Introduction to Volume 1: The scope of public health

The scope of public health is vast and ever widening. Volume 1 of the Oxford Textbook of Public Health provides a conceptual framework encompassing the scope of public health as it strives to cope with the enormous challenges of the twenty-first century.

Despite remarkable health gains achieved in the world over the past century, the increasing complexity of human interactions has considerably expanded public health concerns. Traditional public health approaches to epidemics have had to be redefined in the face of new global threats like severe acute respiratory syndrome (SARS) and avian influenza, as well as other microbial diseases with new biosecurity implications. The growing burden of noncommunicable diseases, the severe consequences of global warming, the repercussions of globalization, and the serious social dislocations resulting from rapid urbanization and armed conflicts have escalated the challenges to public health.

The persistence of HIV/AIDS, malaria, and tuberculosis, particularly among low- and middle-income countries, has spurred public health practitioners to utilize innovations in the fields of vaccinology, genomics, and proteomics to implement realistic solutions through sound health policies and systems strengthening, community engagement, and intersectoral partnerships. A major concern of public health is the growing recognition of the social determinants of health and the wide health disparities among nations, income groups, genders, and social classes. This concern for social justice and equity requires that public health professionals incorporate strategies from the social sciences, ethics, and human rights in the collective and organized pursuit of health for all.

Volume 1 maps the breadth of public health through four updated sections: the history and development of public health, determinants of health and disease, public health policies, and public health law and ethics. Chapter 1.1 provides an overarching framework for public health and defines an expanded list of 13 functions covering the range of technology, social sciences, and politics. The next three chapters (Chapters 1.2–1.4) describe how public health has evolved in the context of rich and poor countries as well as those in economic transition, and the unique roles of the public and private sectors in addressing inequities in these different settings.

Critical to the development of interventions for public health problems is a thorough understanding of the structural and intermediary determinants of social inequities, coupled with a participative approach to address these determinants through intersectoral policies (Chapter 2.2). Globalization can potentially aggravate health inequities; hence, the economic, social, and political processes associated with these transnational interactions must be recognized and effectively managed (Chapter 2.1). The behavioural determinants, once viewed as the dominant factors for health and disease, are discussed within an ecological frame, thus providing a more integrated view of the complex interplay of behaviour with biologic, economic, political, and environmental factors (Chapter 2.3). In Chapters 2.4–2.7, important biologic determinants are elaborated. Genetic risks, which are increasingly being understood through the Human Genome Project, as well as genome-based technologies, have a growing potential to yield important public health interventions in the future, but there are also complex behavioural, economic, and ethical concerns that must be considered (Chapter 2.4). Almost taken for granted by the developed world, but still critically inadequate in many parts of the globe, are safe water, basic sanitation, food security, and good nutrition. Chapters 2.5 and 2.6 discuss the health risks and challenges associated with their absence, shortage, or—in the case of obesity—oversupply. Chapter 2.7 reviews the major infectious diseases, which remain significant causes of ill health globally and which present new threats with the emergence of new microbial pathogens and increasing antimicrobial resistance. The risks to human health and survival posed by a variety of environmental exposures, greenhouse gas accumulation, and ozone depletion, among others, are described in Chapter 2.8 and require urgent collaborative action.

There is ample evidence to demonstrate the value of providing essential packages through quality health services in reducing risks and improving health (Chapter 2.9). By assessing the burden of disease and underlying risk factors (Chapter 2.10), it is possible to prioritize the essential health care packages and interventions that will be most cost-effective and equitable in a given population.

An understanding of health determinants must translate into effective policies and strategies for action. Many countries have responded by addressing these root causes systemically and developing mechanisms to reduce health inequities (Chapter 3.1). With few exceptions, many high-income countries have used knowledge generated from biomedical and public health research to protect and improve public health (Chapter 3.2). In contrast, multiple factors such as poor governance, inadequate financing of health care, the distortion of national health priorities vis-à-vis global health
initiatives, and an inadequate evidence base for decision-making are common features of the policy environment in low- and middle-income countries (Chapter 3.3). Of paramount importance to effective policy-making is strong public health leadership at all levels, characterized by strategic thinking in addressing public health problems and the ability to engage and mobilize multiple stakeholders in the process (Chapter 3.4).

In the last section of Volume 1, Chapter 4.1 affirms the commitment of public health to achieve the 'highest attainable standard of health' and offers a rights-based approach to health (Chapter 4.1). This human right is elaborated in the context of public health legislation (Chapter 4.2) and international public health instruments (Chapter 4.3). Finally, the evolution of principles and guidelines of public health and research ethics are discussed in Chapter 4.4, with particular attention given to the principle of social justice as it relates to public health practice and research.

The extensive responsibilities and dynamic scope of public health described in this volume dictate that public health professionals employ a wide range of disciplines, seek and build intersectoral partnerships and international coalitions, and, most importantly, engage communities to achieve the goals of improving population health and promoting equity for all.