Preface

The constantly changing landscape of E-Health and Telemedicine makes it challenging for experts and practitioners to stay informed of the field’s most up-to-date research. That is why Medical 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 E-Health and Telemedicine 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.

*E-Health and Telemedicine: 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. Frameworks and Methodologies;
3. Tools and Technologies;
4. Cases and Applications;
5. Issues and Challenges; and

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 E-Health and Telemedicine. Introducing the book is *Project Initiation for Telemedicine Services* by Cynthia M. LeRouge, Bengisu Tulu, and Suzanne Wood; 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 *Principles of Information Accountability: An eHealth Perspective* by Randike Gajanayake, Tony Sahama, and Renato Iannella. Section 1 concludes, and leads into the following portion of the book with a nice segue chapter, *Telemedicine Program for Management and Treatment of Stress Urinary Incontinence in Women: Design and Pilot Test* by Anna Abelló Pla, Anna Andreu Povar, Jordi Esquirol Caussa, Vanessa Bayo Tallón, Dolores Rexachs, and Emilio Luque.

Section 2, “Frameworks and Methodologies,” presents in-depth coverage of the conceptual design and architecture of E-Health and Telemedicine. Opening the section is *Information Architecture for Pervasive Healthcare Information Provision with Technological Implementation* by Chekfoung Tan and Shixiong Liu. Through case studies, this section lays excellent groundwork for later sections that will
get into present and future applications for E-Health and Telemedicine. The section concludes with an excellent work by Sabah Al-Fedaghi, titled Design Principles in Health Information Technology: An Alternative to UML Use Case Methodology.

Section 3, “Tools and Technologies,” presents extensive coverage of the various tools and technologies used in the implementation of E-Health and Telemedicine. Section 3 begins where Section 2 left off, though this section describes more concrete tools at place in the modeling, planning, and applications of E-Health and Telemedicine. The first chapter, Healthinfo Engineering: Technology Perspectives from Evidence-Based mHealth Study in WE-CARE Project by Anpeng Huang and Linzhen Xie, lays a framework for the types of works that can be found in this section. Section 3 is full of excellent chapters like this one, including such titles as A System for the Semi-Automatic Evaluation of Clinical Practice Guideline Indicators by Alexandra Pomares Quimbaya, María Patricia Amórtegui, Rafael A. González, Oscar Muñoz, Wilson Ricardo Bohórquez, Olga Milena García, and Melany Montagut Ascanio; and Ambulance Dispatching System with Integrated Information and Communication Technologies on Cloud Environment by Jian-Wei Li, Chia-Chi Chang, Yi-Chun Chang, and Yung-Fa Huang. The section concludes with Using a Smartphone as a Track and Fall Detector: An Intelligent Support System for People with Dementia by Chia-Yin Ko, Fang-Yie Lee, and I-Tsen Lin. Where Section 3 described specific tools and technologies at the disposal of practitioners, Section 4 describes the use and applications of the tools and frameworks discussed in previous sections.

Section 4, “Cases and Applications,” describes how the broad range of E-Health and Telemedicine efforts has been utilized and offers insight on and important lessons for their applications and impact. The first chapter in the section is titled The Role and Use of Telemedicine by Physicians in Developing Countries: A Case Report from Saudi Arabia written by Dana Alajmi, Mohamed Khalifa, Amr Jamal, Nasria Zakaria, Suleiman Alomran, Ashraf El-Metwally, Majed Al-Salamah, and Mowafa Househ. This section includes the widest range of topics because it describes case studies, research, methodologies, frameworks, architectures, theory, analysis, and guides for implementation. The breadth of topics covered in the chapter is also reflected in the diversity of its authors, from countries all over the globe, such as: A Case for Enterprise Interoperability in Healthcare IT: Personal Health Record Systems by Mustafa Yuksel, Asuman Dogac, Cebrail Taskin, and Anil Yalcinkaya. The section concludes with Political Attitudes on the Dutch Electronic Patient Record by Evert Mow, a great transition chapter into the next section.


Section 6, “Emerging Trends,” highlights areas for future research within the field of E-Health and Telemedicine, opening with Mobile Health Services: A New Paradigm for Health Care Systems by Nabila Nisha, Mehree Iqbal, Afrin Rifat, and Sherina Idrish. This section contains chapters that look at what might happen in the coming years that can extend the already staggering amount of applications for E-Health and Telemedicine. The final chapter of the book looks at an emerging field within E-Health and Telemedicine, in the excellent contribution, Coalitions: The Future of Healthcare in Public Private Partnerships by Erinn N. Harris.
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. As a comprehensive collection of research on the latest findings related to using technology to providing various services, *E-Health and Telemedicine: Concepts, Methodologies, Tools and Applications*, provides researchers, administrators and all audiences with a complete understanding of the development of applications and concepts in E-Health and Telemedicine. Given the vast number of issues concerning usage, failure, success, policies, strategies, and applications of E-Health and Telemedicine in countries around the world, *E-Health and Telemedicine: 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 E-Health and Telemedicine.