Textbook of International Health: Global Health in a Dynamic World

By Anne-Emanuelle Birn, Yogan Pillay, and Timothy H. Holtz
3rd ed, 735 pp, $64.50
Oxford, United Kingdom, Oxford University Press, 2009

The third edition of this well-respected textbook supports the new editors' aim to provide a greater focus on climate change, environmental influences, and underlying preconditions, as well as critical perspectives on the political economy of health, including health under crisis conditions. It compares well with Essentials of Global Health (Sudbury Jones & Bartlett [2008]) in terms of breadth of coverage and with Understanding Global Health (McGraw-Hill [2007]), in terms of detail. Its readability benefits from plenty of tables, boxes, lists of key questions, and learning points, all uniformly pertinent.

The early chapters present historical and epidemiologic data on global health with fluidity and a willingness to confidently tackle controversial political themes without overt ideological bias. These chapters were central to previous editions, and their general structure and content will likely be familiar to many readers.

Chapter 8, “Health Under Crisis,” deals with the effects of natural disasters such as hurricanes, floods, tsunamis, and earthquakes. Readers learn that Cuba's civil defense system encourages universal community participation in several storm preparation exercises every year; this preparation has prevented many deaths that the United Nations has praised the model. Similarly illustrative is the point made that a crucial part of the successful response to the 2005 earthquake in Pakistan involved staffing relief clinics with women doctors and nurses so that injured women could obtain care.

Chapter 9, “Globalization, Trade, Work, and Health,” pulls no punches in encouraging communities around the world to champion health interests against neoliberalism, worker exploitation, and unilateral structural adjustment and deregulation decisions made by accountable global institutions such as the World Trade Organization, World Bank, and the International Monetary Fund. It highlights the health problems in the maquiladora industrial belt along the US-Mexico border as a prime example of the problems created by “free trade zones.”

The chapter also discusses the civil society victory against the Multilateral Agreement on Investment from the Organisation for Economic Co-operation and Development in the 1990s but fails to mention how many bilateral and regional trade agreements have included investor-state dispute settlement procedures that allow foreign corporations to sue domestic governments—for instance, when investment by these corporations has been impeded by necessary public health legislation. It also does not mention the use of nonviolation nullification of benefits provisions in trade agreements to facilitate lobbying of government officials to inhibit public health legislation that allegedly interferes with vaguely defined expected benefits without contravening any provision in the deal. Furthermore, it does not mention how bilateral trade agreements have been used to undermine scientific cost-effectiveness–based reimbursement systems for pharmaceuticals.

Chapter 10, “Health and the Environment,” begins by noting how the World Health Organization in 2006 estimated that one-fourth of all diseases and deaths were caused by modifiable environmental factors. Details are provided on the effects of nuclear waste, pesticides, industrial pollutants, lack of clean water, and toxic metals on degrading food supply and human health. The chapter includes an introduction to the health consequences of climate change that emphasizes 5 relatively uncontroversial mechanisms whereby a 2°C increase in atmospheric temperature may stall or reverse human development: (1) reduced agricultural production and food security, (2) water stress and water insecurity, (3) rising sea levels and exposure to climate disasters, (4) degradation of ecosystems and biodiversity, and (5) decreased human health. The chapter discusses the concept of “ecological footprint” in terms of the total area of biologically productive land required to provide resources for human energy, water, food, material, and service requirements.

However, chapter 10 also might have focused on the equally important concept of daily per capita power consumption, which for a citizen of a developed nation is about 125 kWh/d (= 250 kWh/d for a citizen of the United States) and currently totals about 450 EJ/y globally. The chapter could have highlighted to a greater extent that potentially usable solar energy consumed at approximately 1 kW/m² (3.9 × 10^6 EJ/y) would dwarf the estimated global 2050 primary energy consumption of 500 to 1000 EJ. The discussion of alternate energy sources does not mention the most promising—using nanotechnology and solar energy to split water into hydrogen fuel, which when burned produces clean water (to this end, $122 million was recently allocated to the Joint Center for Artificial Photosynthesis at Caltech).

