Innovation In Indian Healthcare Using Health Information

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Opportunities and Challenges in Digital Healthcare Innovation Sandhu, Kamaljeet 2020-06-26 Digital health has faced obstacles from poor IT systems implementation to lack of consumer acceptance. Very little is known about the management, development, and design of digital health projects; the level of IT adoption; and the role of digital leadership that is needed to successfully drive health projects. Digital health, if successfully implemented, offers tremendous opportunities in health data analytics for consumers of health services and service providers that include health information portability, personalization of health information by consumers, easy access and usefulness of health information, and better management of electronic data records by health institutions and the government. Research suggests that despite assurances provided to consumers, digital information security and digital health innovation have been a challenge and are only slowly being accepted. Opportunities and Challenges in Digital Healthcare Innovation is an innovative research publication that identifies digital health innovation opportunities and obstacles and proposes frameworks and conceptual models for digital health innovation that empowers consumers of digital health to use the information to make informed decisions and choices. Highlighting topics such as data analytics, health regulations, and telehealth, this book is ideal for IT consultants, medical software developers, data scientists, hospital administrators, medical practitioners, policymakers, academicians, researchers, and students.
The Role of Telehealth in an Evolving Health Care Environment Institute of Medicine 2012-12-20 In 1996, the Institute of Medicine (IOM) released its report Telemedicine: A Guide to Assessing Telecommunications for Health Care. In that report, the IOM Committee on Evaluating Clinical Applications of Telemedicine found telemedicine is similar in most respects to other technologies for which better evidence of effectiveness is also being demanded. Telemedicine, however, has some special characteristics-shared with information technologies generally-that warrant particular notice from evaluators and decision makers. Since that time, attention to telehealth has continued to grow in both the public and private sectors. Peer-reviewed journals and professional societies are devoted to telehealth, the federal government provides grant funding to promote the use of telehealth, and the private technology industry continues to develop new applications for telehealth. However, barriers remain to the use of telehealth modalities, including issues related to reimbursement, licensure, workforce, and costs. Also, some areas of telehealth have developed a stronger evidence base than others. The Health Resources and Service Administration (HRSA) sponsored the IOM in holding a workshop in Washington, DC, on August 8-9 2012, to examine how the use of telehealth technology can fit into the U.S. health care system. HRSA asked the IOM to focus on the potential for telehealth to serve geographically isolated individuals and extend the reach of scarce resources while also emphasizing the quality and value in the delivery of health care services. This workshop summary discusses the evolution of telehealth since 1996, including the increasing role of the private sector, policies that have promoted or delayed the use of telehealth, and consumer acceptance of telehealth. The Role of Telehealth in an Evolving Health Care Environment: Workshop Summary discusses the current evidence base for telehealth, including available data and gaps in data; discuss how technological developments, including mobile telehealth, electronic intensive care units, remote monitoring, social networking, and wearable devices, in conjunction with the push for electronic health records, is changing the delivery of health care in rural and urban environments. This report also summarizes actions that the U.S. Department of Health and Human Services (HHS) can undertake to further the use of telehealth to improve health care outcomes while controlling costs in the current health care environment.
Inventing Medical Devices Dr. Jagdish Chaturvedi 2016-10-14 "This book comprehensively captures the essence of inventing medical devices through anecdotes, case studies and real life examples. A recommended must read for any aspiring entrepreneur who wishes to invent new medical devices in India." – Dr. Balram Bhargava,Padmashri, Professor of Cardiology, Cardiothoracic Sciences Centre, Executive Director, Stanford India Biodesign Centre, School of International Biodesign (SIB), All India Institute of Medical Sciences, New Delhi. "A timely resource- This is a remarkably readable and useful primer on medical device innovation in India, written by one of the emerging leaders in the field. The realistic perspective and practical suggestions in this book have arrived just in time for a health technology ecosystem that is in a substantial stage of growth." – Dr. Paul Yock, Founder and Director, Stanford Biodesign "Despite the stated focus as a book for doctors looking to engage with the MedTech ecosystem in India, this book has several teachings for engineers, product designers, business strategists, marketing folks and investors as well." – The Hans India In this book, the author shares his experience, anecdotes, insights and failures while inventing medical devices in India over the last six years. The idea is to give entrepreneurs (clinicians, engineers, designers, business professionals) a realistic expectation of the time, money, co-ordination and teamwork required to develop a medical device in India. This book includes case studies, anecdotes, caricatures and a special "how I do it" section at the end of the book that gives step-by-step guidelines on how to identify a need, make clinical observations, create need statements, perform needs filtering, develop criteria, conceptualize a solution and take it to a proof of concept. This book is recommended for all Indian healthcare professionals, engineers and product designers who seek to solve unmet clinical challenges with new medical devices, but are unsure of how to go about taking their idea from the concept stage to an actual product. This book illustrates ways for engineers and designers to formally engage with doctors, and gives a comprehensive perspective of the path from ideation to commercialization.
