1. Record Nr. UNINA9910830831903321 Autore Istepanian Robert S. H. Titolo M-health: fundamentals and applications // Robert S.H. Istepanian, **Bryan Woodward** Hoboken, New Jersey:,: John Wiley & Sons,, [2017] Pubbl/distr/stampa [Piscatagay, New Jersey]:,: IEEE Xplore,, [2017] **ISBN** 1-119-30290-0 1-119-30288-9 Descrizione fisica 1 online resource (423 pages) Collana IEEE press series on biomedical engineering IEEE Press series in biomedical engineering;; 27 362.1028 Disciplina Soggetti Telecomunicació en medicina Comunicació sense fil, Sistemes de Telecommunication in medicine Mobile communication systems Wireless communication systems Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references at the end of each chapters and index. Nota di contenuto About the Authors xi -- Foreword xv -- Preface xvii --Acknowledgments xxi -- Acronyms xxiii -- 1 Introduction to m-Health 1 -- 1.1 Introduction, 1 -- 1.2 The Concept of m-Health: The Beginnings, 2 -- 1.3 Taxonomy of Telemedicine, Telehealth, e-Health, and m-Health, 5 -- 1.4 m-Health and Digital Ubiquity, 9 -- 1.5 The Paradigm Shift of Mobile Connectivity and m-Health Services, 12 -- 1.6 Impact of m-Health on Cultural, Commercial, and Operational Changes, 16 -- 1.7 Summary, 18 -- References, 18 -- 2 Smart m-Health Sensing 23 -- 2.1 Introduction, 23 -- 2.2 Fundamentals of m-Health Sensing and a New Taxonomy, 24 -- 2.3 Health and Wellness Monitoring Sensors, 26 -- 2.4 Who is Monitored? 30 -- 2.5 What is Monitored? 31 -- 2.6 Wearable Sensors for m-Health Monitoring, 36 -- 2.7 Wearable Fitness and Health-Tracking Devices, 45 -- 2.8 Design Considerations for Wireless Health Sensing and Monitoring, 47 -- 2.9 Diagnostic

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Sommario/riassunto

Addresses recent advances from both the clinical and technological perspectives to provide a comprehensive presentation of m-Health This book introduces the concept of m-Health, first coined by Robert S. H. Istepanian in 2003. The evolution of m-Health since then--how it was transformed from an academic concept to a global healthcare technology phenomenon--is discussed. Afterwards the authors describe in detail the basics of the three enabling scientific technological elements of m-Health (sensors, computing, and communications), and how each of these key ingredients has evolved and matured over the last decade. The book concludes with detailed discussion of the future of m-Health and presents future directions to potentially shape and transform healthcare services in the coming decades. In addition, this book: Discusses the rapid evolution of m-Health in parallel with the maturing process of its enabling technologies, from bio-wearable sensors to the wireless and mobile communication technologies from IOT to 5G systems and beyond. Includes clinical examples and current studies, particularly in acute and chronic disease management, to illustrate some of the relevant medical aspects and clinical applications of m-Health. Describes current m-Health ecosystems and business models. Covers successful applications and deployment examples of m-Health in various global health settings, particularly in developing countries.