Chapter 11, “Health Economics and the Economics of Health,” cites how in 2006 alone, 2400 cases of health fraud totaling $60 billion were investigated in the United States. It discusses how the concept of global public goods includes knowledge from research, safety, and cost-effectiveness regulation and health systems but requires guaranteed streams of funding from sources such as taxes on international financial transactions and on multinational corporate earnings.

Chapter 14, “Doing International Health,” brings the book to a close by discussing what constitutes success in international health. Jeffrey Sachs argues that health is increasing and transforming foreign aid. Other candidates mentioned are increased health services, trained health workers, improved focus on health in trade relations, decreased levels of...
premature death and disability, reduction of social inequality, and establishing ethics- and human rights–screening procedures for investment in public health and environmentally damaging industries. The authors reiterate one of their major themes, ie, that international health work can be conceptualized at 3 levels: individual actions and motivations, organizational missions and interventions, and the logic and structures of world order. The authors then conclude by expressing the hope that the international health community can express a functional world health conscience.

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CANCER MORTALITY AND MORBIDITY PATTERNS IN THE U.S. POPULATION: AN INTERDISCIPLINARY APPROACH
By Kenneth G. Manton, Igor Akushevich, and Julia Kravchenko
455 pp, $74.95

This book, written by a group of authors from various disciplines, is an example of and a call for interdisciplinary research and innovation in biomedical studies. It goes far beyond a discussion of statistics in relation to biology and health, and it also covers far more than just US patterns, although these topics are at its core.

Much of the book reads like a novel, especially the opening chapters on the history and prehistory of human cancer and the evolution and description of cancer models—all covered in a manner richer and more flexible than is typical in epidemiologic textbooks. The book uses new models and unique human population data, and it relates or couples mechanisms at the cellular and population levels over time and age. Accordingly, it is the first book of its kind to describe interdisciplinary approaches to biomedical studies. It views analyses of biomedical data sets, such as cancer morbidity and mortality, from a different and richer perspective than classic epidemiologic overviews that use mathematical modeling methods, including methods providing insights into probable mechanisms of human carcinogenesis.

Cancer Mortality and Morbidity Patterns in the U.S. Population will be useful for many specialists, eg, epidemiologists, oncologists, medical researchers, biologists, public health and environmental specialists, and specialists in mathematical modeling. Medical, biology, and mathematics undergraduates and postgraduates will find practical information here, as will researchers in basic and applied sciences attempting to extend their studies in collaboration with other specialists in interdisciplinary teams. Biomedical specialists might be interested in historical aspects of cancer treatment and prevention, mechanisms of carcinogenesis, cancer risk factors, cancer mortality and morbidity trends in the United States during a period of 50 years or more, specific features of cancer types, and recent approaches to cancer prevention. Readers interested in analytic aspects can find information on existing and innovative approaches used in interdisciplinary studies, such as stochastic process models, microsimulation of interventions, and empirical Bayes approaches.

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KUCERS’ THE USE OF ANTIBIOTICS
6th ed, 2 vols, 3000 pp, $732.52
London, United Kingdom, Hodder Education/ASM Press, 2010

The proper use of antibiotics has never been more important than today, when antibiotic-resistant organisms limit the ability to treat, and treatment with antibiotics leads to antibiotic resistance, superinfections including Clostridium difficile colitis, and toxicities such as acute kidney injury, metabolic disorders, and myelosuppression. This textbook is an admirable reference source on these problems, which are part of the daily practice of every infectious diseases consultant.

This comprehensive textbook of antibiotics—a 2-volume, 200-plus author work with 238 chapters and more than 3000 pages—is a tour de force. Little is missed in its coverage of antibiotics, antifungals, antiparasitics, and antimicrobials, including extensive coverage of human immunodeficiency virus (HIV) medicine. The textbook is named after the former single author, Alvis Kucers, who for many years directed medical services at the Fairfield Hospital in Victoria, Australia, where he mentored many and provided national leadership in the management of HIV/AIDS in the early years of the epidemic.

Many of the editors and authors are practicing clinicians; as a result, the book is well oriented to clinical practice despite being divided into chapters by antimicrobial agent rather than by microorganism or clinical syndrome. The sixth edition (the last edition was 1997) is quite up to date, with many references from 2008 and 2009. Even the newest agents are well covered, including cefaroline, telavancin, posaconazole, nitazoxanide, and hepatitis C protease and polymerase inhibitors.