Preface

The constantly changing landscape of User-Driven Healthcare makes it challenging for experts and practitioners to stay informed of the field’s most up-to-date research. That is why Information Science Reference is pleased to offer this three-volume reference collection that will empower students, researchers, and academicians with a strong understanding of critical issues within User-Driven Healthcare by providing both broad and detailed perspectives on cutting-edge theories and developments. This reference is designed to act as a single reference source on conceptual, methodological, technical, and managerial issues, as well as provide insight into emerging trends and future opportunities within the discipline.

User-Driven Healthcare: Concepts, Methodologies, Tools and Applications is organized into six distinct sections that provide comprehensive coverage of important topics. The sections are: (1) Fundamental Concepts and Theories, (2) Tools and Technologies, (3) Frameworks and Methodologies, (4) Cases and Applications, (5) Issues and Challenges, and (6) Emerging Trends. The following paragraphs provide a summary of what to expect from this invaluable reference tool.

Section 1, Fundamental Concepts and Theories, serves as a foundation for this extensive reference tool by addressing crucial theories essential to the understanding of User-Driven Healthcare. Introducing the book is The User Driven Learning Environment by Rakesh Biswas, Joachim P. Sturmberg, and Carmel M. Martin, a great foundation laying the groundwork for the basic concepts and theories that will be discussed throughout the rest of the book. Another chapter of note in Section 1 is titled The Promises and Challenges of Health Information Technology by Brian Gugerty and Michael J. Maranda, which discusses the novel techniques of integrating new technologies to assist health IT management policies and tactics. Section 1 concludes, and leads into the following portion of the book with a nice segue chapter, Information Security Standards for Health Information Systems, by Stelios Eliakis and Evangelos Kotsonis. Where Section 1 leaves off with fundamental concepts, Section 2 discusses tools and technologies in place for User-Driven Healthcare.

Section 2, Tools and Technologies, presents extensive coverage of the various tools and technologies used in the implementation of User-Driven Healthcare. Section 2 begins where Section 1 left off, though this section describes more concrete tools at place in the modeling, planning, and applications of User-Driven Healthcare. The first chapter, RFID Applications in E-Healthcare, by Mohamed K. Watfa, Manprabhjot Kaur, and Rashida Firoz Daruwala, lays a framework for the types of works that can be found in this section, a perfect resource for practitioners looking for the types of technologies currently in practice in User-Driven Healthcare. Section 3 is full of excellent chapters like this one, including such titles as A Centralized Real-Time E-Healthcare System for Remote Detection and Prediction of Epileptic Seizures, Advanced Video Distribution for Wireless E-Healthcare Systems, and A Simple Web-Based Image Database System for Facilitating Medical Care in Dermatological Clinics, to name a few. Where
Section 2 described specific tools and technologies at the disposal of practitioners, Section 3 describes frameworks and methodologies within the field.

Section 3, Frameworks and Methodologies, presents in-depth coverage of the conceptual design and architecture of User-Driven Healthcare, focusing on aspects including design requirements, user diversity, ambiguous contexts, ubiquitous therapy services, mobile technologies, business models, and many more topics. Opening the section is *User Diversity as a Challenge for the Integration of Medical Technology into Future Smart Home Environments* by Martina Ziefle and Wiktoria Wilkowska. This section is vital for developers and practitioners who want to measure and track the progress of User-Driven Healthcare through the multiple lens of parametric design. Through case studies, this section lays excellent groundwork for later sections that will get into present and future applications for User-Driven Healthcare, including, of note: *Design and Implementation of Mobile-Based Technology in Strengthening Health Information System* by Saptarshi Purkayastha, and *The Protocols of Privileged Information Handling in an E-Health Context* by Juanita Fernando. The section concludes with an excellent work by Tan Yigitcanlar, Virendra Pathak, Ori Gudes, Elizabeth Kendall, and Jung Hoon Han, titled *Developing a Competitive City through Healthy Decision-Making*.

Section 4, Cases and Applications, describes how the broad range of User-Driven Healthcare efforts has been utilized and offers insight on and important lessons for their applications and impact. Section 4 includes the widest range of topics because it describes case studies, research, architectures, theory, analysis, and guides for implementation. Topics range from rural and urban issues to global concerns over outsourcing, infrastructure development, occupational therapy, and migration. The first chapter in the section is titled *Key Health Information Systems Outsourcing Issues from Six Hospital Cases*, which was written by Yu-An Huang, Chad Lin, Chien-Fa Li, and Geoffrey Jalleh. The breadth of topics covered in the chapter is also reflected in the diversity of its authors, from countries all over the globe, including Seden, New Zealand, Australia, India, UK, Spain, China, the United States, and more. Section 4 concludes with an excellent view of a case study in a new program, *Stomodeum to Proctodeum*, by Rakesh Biswas, Paramartha Bhattacharya, and Amar Puri Asanga.

Section 5, Issues and Challenges, presents coverage of academic and research perspectives on User-Driven Healthcare tools and applications. The section begins with *Conceiving Community Knowledge Records as e-Governance Concerns in Wired Healthcare Provision* by Kam Hou Vat. Other issues covered in detail in Section 5 include identity management, evaluation considerations, privacy, security, trust, interprofessional care, ethics, learning, and much more. The section concludes with *The Concept of Interoperability for AAL Systems* by Dimitrios K. Lymberopoulos and Lamprini T. Kolovou, a great transitional chapter between Sections 5 and 6 because it examines an important trend going into the future of the field. The last chapter manages to show a theoretical look into future and potential technologies, a topic covered in more detail in Section 6.

Section 6, Emerging Trends, highlights areas for future research within the field of User-Driven Healthcare, opening with *Privacy Considerations for Electronic Health Records* by Mary Kuehler, Nakeisha Schimke, and John Hale. Section 6 contains chapters that look at what might happen in the coming years that can extend the already staggering amount of applications for User-Driven Healthcare. Other chapters of note include *A Medical Data Trustworthiness Assessment Model and Will Comparative Effectiveness Research Lead to Healthcare Rationing?* The final chapter of the book looks at an emerging field within User-Driven Healthcare, in the excellent contribution, *The Nationwide Health Information Network* by Omotunde Adeyemo.
Although the primary organization of the contents in this multi-volume work is based on its six sections, offering a progression of coverage of the important concepts, methodologies, technologies, applications, social issues, and emerging trends, the reader can also identify specific contents by utilizing the extensive indexing system listed at the end of each volume. Furthermore to ensure that the scholar, researcher, and educator have access to the entire contents of this multi volume set as well as additional coverage that could not be included in the print version of this publication, the publisher will provide unlimited multi-user electronic access to the online aggregated database of this collection for the life of the edition, free of charge when a library purchases a print copy. This aggregated database provides far more contents than what can be included in the print version, in addition to continual updates. This unlimited access, coupled with the continuous updates to the database ensures that the most current research is accessible to knowledge seekers.

As a comprehensive collection of research on the latest findings related to using technology to providing various services, User-Driven Healthcare: Concepts, Methodologies, Tools and Applications, provides researchers, administrators, and all audiences with a complete understanding of the development of applications and concepts in User-Driven Healthcare. Given the vast number of issues concerning usage, failure, success, policies, strategies, and applications of User-Driven Healthcare in countries around the world, User-Driven Healthcare: Concepts, Methodologies, Tools and Applications addresses the demand for a resource that encompasses the most pertinent research in technologies being employed to globally bolster the knowledge and applications of User-Driven Healthcare.