Preface

The continuous presence of centuries old diseases such as malaria, Tuberculosis, Influenza, Chaga’s disease, Anthrax, Scurvy, Plague, and Malnutrition to name a few, remain a threat to the health of the public. With the continuous growth of the world population and the constant interactions between peoples across continents, there has been a rise in global epidemics. Over the past decades, the world has evolved into a global village where transmissions of diseases have transcended borders within a short period of time. Recently, the world has seen the emergence and re-emergence of diseases such as Novel Coronavirus, SARS, H1N1, Ebola, among other infectious diseases that have not been confined in one region, but rather has traversed beyond borders, in particular the Middle East, Far East, Europe, South America, and Africa within a short time. Equally, the rapid containment and prevention of these epidemics has occurred often swiftly as a result of the robust communication, coordination and collaborative efforts between multinational public health intelligence agencies such as, the World Health Organization (WHO), Centre for Disease Control (CDC), the respective National Ministries of Health, and other key organizations.

Public health sciences stems from the advent of adversities and challenges on human health since the evolution of mankind. Despite incredible public health achievements in the 20th century, these adversities continue to evolve, persist and remain indelible in the 21st century. Subsequently, the scale of human suffering due to contemporary diseases, disasters and other adversities has been a global phenomenon but has remained an overwhelming conundrum to the global poor, in particular those in developing nations and resource poor settings. Although many nations have remained steadfast in protecting their populations from the emergence or re-emergence of diseases, that has not been the case across the globe for all in equivalent capacity – divided along developed and developing nations, in other words the haves and the have Nots. Public health for the global poor is not only a current health care challenge, but has always been and continues to be in the foreseeable future.

The perpetuation of these adversities is in part due to the lack of recognizing that public health is more than the mere sum of its individual parts; the fact that it is a function of complex systems with many moving parts and determinants. These multiple determinants are comprised of communities, individuals, organizations, institutions, and subsystems which are interdependent and interacting in dynamic environments, naturally giving rise to adverse health outcomes at multiple levels and scales. The failure to understand these complexities has led to the traditional emphasis on specific risk factors or isolated causes of morbidity and mortality, attributing, for instance, a certain disease or health outcome to one single cause and focusing on addressing that cause. Such an oversimplification of the real world leads to inadequate interventions and poor policy solutions that target one issue, often neglecting to address the multiple causes of what seems like a simple issue.
Furthermore, focusing on downstream factors rather than recognizing and addressing the more systemic and upstream causes and drivers of poor health and health inequities, such as the social determinants of health, can compound the public health challenges. For example, it’s no mystery that poverty is associated with poor housing conditions, and substandard housing is linked to adverse health outcomes. People in crowded and poor housing are more susceptible to respiratory infections through biological and environmental risk exposures, as well as physical injury. People with poor health are in turn less likely to maintain a steady income, leading to a vicious cycle of disadvantage. In the 21st century, transforming public health means we absolutely need to understand and address the multiple causes and contributors to the issues we face, and the complex interactions and interdependencies that arise over time. In resource poor countries with often shifting political, social, and environmental instabilities, achieving equitable public health and health care services for all is a significant challenge that requires a holistic and tactical approach. To reframe our approach to effective solutions means we need to take a systems approach. The good news though, there is a pace towards transforming health care, however slow this may be.

The impetus of this book stems from the overwhelming need to harness the challenges faced by many countries in the twenty first century, especially the developing and resource poor nations. Transforming public health in resource poor nations cannot be an overnight fix but rather is more critical and complicated, and requires continued exploration for transformative strategies.

THE PURPOSE OF THIS BOOK

The growing need to empower and equip health care professionals and communities with skills, knowledge and resources in tackling the emergence of diseases and other global health challenges in the 21st century cannot be ignored. Despite the existence of considerable amount of work and literature on public health in developing countries, there are limited sources of effective public health approaches and strategies based on empirical evidence.

The purpose of this book is to showcase the latest developments, trends, and innovative frameworks. It highlights challenges and headways within the field of global health; in particular, transforming public health approaches in developing countries. Empirical studies, case studies, reviews and discussion notes are used to highlight the important contemporary health issues in various settings. This is an important book as it provides insights into the growing and interesting field of international public health, health systems strengthening, health information technology, and healthcare services research among others, for the developing world. Preparing and constantly updating human resources for health (HRH) with contemporary skills and techniques requires well developed resources and frameworks, within which they can work. Sowing such seeds also requires knowledge sharing and transfer within the healthcare community. This book will aid that transfer of contemporary knowledge to the ever-burgeoning health care services needs of communities, by providing reflective highlights for past and present challenges, particularly within the developing nations.

The overall objective and mission of this book is to provide population health experts, public health technocrats, students, clinicians, and healthcare organizations with an overview of practical tools that aid our understanding of how to tackle contemporary public health challenges within the healthcare systems in the developing world. The team of authors of this book is composed of professionals and
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researchers working in the field of international public health and its related disciplines (particularly in the developing countries) including medical and biomedical sciences, health information systems, health administrative sciences, health sciences, pharmacy, nursing, medicine, communication sciences, management, and policy and public health tertiary education.

