range of PCEH-related topics generated from a multitude of disciplinary perspectives. An examination of how the chapters of this volume have been ordered, integrated, and presented showed that both foundational areas and applications are key to our understanding of the PCEH field. On the foundation side, the reader's interest is first perked with an opening chapter on how e-health technology redefines the relationship between the patient and the healthcare provider. This is followed by insights on new methods for PCEH system design and development, by illustrative thoughts on ways to improve health literacy and communications through e-technology, by emerging concepts of personal health records (PHR) to securely and robustly capture, store, and exchange sensitive health information, and finally, by detailed discussions on privacy, trust, and e-technology marketing ideas not only for the typical patient and the general public, but also for the needy, the disabled, and the underserved. On the application side, the contributed pieces focused on PCEH system acceptability and usability factors, and several other key PCEH-related technology adoption factors, and the use of Web-based tools to enhance healthcare transparency. A study on predicting PCEH system use as moderated by effects of facilitating conditions and patients' behavioral intention serves to close this part of the discussion.

What ingredients, specifically, are critical to ensure the success and significance of future PCEH research and development? Dr. Wilson noted a combination of three such ingredients in his *Preface*, namely, PCEH systems that are *patient-focused*, *patient-active*, and *patient-empowered*. In this regard, I

concur with his view and would like to further emphasize why these ingredients are particularly important for future PCEH initiatives. First, a system that is *provider-focused* will not be appealing to the patient. Unfortunately, the majority of HIT applications developed have mostly been *provider-focused*, rather than personalized to the patients so that they could be connected to “their own physicians, clinics, and records” interactively. Second, to elicit the active participation of the patient, the system should have all of the necessary characteristics that enhance use and acceptance by the patient (user). Here, Wilson noted the example of personal health records (PHR) where implementation failure is probably a result of “poor usability [...] privacy issues (or) lack of health content integration.” I find this true to many of my own research—for example, in designing the *eHealthSmart system*, a PCEH system to close the disparity gap for seniors in key specific areas of health promotion, such as smoking cessation and weight control, much of our software development effort has to be devoted to designing a user interface that meets the needs of the elderly person, whether it be to overcome their hearing problem, deteriorating eyesight, or their ability to maneuver the keyboard and the mouse. Finally, the use and design of *patient-empowered* systems such as the ability of the patient to schedule a doctor’s visit online via a PCEH application puts PCEH in the forefront of health information sciences and consumer health informatics. After all, if many of the individual patient’s concerns can be fixed through self-help with the aid of various PCEH applications, it would translate to a highly efficient, low cost, safe, and good quality e-healthcare service delivery system that would gradually transform and replace our aging traditional healthcare delivery system.

This volume challenges the next generation e-health researchers and practitioners to promote the awareness of PCEH concepts, methods, and applications and how they differ from other forms of e-health. Those who have been the early adopters of these concepts, methods and applications have now opened the doors of the PCEH knowledge domain to future innovation, research, and development.

Joseph Tan, PhD
Professor of Business and Healthcare Informatics,
Wayne State University
Editor-in-Chief, IJHISI