Table of Contents

Foreword ........................................................................................................................................... xvii
Preface ................................................................................................................................................ xix

Section 1
Biomedical Knowledge Management Systems

Chapter 1
Telemedicine and Biotelemetry for E-Health Systems: Theory and Applications ....................... 1

   Elif Derya Ubeyli, TOBB Ekonomi ve Teknoloji Üniversitesi, Turkey

Chapter 2
The Use of Artificial Intelligence Systems for Support of Medical Decision-Making.................. 18

   William Claster, Ritsumeikan Asia Pacific University, Japan
   Nader Ghotbi, Ritsumeikan Asia Pacific University, Japan
   Subana Shanmuganathan, Auckland University of Technology, New Zealand

Chapter 3
Digitizing Healthcare: Electronic Medication Administration Record (eMAR) and
Bedside Medication Verification (BMV)....................................................................................... 31

   Yasin Ozcelik, Fairfield University, USA
   Claire H. Carter, Greenwich Hospital, USA
   Maryann Clark, Greenwich Hospital, USA
   Alejandro Martinez, Fairfield University, USA

Chapter 4
Electronic Health Records System Using HL7 and DICOM in Ophthalmology....................... 42

   Isabel de la Torre Díez, University of Valladolid, Spain
   Roberto Hornero Sánchez, University of Valladolid, Spain
   Miguel López Coronado, University of Valladolid, Spain
   María Isabel López Gálvez, University of Valladolid, Spain
Chapter 5
Electronic Medical Prescription: An Overview of Current Status and Issues ...................................................... 61
Golam Sorwar, Southern Cross University, Australia
San Murugesan, University of Western Sydney, Australia

Chapter 6
Data-Mining Techniques for an Analysis of Non-Conventional Methodologies:
Deciphering of Alternative Medicine ............................................................................................................... 82
William Claster, Ritsumeikan Asia Pacific University, Japan
Nader Ghotbi, Ritsumeikan Asia Pacific University, Japan
Subana Shanmuganathan, Auckland University of Technology, New Zealand

Chapter 7
Ethical Issues of Health Management Predictive Modeling .............................................................................. 92
Elizabeth McGrady, University of Dallas, USA
Linda W. Nelms, Tennessee Department of Health, USA

Section 2
Applications: Extending the Scope of Health Care Beyond Conventional Boundaries

Chapter 8
Persistent Clinical Encounters in User Driven E-Health Care .......................................................................... 101
Rakesh Biswas, Manipal University, Malaysia
Joachim Sturmberg, Monash University, Australia
Carmel M. Martin, Northern Ontario School of Medicine, Canada
A. U. Jai Ganesh, Sri Sathya Sai Information Technology Center, India
Shashikiran Umakanth, Manipal University, Malaysia
Edwin Wen Huo Lee, Kuala Lumpur, Malaysia
Kevin Smith, National Digital Research Centre, Ireland

Chapter 9
Incorporating Radiological Patient Data Acquired at Other Hospitals into the Local Workflow .......................................................... 118
P.M.A. van Ooijen, University Medical Center Groningen, The Netherlands
A. Broekema, University Medical Center Groningen, The Netherlands

Chapter 10
User-Centric and Inclusive Design Methods: Implications for E-Healthcare ................................................. 134
Alastair S. Macdonald, The Glasgow School of Art, Scotland
David Loudon, The Glasgow School of Art, Scotland
Christopher S. C. Lim, The Glasgow School of Art, Scotland
Chapter 11
Telederm: A Web-Based Decision Support System for Medical Practitioners ........................................ 154

Geoff West, Curtin University, Australia
Mihai Lazarescu, Curtin University, Australia
Monica Ou, Curtin University, Australia

Chapter 12
A Stroke Information System (SIS): Critical Issues and Solutions ........................................................... 177

Subana Shanmuganathan, Auckland University of Technology, New Zealand

Chapter 13
Human Factors in Dynamic E-Health Systems and Digital Libraries ................................................... 192

Arash Shaban-Nejad, Concordia University, Canada
Volker Haarslev, Concordia University, Canada

Section 3
Selected Case Studies

Chapter 14
The Use of Laboratory Test Results in Health Care Management ......................................................... 204

M. Nanda Prematilleke, Consultant Haematologist, Colombo, Sri Lanka

Chapter 15
Sun, Surgery and Cyberspace: The Role of the Internet in the Rise of Medical Tourism ...................... 217

Jerry S. Eades, Ritsumeikan Asia Pacific University, Beppu, Japan

Chapter 16
The Use of Public Health Surveillance Data for Preventive Control of Diseases that Depend on Individual Risky Behavior: The Case of HIV Infection in Japan ........................................ 232

N. Ghotbi, Ritsumeikan Asia Pacific University, Japan
W. Claster, Ritsumeikan Asia Pacific University, Japan

Chapter 17
E-Health in Brazil: Less Care for the Poor? ................................................................................................. 242

José Rodrigues-Filho, Universidade Federal da Paraíba, Brazil
Natanael Pereira Gomes, Universidade Federal de Pernambuco, Brazil

Chapter 18
Mental Health Management in New Zealand: The Pathways Model for Client-Based Treatment .......... 253

Gavin J. Cooper, Pathways, New Zealand
Chapter 19
An Exploratory Study to Understand the Drivers and Inhibitors for the Successful Adoption of Wireless Technology in Australian Healthcare Systems ................................................................. 267
   Abdul Hafeez-Baig, University of Southern Queensland, Australia
   Raj Gururajan, University of Southern Queensland, Australia

Chapter 20
The Role of Wireless Technology in Addressing Sleeping Disorders in Aged Care ....................... 279
   Clint Moloney, University of Southern Queensland, Australia

Chapter 21
Development of an Online Sleep Diary .............................................................................................................. 289
   Jacqui Blake, University of the Sunshine Coast, Australia
   Don Kerr, University of the Sunshine Coast, Australia

Chapter 22
Doctors Using Patient Feedback to Establish Professional Learning Goals: Results from a Communication Skill Development Program ............................................................... 303
   L. Baker, Auckland University of Technology, New Zealand
   M. J. Greco, Auckland University of Technology, New Zealand
   A. Narayanan, Auckland University of Technology, New Zealand

Chapter 23
TACMIS: A Total Access Care and Medical Information System ................................................................. 315
   Monte Cassim, Ritsumeikan Asia Pacific University, Japan

Chapter 24
IT Applications for Medical Services in Japan ................................................................................................. 327
   Susumu Yamamoto, Ritsumeikan Asia Pacific University, Japan

Compilation of References ................................................................................................................................. 337

About the Contributors ......................................................................................................................................... 370

Index ..................................................................................................................................................................... 380