HOW THIS BOOK IS ORGANISED

The book is organised into collections of six overall themes: 1) primary health care; 2) health systems; 3) global health; 4) patient safety; 5) reproductive health; and 6) E-health. To help the reader understand the relevant relationships that constitute transforming the health of communities, these themes comprise of a total of fourteen interrelated chapters that examine issues addressing health systems improvement in developing nations, patient care, mental health outcome in post emergencies, evidence based decision-making in health care, antibiotic overuse and effects, communicable and non-communicable diseases in developing nations, access to health care services, information system in health care, and vector borne diseases.

The chapters are organized into areas of common themes. The first theme examines primary health care in developing nations. It encompasses of two detailed chapters, chapter one has several streams of different case studies and topics. This is chapter one of the book; seeking solutions to the challenges in health services in developing nations: Primary Health Care revisited which provides very detailed insights into the role of primary health care and extrapolates its importance in health services in developing countries. This chapter covers an in-depth range of the issues, challenges, successes and opportunities that the primary health care sector has enabled populations of many developing countries. Two compelling case studies are highlighted in this chapter focusing on primary health care in Cuba and Thailand, which provide meaningful insights into the implementation of primary health care in two countries with very different circumstances and experiences.

The second chapter in this theme, The Role of Primary Health Care in Prevention, Early Detection and Control of Cancer, highlights an analysis of the role of primary healthcare in the prevention, early detection, and control of cancer in developing nations, in particular Saudi Arabia. The chapter specifically aims to provide meaningful insights into the role primary health plays in the control of cancer in a developing country that has considerable health resources.

The second theme, health systems, comprises of four chapters. Chapter 3 discusses the approaches to evidence based management and decision-making in healthcare organizations. Providing important approaches and contemporary techniques for health managers in developing nations. Chapter 4: Nomadic clinics as innovative concept that transforms health care services in mobile population: Case example from North Eastern Kenya, extrapolates the pertinent issues in providing health care to mobile populations. The chapter highlights the approaches used to reach such vulnerable population in developing nations. Chapter 5: Harnessing Non Communicable Diseases: Lessons for health professionals in the Middle Eastern Gulf focuses on the current challenges and some success on the ever burgeoning non-communicable diseases. The author examines the current situation in the gulf region and the possible solutions to the challenges. Chapter 6: Barriers to accessing healthcare services in developing nations: Reflective lessons for the Gulf Cooperation Council Countries. Health utilization and access is one of the crucial issues facing many populations in developing nations. The authors take us through the challenges of providing accessible services in some key example countries – the gulf region.
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The third theme, global health, comprises of three chapters. Chapter 7: Improving the effects of global health initiatives through FOMENT: An Enhancement to the Diffusion Process. This chapter discusses the Focus, Organization, Management, Environment, Network, and Technology (FOMENT) process as a strategy and a tool to enhance the impact and efficiency of the diffusion process within the public health systems and change agencies, especially in developing countries. Chapter 8: Water and Sanitation: A case study for policy implication to reaching global development goals in developing nations. The chapter identifies the important role policies and legislations, in developing countries play in the management of groundwater, through analysis of documents and excerpts from focus group participant contributions are presented. Chapter 9: Community Development and Faith-based organizations: lessons for global health. This chapter provides testimonies from the field. The theme here is about role faith-based organized have played in resource poor settings. The challenges of setting boundaries between contesting interest – faith and professional humanitarianism are highlighted. The chapter gives reflective lessons from the field.

The fourth theme examines patient safety in developing nations. It comprises of two chapters. Chapter 10: Antimicrobial Consumption and Multidrug resistant organisms in intensive care units: Lessons from Saudi Arabia. The appropriate clinical use of antimicrobial agents is of particular concern in many developing countries. The chapter takes Saudi Arabia as an important case study. Chapter 11: Detection of Pre-analytical Laboratory Testing Errors: Leads and Lessons for patient safety. This chapter also examines the critical issues that underpin patient safety, laboratory errors and in particular the pre-analytical errors. It further provides some recommendations of ways to overcome such critical domains.

The fifth theme of the book examines the impact of natural disasters on the mental health and wellbeing of women on post emergencies in developing countries. It comprises of one major chapter. Chapter 12: Reproductive and mental health during natural disaster: Implications and issues for women in developing nations – A case example. With the ever-increasing number of natural disasters, it is important to understand the impact on the mental health and wellbeing of survivors, especially women. This chapter provides important discussions surrounding the challenges of mental health outcome for women affected by natural disasters in developing nations.

The sixth and the last theme explore the role of electronic health technology in the development of population health in resource poor settings. It comprises of two chapters. Chapter 13: The role and use of teledmedicine by physicians in developing countries: A case report from Saudi Arabia. As technological advance leaps into the developing world, teledmedicine is expected to significantly grow in many developing countries. This chapter aims to examine the acceptability of technology to clinicians in developing nations. Chapter 14: Information Systems in Healthcare with a special focus on developing countries. The chapter is a review of Information Systems (IS) in healthcare in developing countries. It highlights the challenges of information systems in healthcare by providing a relevant review of the information system theory in healthcare. The last chapter is chapter fifteen; Interactive Visualizations as ‘Decision Support Tools’ in Developing Nations: The Case of Vector-Borne Diseases examines decision tools for vector-borne diseases.