Innovations in Healthcare Management Vijai Kumar Singh 2015-02-18 As developed economies enter a period of slower growth, emerging economies such as India have become prime examples of how more can be achieved with less. Bringing together experience and expertise from across the healthcare industry, this book examines innovations that can bring about real advances in the healthcare industry. Innovations in Healthcare Management: Cost-Effective and Sustainable Solutions explores recent innovations in healthcare from a global and Indian perspective. Emphasizing the importance of Lean healthcare and innovation, it presents low-cost, high-volume solutions that improve access to care. Providing concrete examples of the five levels of innovation present in healthcare, the book presents new concepts, methods, and tools for advancing processes and operational flow. It includes case studies of actual results in healthcare innovation from three continents that highlight emerging global trends in healthcare system innovation. The book describes how to organize resources and flows so that given targets, such as cost, clinical quality, and patient experience, can be achieved with available resources. It also covers nontraditional ecosystems of innovation that move outside of expected technological innovations, such as innovations in social persuasion, rural health delivery, and the planning and design of hospitals. The book maintains a focus on key issues across the healthcare industry—such as access to care, demand creation, patient experiences, and data—to help readers implement new ideas and new models of delivery of affordable care in healthcare systems around the world.
Networking Health National Research Council 2000-07-12 Consumer health websites have garnered considerable media attention, but only begin to scratch the surface of the more pervasive transformations the Internet could bring to health and health care. Networking Health examines ways in which the Internet may become a routine part of health care delivery and payment, public health, health education, and biomedical research. Building upon a series of site visits, this book: Weighs the role of the Internet versus private networks in uses ranging from the transfer of medical images to providing video-based medical consultations at a distance. Reviews technical challenges in the areas of quality of service, security, reliability, and access, and looks at the potential utility of the next generation of online technologies. Discusses ways health care organizations can use the Internet to support their strategic interests and explores barriers to a broader deployment of the Internet. Recommends steps that private and public sector entities can take to enhance the capabilities of the Internet for health purposes and to prepare health care organizations to adopt new Internet-based applications.
Challenges and Opportunities for SMEs in Industry 4.0 Ahmad, Noor Hazlina 2020-03-20 Small and medium enterprises (SMEs) have been widely acknowledged to be an important agent of development because of their potential for addressing unemployment, inequality, and poverty, as well as promoting inclusiveness in economic development. The sector is critical for achieving the country's sustainable growth. However, there is a lack of research on the adaptations SMEs are making in today's technologically driven market. Challenges and Opportunities for SMEs in Industry 4.0 is a collection of innovative research on the methods and applications of modern business development and innovative strategies for small and medium enterprises in the age of smart industrialism. This book features a wide range of topics including business intelligence, collaborative manufacturing, and organizational networking. This reference source is ideally designed for managers, policymakers, economists, entrepreneurs, strategists, researchers, industrialists, academicians, educators, and students.
Affordable Healthcare in India – a Frugal Innovation Perspective 2015 This bachelor thesis deals with the concept of frugal innovation in India. It examines how frugal innovation is organized and performed and how frugal innovation can be an enabler of affordable and accessible health care for the Bottom of the Pyramid in India. A broad literature review builds the theoretical framework for the case study in the second part of this bachelor thesis. In this empirical part, 3 examples of frugal innovation from the medical technology industry are examined and compared in a cross case analysis. The analysis showed that frugal innovation is mostly embedded in hybrid business models that generate social as well as economic value. A frugal mindset is another crucial key success factor. Such a mindset emerges when an academic mindset is applied in resource constraint areas. Furthermore, it became clear that frugal innovation in the medical technology industry is an important lever to make health care affordable for the whole Indian population.
Health Information Systems: Concepts, Methodologies, Tools, and Applications Rodrigues, Joel J.P.C. 2009-12-31 "This reference set provides a complete understanding of the development of applications and concepts in clinical, patient, and hospital information systems"--Provided by publisher.
