Discovering Precision Health: Predict, Prevent, and Cure to Advance Health and Well-Being. By Lloyd Minor, MD and Matthew Rees. 2020. John Wiley & Sons Ltd: Hoboken, New Jersey. ISBN (Hardcover): 978-1119672692. US $39.15. 257 p.

Discovering Precision Health: Predict, Prevent, and Cure to Advance Health and Well-Being offers readers a detailed vision of a healthcare system where patient-specific factors are leveraged to prevent, treat, and cure disease. The concept of Precision Health is based on the recently established field of Precision Medicine with a shifted focus from treatment to prevention. Together, Dr. Lloyd Minor, Dean of the School of Medicine at Stanford University, and Matthew Rees, founder of Geonomica, outline the need for patient-specific healthcare, its role in predicting and preventing disease, and the scientific and technological breakthroughs that make it a plausible vision for the near future.

One of Minor’s fundamental principles is that effective patient-based care should be precise yet comprehensive. In recent years, medical professionals have widened their perspectives regarding factors that influence health outcomes. Instead of relying solely on common clinical metrics, Minor highlights the value of utilizing a variety of unique patient factors – including genomics, metabolomics, and microbiomics – in developing a complete understanding of an individual’s physiology. Minor also emphasizes the importance of environmental, financial, and social circumstances, as well as lifestyle choices and daily habits, specifically given the stark health disparities in the United States.

Discovering Precision Health describes how shifting the “one-size-fits-all” model of healthcare to a more personalized approach can promote health and mitigate symptoms at various points in the trajectory of disease. Notably, Minor describes how continuous health monitoring allows physicians to obtain baseline clinical values for each patient, which may be more effective than using those derived from antiquated studies lacking in diversity. Using this personalized information, clinicians can diagnose earlier and intervene faster, or even take measures to prevent disease onset entirely. Furthermore, continuous monitoring increases patient engagement and encourages a more active role in maintaining health and wellness. Continuous monitoring based on personalized metrics can also help patients with chronic diseases prevent acute exacerbations, dramatically improving health outcomes.

Throughout the text, Minor draws on major advances in biomedical research and healthcare technology, as well as private sector collaborations, to depict how Precision Health can become a reality in the near future. He describes how genome sequencing, and recent research on the functions and interactions of specific genes, can be utilized to identify the most effective treatment and dosing strategies for patients, circumventing the timely and costly trial-and-error process all too common in modern healthcare. The genetic revolution has also resulted in genome editing and individualized stem cell therapeutics and tissue regeneration. Furthermore, technological advances in digital health devices facilitate the implementation of easy and effective continuous monitoring.

By identifying the shortcomings of the US healthcare system and the innovations that can alleviate them, Minor and Rees offer readers a new perspective on the future of healthcare.

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Digital Health in Focus of Predictive, Preventive and Personalised Medicine. Edited by Lotfi Chaari, PhD. 2020. Springer Nature: Switzerland. ISBN (eBook): 978-3030498153. US $109. 164 p.

Together, modern innovations in the interconnected fields of precision medicine, machine learning, bioinformatics, information technology, and artificial intelligence offer an array of applications for tailoring the delivery of quality patient-centered care, advancing biomedical research, and streamlining the routine operations of entire health systems. In Digital Health in Focus of Predictive, Preventive and Personalised Medicine, Lotfi Chaari presents a collection of 18 original research contributions that were presented at the second annual International Conference on Digital Health Technologies (ICDHT 2019). For readers actively engaged in these technological domains along with those hoping to gain early insight, these articles highlight the contemporary paradigm shift in which big data meets preventive medicine.

This quantitative-driven volume of the full book series, Advances in Predictive, Preventive and Per-