Preface

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

*Healthcare Administration: 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) Development and Design Methodologies, (3) Tools and Technologies, (4) Managerial Impact, (5) Organizational and Social Implications, and (6) Emerging Trends. The following paragraphs provide a summary of what readers may expect from this invaluable reference tool.

Section 1, “Fundamental Concepts and Theories,” provides an in-depth overview of Information and Communication Technologies in Healthcare Administration. The chapters in this section cover a number of pertinent topics and themes, including data management, wireless networking, and telehealth, to name a few. Particular chapters of note include *Big Data in Healthcare* by Yiannis Koupourou, *Making a Case for Information Integrity in Healthcare* by Reema Khurana and Vijay V. Mandke, *A Review of Notifications Systems in Elder Care Environments* by Sandra Nava-Muñoz and Alberto L. Morán, and *Telehealth Implementation* by Mary DeVany, Karla Knobloch-Ludwig, Marilyn Penticoff, and Stuart Speedie. Additional chapters in this section, such as *Policies on Telemedicine-Enhanced Hospital Services* by Angelo Rossi Mori, Mariangela Contenti, and Rita Verbicaro, and *Intensive Care* by Eric Van Genderen, present a foundation for the delivery of care in various environments. The section concludes with *A New Era for Safety Measurement* by Sarahjane Jones and Mairi Macintyre, a chapter that presents patient safety as the primary concern of any hospital administrator.

Section 2, “Development and Design Methodologies,” continues with the concepts of patient safety and hospital management as critical concerns in Healthcare Administration. The first chapter in this section, *Development of an E-Healthcare Information Security Risk Assessment Method* by June Wei, Binshan Lin, and Meiga Loho-Noya, explores the design of a risk assessment model for healthcare administrators, enabling managers and caregivers to effectively and safely utilize the ICT tools at their disposal. Subsequent chapters in this section explore methods of organizational management, such as *Hierarchies and Holdings* by Teresa Carla Oliveira, Stuart Holland, João Fontes da Costa, and Francisco Edinaldo Lira de Carvalho; *Implementation of Evidence-Based Practice and the PARIHS Framework* by Shahram Zaheer; and *Modelling the Growing Process of Integrated Healthcare Supply Networks* by Daria Battini, Maurizio Faccio, Alessandro Persona, and Fabio Sgarbossa. The final chapter in this
Medical Practical Knowledge Circulation Based on Purpose-Oriented Service Modeling by Taisuke Ogawa, Mitsuru Ikeda, Muneou Suzuki, and Kenji Araki, serves as an effective close to this section in its exploration of models and methodologies for training the next generation of caregivers.

Section 3, “Tools and Technologies,” explores the devices, instruments, software, and infrastructure used in modern-day Healthcare Administration. The section begins with Sensorized Garments Developed for Remote Postural and Motor Rehabilitation by Giovanni Saggio, Valentina Sabato, and Roberto Mugavero, a chapter that describes the use of technology for patient care on a personal level. On the other hand, Mobile Communication in Hospitals by Terje Solvoll explores the tools at work in a larger, hospital-wide setting. Similarly diverse chapters are included throughout this section, including Real-Time Biomedical Telemetry System for Ambulances by Nuria Novas, José Antonio Gázquez, and Marina Noguero; PINATA by Alexiei Dingli, Charlie Abela, and Ilenia D’Ambrogio; and Using RFID and Wi-Fi in Healthcare by Alexiei Dingli and Dylan Seychell. The section concludes with Implementation of Case Costing with Ontario Case Costing Initiative (OCCI) by Thuy Thi Thanh Hoang and other chapters on hospital administration and electronic records management, an effective transition into the managerial issues discussed in the next section.