Transforming Healthcare Through Innovation in Digital Health J.A. Ginige 2018-10-18 The term Telehealth covers a wide spectrum of disciplines, ranging from the enabling of direct clinical interventions to patient-centered care needs such as personal monitoring and care team support, as well as education, policy and professional aspects. Contributing to the solving of healthcare sustainability challenges and supporting the development and delivery of a wide range of innovative care and treatment models, Telehealth also acts as a major driver for change in global health issues. This book, Transforming Healthcare Through Innovation in Digital Health, presents the accepted full-paper, double-blinded, peer-reviewed contributions, as well as the editor-reviewed invited keynote papers, delivered at the 7th International Conference on Global Telehealth (GT2018), held in Colombo, Sri Lanka, on 10 and 11 October 2018. Approximately 50% of the total initial submissions were accepted. The conference provided a platform for the sharing of best practice and research directions across the international Telehealth community, and the 14 papers presented here deal with a variety of themes ranging from data collection and analysis to the design of interventions and delivery mechanisms, in situations from public health and primary care through to consumer health informatics, and from implementation and algorithm design to privacy and ethical considerations. Offering an overview of the innovation and diversity of today's Telehealth domain, this book will be of interest to all those involved in the design and implementation of healthcare solutions.
Telemedicine Institute of Medicine 1996-11-08 Telemedicine--the use of information and telecommunications technologies to provide and support health care when distance separates the participants--is receiving increasing attention not only in remote areas where health care access is troublesome but also in urban and suburban locations. Yet the benefits and costs of this blend of medicine and digital technologies must be better demonstrated before today's cautious decisionmakers invest significant funds in its development. Telemedicine presents a framework for evaluating patient care applications of telemedicine. The book identifies managerial, technical, policy, legal, and human factors that must be taken into account in evaluating a telemedicine program. The committee reviews previous efforts to establish evaluation frameworks and reports on results from several completed studies of image transmission, consulting from remote locations, and other telemedicine programs. The committee also examines basic elements of an evaluation and considers relevant issues of quality, accessibility, and cost of health care. Telemedicine will be of immediate interest to anyone with interest in the clinical application of telemedicine.
Indian State Priorities for Health Innovation Partnerships Nicole Davis 2019 Many international institutions—universities, foundations, companies, NGOs, and governments—would like to engage more deeply with the government of India to improve health outcomes. However, a lack of transparency, changing state-level priorities, and the absence of a single venue to learn about engagement opportunities holds back many potential partnerships. The Center for Strategic and International Studies (CSIS) Wadhwani Chair in U.S.-India Policy Studies and Duke University's Innovations in Healthcare have launched the "Indian States Health Innovation Partnership" to address this information gap and encourage subnational health care cooperation between Indian government entities and external partners. The primary goal of this project is to strengthen health outcomes in India by methodically identifying which Indian states are ripe for innovative partnerships with international institutions and broadcasting these opportunities publicly to spur future partnerships.
Machine Learning for Healthcare Applications Sachi Nandan Mohanty 2021-04-13 When considering the idea of using machine learning in healthcare, it is a Herculean task to present the entire gamut of information in the field of intelligent systems. It is, therefore the objective of this book to keep the presentation narrow and intensive. This approach is distinct from others in that it presents detailed computer simulations for all models presented with explanations of the program code. It includes unique and distinctive chapters on disease diagnosis, telemedicine, medical imaging, smart health monitoring, social media healthcare, and machine learning for COVID-19. These chapters help develop a clear understanding of the working of an algorithm while strengthening logical thinking. In this environment, answering a single question may require accessing several data sources and calling on sophisticated analysis tools. While data integration is a dynamic research area in the database community, the specific needs of research have led to the development of numerous middleware systems that provide seamless data access in a result-driven environment. This book is intended to be useful to a wide audience, students, researchers and scientists from both academia and industry may all benefit from this material. It contains a comprehensive description of issues for healthcare data management and an overview of existing systems, making it appropriate for introductory and instructional purposes. Prerequisites are minimal; the readers are expected to have basic knowledge of machine learning. This book is divided into 22 real-time innovative chapters which provide a variety of application examples in different domains. These chapters illustrate why traditional approaches often fail to meet customers' needs. The presented approaches provide a comprehensive overview of current technology. Each of these chapters, which are written by the main inventors of the presented systems, specifies requirements and provides a description of both the chosen approach and its implementation. Because of the self-contained nature of these chapters, they may be read in any order. Each of the chapters use various technical terms which involve expertise in machine learning and computer science.