Section 4, “Managerial Impact,” focuses the discussion on how hospital staff and managers in particular, can most effectively utilize the principles of Healthcare Administration in their daily tasks. The section begins by discussing personnel management, with chapters such as Personnel Rostering Management by ICT Techniques by Federico Della Croce and Fabio Salassa, and Operating Room Management in Health Care by Irem Ozkarahan, Emrah B. Edis, and Pinar Mizrak Ozfirat being two notable examples. Managing staff is not the only job of a hospital administrator, however, and other chapters in this section explore the concepts of effective teamwork (Teamwork in Medical Organizational Cultures by Simona Vasilache), education and professional development (Educational Paradigm Change and Fostering Sustainable Success of Healthcare Organization with the Aid of Web-Based Interactive Training by Kristina Zgodavová and Aleš Bourek), and information and decision support systems (Design of an ICT Tool for Decision Making in Social and Health Policies by Francisco Grimaldo, Francisco Ródenas, Miguel Lozano, Stephanie Carretero, Juan Manuel Orduña, Jorge Garcés, José Duato, and Enrique Fatas). The final chapter in this section, One System of Care, One Electronic Chart by Jennifer Gholson and Heidi Tennyson, shows how administrators can take a patient-centered approach to the management of their organization without sacrificing long-term goals.

Section 5, “Organizational and Social Implications,” emphasizes the real intent of Healthcare Administration: the care and treatment of patients. Each chapter in this section deals directly with the patient, whether through Patient Centered Design (Catarina I. Reis, Carla S. Freire, Joaquín Fernández, and Josep M. Monguet), The Sociotechnical Challenge of Integrating Telehealth and Telecare into Health and Social Care for the Elderly (Ken Eason, Patrick Waterson, and Priya Davda), or The Role of ICTs in the Management of Rare Chronic Diseases (Leonor Teixeira, Vasco Saavedra, Carlos Ferreira, and Beatriz Sousa Santos). Additional chapters also cover issues of organizational management, culture, and teamwork, as well as how hospital policy can directly affect patient outcomes. Notable among these chapters are A Serious Game for On-the-Ward Infection Control Awareness Training by Ian Dunwell and Steve Jarvis and A Preliminary Study of Key Factors Affecting Management and Evaluation of IT Outsourcing Contracts in Hospitals by Chad Lin, Yu-An Huang, Chien-Fa Li, Geoffrey Jalleh, and Ying-Chieh Liu, two chapters that take a critical perspective of Healthcare Administration and how administrators and staff can work together to achieve the best outcomes for their patients.
Section 6, “Emerging Trends,” investigates the latest technologies, policies, and methodologies to improve Healthcare Administration and patient care. The first few chapters in this section explore the management and organization of healthcare providers, including nurses and hospital staff. These chapters include *Conceptualizing Emergency Department Scenarios* by Maya Kaner, Tamar Gadrich, Shuki Dror, and Yariv Marmor, and *Recent Evidence on the Changing Mix of Providers of Healthcare in England* by Greenwell Matchaya, Pauline Allen, Simon Turner, Will Bartlett, Virginie Perotin, and Bernarda Zamora, among others. Additional chapters in this section describe advances in technological tools such as electronic health records, data management systems, telemedicine, etc. Of note are the chapters *Ubiquitous Multimedia Data Access in Electronic Health Care Systems* by Muhammad H. Aboelfotoh, Patrick Martin, and Hossam Hassanein; *Not Just Meaningful Data but Coordinated Data!* by Vahé A. Kazandjian; and *Leading the Technological Innovation in Healthcare Systems* by Vincenzo Gullà. The final chapter in this section, *Global Telemedicine and eHealth* by S. A. Davis explores the future of healthcare and the practice of medicine in a global, technology-mediated society.

As a comprehensive collection of research on current findings related to the development of interdisciplinary technologies, *Healthcare Administration: Concepts, Methodologies, Tools, and Applications* provides researchers, administrators, and all audiences with a complete understanding of the latest advances, applications, and concepts in Healthcare Administration. Although the primary organization of the contents in this multi-volume work is based on its six sections, offering a progression of coverage on the important concepts, methodologies, technologies, managerial considerations, social issues, and emerging trends, the reader can also identify specific content by utilizing the extensive indexing system found at the end of each volume. Given the vast number of issues concerning usage, successes and failures, policies, strategies, and applications of Healthcare Administration in countries around the world, *Healthcare Administration: Concepts, Methodologies, Tools, and Applications* addresses the demand for a resource that encompasses the most pertinent research on the technologies being employed to globally bolster the knowledge and implementation of Healthcare Administration.