The Business of Healthcare Innovation Lawton R. Burns 2005-08-25 The first wide-ranging analysis of business trends in the manufacturing segment of the health care industry.
World report on hearing World Health Organization 2021-03-03 The World report on hearing was developed with the key purpose of promoting global action for equitable access to ear and hearing care in all settings across the world. The report provides clear evidence to target hearing loss as a global public health priority and outlines the H.E.A.R.I.N.G. package of interventions that countries should prioritize, taking into account their national circumstances. The many challenges facing countries in these endeavours are outlined in the report.
Promoting Access to Medical Technologies and Innovation – Intersections between Public Health, Intellectual Property and Trade World Intellectual Property Organization 2013 This study has emerged from an ongoing program of trilateral cooperation between WHO, WTO and WIPO. It responds to an increasing demand, particularly in developing countries, for

strengthened capacity for informed policy-making in areas of intersection between health, trade and IP, focusing on access to and innovation of medicines and other medical technologies.
Digital Innovation for Healthcare in COVID-19 Pandemic: Strategies and Solutions Patricia Ordóñez de Pablos 2022-03-25 Digital Innovation for Healthcare in COVID-19 Pandemic: Strategies and Solutions provides comprehensive knowledge and insights on the application of information technologies in the healthcare sector, sharing experiences from leading researchers and academics from around the world. The book presents innovative ideas, solutions and examples to deal with one of the major challenges of the world, a global problem with health, economic and political dimensions. Advanced information technologies can play a key role in solving problems generated by the COVID-19 outbreak. The book addresses how science, technology and innovation can provide advances and solutions to new global health challenges. This is a valuable resource for researchers, clinicians, healthcare workers, policymakers and members of the biomedical field who are interested in learning how digital technologies can help us avoid and solve global disease dissemination. Presents real-world cases with experiences of applications of healthcare solutions during the pandemic of COVID-19 Discusses new approaches, theories and tools developed during an unprecedented health situation and how they can be used afterwards Encompasses information on preparedness for future outbreaks to make less costly and more effective healthcare responses to crises
India Health Report, 2010 2010
Frugal Innovation in Healthcare Aditi Ramdorai 2015-04-29 This book focuses on how companies are innovating with regard to the Bottom-of-the-Pyramid (BOP) - the lowest socio-economic segment, and the organizational conditions they need to be successful. The authors use several examples of disruptive innovations from this market, particularly in the Indian healthcare sector. Low-cost, specialty hospital chains like Aravind Eye Care and Narayana Hrudayalaya have brought down the cost of certain medical procedures significantly. The Indian conglomerate Tata Group and the American healthcare giant GE Healthcare have also developed affordable products targeted at the lowest-income segments in India. The authors present an in-depth analysis of these companies and present their insightful results on disruptive innovation and the ever-challenging BOP market.
Interior, Environment, and Related Agencies Appropriations for 2014 United States. Congress. House. Committee on Appropriations. Subcommittee on Interior, Environment, and Related Agencies 2013
Handbook of Research on Managerial Practices and Disruptive Innovation in Asia Ordóñez de Pablos, Patricia 2019-08-30 Collaboration in business allows for equitable opportunities and inclusive growth as the economy rises while also permitting partnering organizations to adopt and utilize the latest successful practices and management. However, a market in stasis may require a displacement in order to allow businesses to grow and create new alliances and partnerships toward a shared economy. There is a need for studies that seek to understand the necessity of market disruption and the best supervisory methods for remaining relevant and profitable in a time of change. The Handbook of Research on Managerial Practices and Disruptive Innovation in Asia is an essential reference source that explores successful executive behavior and business operations striving toward a more inclusive economy. Featuring research on topics such as employee welfare, brand orientation, and entrepreneurship, this publication is ideally designed for human resources developers, policymakers, IT specialists, economists, executives, managers, corporate directors, information technologists, and academicians seeking current research focusing on innovative business factors and sustainable economies in Asia.
Innovation and Entrepreneurship Klaus Weiermair 2010
Global Climate Change and Human Health George Luber 2015-10-14 Learn the foundations of climate science and human health Global Climate Change and Human Health examines the environmental crisis from a public health and clinical health perspective, giving students and clinicians the information they need to prepare for the future of health care. Edited by George Luber, associate director for climate change at the Centers for Disease Control and Prevention, and Jay Lemery, associate professor at the University of Colorado School of Medicine and section chief of Wilderness and Environmental Medicine in the Department of Emergency Medicine, and including chapters written by luminaries in the field, this landmark book provides a comprehensive introduction to climate change and health. Students will learn about climate changes direct effect on health, including extreme weather events, altered and degraded ecosystems, and threats to human security and welfare. Discussions on mitigation and adaptation strategies, including disease surveillance, communications, and greening health care, as well as a primer on the core concepts of climate change science are presented. Each chapter has a specific section on the clinical correlations of the impact of climate change on health. Informative illustrations depict increasing aeroallergens, shifting vector habitats, emergent risks, and more. Visual teaching materials broken down by chapter (including PowerPoint lecture slides) are available for instructors. This book shows how human health will be —and already has been — affected and how health care practitioners need to start preparing. Understand the science behind climate change and climate variability Learn how the availability of food and clean water will affect public health Consider the diseases that will surge as vector populations swell Discover mitigation strategies targeted toward the health care community Understanding how climate change affects human rights and how international institutions are responding Increased temperatures bring algal blooms that threaten clean water. Degraded air quality brings allergies, asthma, and respiratory diseases. Ground pollutants lower the nutritional value of food crops. It's clear that climate change is very much a public health concern, and Global Climate Change and Human Health helps those preparing to be on the front lines of health care.
Tele-oncology Giovanna Gatti 2015-06-09 This book explains how telemedicine can offer solutions capable of improving the care and survival rates of cancer patients and can also help patients to live a normal life in spite of their condition. Different fields of application – community, hospital and home based – are detailed, and detailed attention is paid to the use of tele-oncology in rural/extreme rural settings and in developing countries. The impact of new technologies and the opportunities afforded by the social web are both discussed. The concluding chapters consider eLearning in relation to cancer care and assess the scope for education to improve prevention. No medical condition can shatter people's lives as cancer does today and the need to develop strategies to reduce the disease burden and improve quality of life is paramount. Readers will find this new volume in Springer's TELe Health series to be a rich source of information on the important contribution that can be made by telemedicine in achieving these goals.
Health Information Technology in the International Context Nir Menachemi 2012-06-06 This book facilitates the exchange of management theory, best practice, implementation challenges, and the impact of adoption as it pertains to HIT adoption in one or more international settings. It presents a holistic viewpoint on HIT use in health care organizations and systems, and provides a managerial perspective from authors around the world.
From Innovation to Implementation Who Regional Office for Europe 2016 "The principal authors were Carrie Beth Peterson (Consultant in eHealth and Innovation, WHO Regional Office for Europe), Clayton Hamilton (Editor-in-chief and Unit Leader, eHealth and Innovation in the Division of Information, Evidence, Research and Innovation, WHO Regional Office for Europe) and Per Hasvold (WHO Collaborating Centre for eHealth and Telemedicine at the Norwegian Centre for Integrated Care and Telemedicine, Tromsø, Norway)."--Page viii.
The Innovation Imperative in Health Care Organizations Peter Spurgeon 2012-01-01 ÔHealthy organisations are twice as likely to get better results than unhealthy ones, and this could be a matter of life and death if your business is healthcare. Whatever way you look at it, HR has a key role to play and the authors once again points the way.Õ Þ Clare Chapman, Group People Director, BT (British Telecoms) ÔIf healthcare systems around the world are to respond to the growing demands of an ageing population and advances in technology, then healthcare workforces will need to managed with imagination, agility and innovation. This important book sets out some of these challenges in a thoughtful and accessible way, allowing the reader to tap into the research pedigree of its authors and to draw out lessons and evidence which will inform both strategy and practice.Õ Þ Stephen Bevan, Director, Centre for Workforce Effectiveness, The Work Foundation This insightful book discusses vital concepts of system sustainability in terms of productivity, quality improvement, innovation and cost control in the context of maximising the potential of staff in the health care sector through effective human resource management. Health systems in the western world face increasingly intense pressure to contain or reduce costs, while countries such as China and India move towards universal coverage. The contributors illustrate that radical gains in efficiency and innovative practice are required internationally in health care systems. They argue that the high proportion of health care system costs invested in staffing place the human resource function at the forefront of meeting this challenge. Sustained system change and productivity gains, more effective management of staff and work climate are essential elements of reform and are all covered in this book The book provides practical examples as to how health service managers can rise to the challenge of sustaining services against greater pressures than ever before. It will strongly appeal to academics and students of health service management and public sector management. Health service managers, HR professionals in health as well as clinical staff will also find plenty of informative information in this enriching compendium.
Handbook of Research on Engineering Innovations and Technology Management in Organizations Gaur, Loveleen 2020-04-17 As technology weaves itself more tightly into everyday life, socio-economic development has become intricately tied to these ever-evolving innovations. Technology management is now an integral element of sound business practices, and this revolution has opened up many opportunities for global communication. However, such swift change warrants greater research that can foresee and possibly prevent future complications within and between organizations. The Handbook of Research on Engineering Innovations and Technology Management in Organizations is a collection of innovative research that explores global concerns in the applications of technology to business and the explosive growth that resulted. Highlighting a wide range of topics such as cyber security, legal practice, and artificial intelligence, this book is ideally designed for engineers, manufacturers, technology managers, technology developers, IT specialists, productivity consultants, executives, lawyers, programmers, managers, policymakers, academicians, researchers, and students.
Behavioral Healthcare and Technology Lisa A. Marsch 2014-12-08 In recent years, there has been an explosion of research focused on using technology in health care, including web- and mobile- health assessment and intervention tools, as well as smartphone sensors and smart environments for monitoring and promoting health behavior. This work has shown that technology-based therapeutic tools offer considerable promise for monitoring and responding to individuals' health behavior in real-time. They may also function as important "clinician-extenders" or stand-alone tools, may be cost-effective and may offer countless opportunities for tailoring behavioral monitoring and intervention delivery in a manner that is optimally responsive to each individual's profile and health behavior trajectory over time. Additionally, informational and communication technologies may be used in the context of decision support tools to help individuals better understand and access treatment. Technology may enable entirely new models of health care both within and outside of formal systems of care and thus offers the opportunity to revolutionize health care delivery. This edited book will define the state of scientific research related to the development, experimental evaluation, and effective dissemination of technology-based therapeutic tools targeting behavioral health. Behavioral Health Care and Technology will provide an overview of current evidence-based approaches to leverage technology to promote behavioral health, including management of substance use, mental health, diet/exercise, medication adherence, as well as chronic disease self-management. Additionally, the book will define the state of implementation research examining models for deploying technology-based behavioral health care systems and integrating them into various care settings to increase the quality and reach of evidence-based behavioral health care while reducing costs.
India's Healthcare Industry Lawton R. Burns 2014-01-13 "Describes the three sets of institutions that deliver healthcare services in India, finance these services, and manufacture the products used in these services"--Provided by publisher.
Emerging Technologies for Health and Medicine Dac-Nhuong Le 2018-10-16 With the current advances in technology innovation, the field of medicine and healthcare is rapidly expanding and, as a result, many different areas of human health diagnostics, treatment and care are emerging. Wireless technology is getting faster and 5G mobile technology allows the Internet of Medical Things (IoMT) to greatly improve patient care and more effectively prevent illness from developing. This book provides an overview and review of the current and anticipated changes in medicine and healthcare due to new technologies and faster communication between users and devices. This groundbreaking book presents state-of-the-art chapters on many subjects including: A review of the implications of VR and AR healthcare applications A review of current augmenting dental care An overview of typical human-computer interaction (HCI) that can help inform the development of user interface designs and novel ways to evaluate human behavior to responses in virtual reality (VR) and other new technologies A review of telemedicine technologies Building empathy in young children using augmented reality AI technologies for mobile health of stroke monitoring & rehabilitation robotics control Mobile doctor brain AI App An artificial intelligence mobile cloud computing tool Development of a robotic teaching aid for disabled children Training system design of lower limb rehabilitation robot based on virtual reality
The Fourth Industrial Revolution Klaus Schwab 2017-01-03 World-renowned economist Klaus Schwab, Founder and Executive Chairman of the World Economic Forum, explains that we have an opportunity to shape the fourth industrial revolution, which will fundamentally alter how we live and work. Schwab argues that this revolution is different in scale, scope and complexity from any that have come before. Characterized by a range of new technologies that are fusing the physical, digital and biological worlds, the developments are affecting all disciplines, economies, industries and governments, and even challenging ideas about what it means to be human. Artificial intelligence is already all around us, from supercomputers, drones and virtual assistants to 3D printing, DNA sequencing, smart thermostats, wearable sensors and microchips smaller than a grain of sand. But this is just the beginning: nanomaterials 200 times stronger than steel and a million times thinner than a strand of hair and the first transplant of a 3D printed liver are already in development. Imagine "smart factories" in which global systems of manufacturing are coordinated virtually, or implantable mobile phones made of biosynthetic materials. The fourth industrial revolution, says Schwab, is more significant, and its ramifications more profound, than in any prior period of human history. He outlines the key technologies driving this revolution and discusses the major impacts expected on government, business, civil society and individuals. Schwab also offers bold ideas on how to harness these changes and shape a better future—one in which technology empowers people rather than replaces them; progress serves society rather than disrupts it; and in which innovators respect moral and ethical boundaries rather than cross them. We all have the opportunity to contribute to developing new frameworks that advance progress.
Digital Health Entrepreneurship Sharon Wulfovich 2019-06-20 This book presents a hands on approach to the digital health innovation and entrepreneurship roadmap for digital health entrepreneurs and medical professionals who are dissatisfied with the existing literature on or are contemplating getting involved in digital health entrepreneurship. Topics covered include regulatory affairs featuring detailed guidance on the legal environment, protecting digital health intellectual property in software, hardware and business processes, financing a digital health start up, cybersecurity best practice, and digital health business model testing for desirability, feasibility, and viability. Digital Health Entrepreneurship is directed to clinicians and other digital health entrepreneurs and stresses an interdisciplinary approach to product development, deployment, dissemination and implementation. It therefore provides an ideal resource for medical professionals across a broad range of disciplines seeking a greater understanding of digital health innovation and entrepreneurship.
Public Health Informatics and Information Systems J.A. Magnuson 2020-07-17 This 3rd edition of a classic textbook examines the context and background of public health informatics, explores the technology and science underlying the field, discusses challenges and emerging solutions, reviews many key public health information systems, and includes practical, case-based studies to guide the reader through the topic. The editors have expanded the text into new areas

that have become important since publication of the previous two editions due to changing technologies and needs in the field, as well as updating and augmenting much of the core content. The book contains learning objectives, overviews, future directions, and review questions to assist readers to engage with this vast topic. The Editors and their team of well-known contributors have built upon the foundation established by the previous editions to provide the reader with a comprehensive and forward-looking review of public health informatics. The breadth of material in Public Health Informatics and Information Systems, 3rd edition makes it suitable for both undergraduate and graduate coursework in public health informatics, enabling instructors to select chapters that best fit their students' needs.

Reverse Innovation in Health Care Vijay Govindarajan 2018 Part One. Health care solutions from a distant shore: value-based competition in India: An unhealthy problem meets an unlikely solution -- How value-based competition works: five core principles -- Value-based competition in action: Narayana health -- Part two. Reverse innovation in health care delivery: four models for the U.S.: Disrupting U.S. costs: Health City Cayman Islands -- Expanding rural access: University of Mississippi Medical Center -- Expanding access for the uninsured: Ascension Health -- Improving quality: Iora Health -- Promoting reverse innovation and value-based health care: how to get started

Inclusive Innovation Rajeswari S. Raina 2020-02-27 This book discusses the role of inclusive innovation for development in rural India. It uses the evidence of innovation in the context of skewed or limited livelihood options and multiple knowledge systems to argue that if inclusive innovation is to happen, the actors and the nature of the innovation system need reform. The book presents cases of substantive technological changes and institutional reforms enabling inclusive innovation in rural manufacturing, sustainable agriculture, health services, and the processes of technological learning in traditional informal networks, as well as in formal modern commodity markets. These cases offer lessons to enable learning and change within the state and formal science and technology (S&T) organizations. By focusing on these actors central to development economics and innovation systems framework, the book bridges the widening conceptual gaps between these two parallel knowledge domains, and offers options for action by several actors to enable inclusive innovation systems. The content is thus of value to a wide audience consisting of researchers, policy makers, NGOs and industry observers.

Textbook for Transcultural Health Care: A Population Approach Larry D. Purnell 2020-09-05 This textbook is the new edition of Purnell's famous Transcultural Health Care, based on the Purnell twelve-step model and theory of cultural competence. This textbook, an extended version of the recently published Handbook, focuses on specific populations and provides the most recent research and evidence in the field. This new updated edition discusses individual competences and evidence-based practices as well as international standards, organizational cultural competence, and perspectives on health care in a global context. The individual chapters present selected populations, offering a balance of collectivistic and individualistic cultures. Featuring a uniquely comprehensive assessment guide, it is the only book that provides a complete profile of a population group across clinical practice settings. Further, it includes a personal understanding of the traditions and customs of society, offering all health professionals a unique perspective on the implications for patient care.

Innovation in Health Informatics Miltiadis Lytras 2019-11-13 Innovation in Health Informatics: A Smart Healthcare Primer explains how the most recent advances in information and communication technologies have paved the way for new breakthroughs in healthcare. The book showcases current and prospective applications in a context defined by an imperative to deliver efficient, patient-centered and sustainable healthcare systems. Topics discussed include big data, medical data analytics, artificial intelligence, machine learning, virtual and augmented reality, 5g and sensors, Internet of Things, nanotechnologies and biotechnologies. Additionally, there is a discussion on social issues and policy- making for the implementation of smart healthcare. This book is a valuable resource for undergraduate and

graduate students, practitioners, researchers, clinicians and data scientists who are interested in how to explore the intersections between bioinformatics and health informatics. Provides a holistic discussion on the new landscape of medical technologies, including big data, analytics, artificial intelligence, machine learning, virtual and augmented reality, 5g and sensors, Internet of Things, nanotechnologies and biotechnologies Presents a case study driven approach, with references to real-world applications and systems Discusses topics with a research-oriented approach that aims to promote research skills and competencies of readers

Health Care Comes Home National Research Council 2011-06-22 In the United States, health care devices, technologies, and practices are rapidly moving into the home. The factors driving this migration include the costs of health care, the growing numbers of older adults, the increasing prevalence of chronic conditions and diseases and improved survival rates for people with those conditions and diseases, and a wide range of technological innovations. The health care that results varies considerably in its safety, effectiveness, and efficiency, as well as in its quality and cost. Health Care Comes Home reviews the state of current knowledge and practice about many aspects of health care in residential settings and explores the short- and long-term effects of emerging trends and technologies. By evaluating existing systems, the book identifies design problems and imbalances between technological system demands and the capabilities of users. Health Care Comes Home recommends critical steps to improve health care in the home. The book's recommendations cover the regulation of health care technologies, proper training and preparation for people who provide in-home care, and how existing housing can be modified and new accessible housing can be better designed for residential health care. The book also identifies knowledge gaps in the field and how these can be addressed through research and development initiatives. Health Care Comes Home lays the foundation for the integration of human health factors with the design and implementation of home health care devices, technologies, and practices. The book describes ways in which the Agency for Healthcare Research and Quality (AHRQ), the U.S. Food and Drug Administration (FDA), and federal housing agencies can collaborate to improve the quality of health care at home. It is also a valuable resource for residential health care providers and caregivers.

Emerging Trends and Innovations in Privacy and Health Information Management Cristina Albuquerque 2019 "This book examines the social, ethical, and scientific issues surrounding the use of technology in the management of health services and in the provision of care in medical facilities"--

Reverse Innovation in Health Care Vijay Govindarajan 2018-06-19 Health-Care Solutions from a Distant Shore Health care in the United States and other nations is on a collision course with patient needs and economic reality. For more than a decade, leading thinkers, including Michael Porter and Clayton Christensen, have argued passionately for value-based health-care reform: replacing delivery based on volume and fee-for-service with competition based on value, as measured by patient outcomes per dollar spent. Though still a pipe dream here in the United States, this kind of value-based competition is already a reality--in India. Facing a giant population of poor, underserved people and a severe shortage of skills and capacity, some resourceful private enterprises have found a way to deliver high-quality health care, at ultra-low prices, to all patients who need it. This book shows how the innovations developed by these Indian exemplars are already being practiced by some far-sighted US providers--reversing the typical flow of innovation in the world. Govindarajan and Ramamurti, experts in the phenomenon of reverse innovation, reveal four pathways being used by health-care organizations in the United States to apply Indian-style principles to attack the exorbitant costs, uneven quality, and incomplete access to health care. With rich stories and detailed accounts of medical professionals who are putting these ideas into practice, this book shows how value-based delivery can be made to work in the United States. This "bottom-up" change doesn't require a grand plan out of Washington, DC, agreement between entrenched political parties, or coordination among all players in the health-care system. It needs entrepreneurs with innovative ideas about delivering value to patients. Reverse innovation has worked in other industries. We need it now in health care.