

Essential Readings in Infectious Disease Epidemiology. Manya Magnus. Jones and Bartlett Publishers, Massachusetts, USA. 2009. XV + 289 pp.

Recent cases of swine flu in Pune and other parts of the country, with the possibility of these spiraling into major outbreaks or epidemics not only created a lot of public anxiety but also brought to fore the lack of adequate number of public health professionals specialized in infectious diseases in the country. The start of the ICMR School of Public Health in 2005 with the Master's degree in Applied Epidemiology, which is modelled on the lines of EIS-CDC, and recently a similar programme at the National Institute of Communicable Diseases (NICD) are steps in the right direction. However, looking at the global scenario of outbreaks due to emerging and re-emerging infectious diseases more efforts need to be undertaken in this direction. It is in this spirit that a recent book on infectious disease epidemiology has been reviewed.

The book has been organized into three sections. Section I (Historical moments) has five parts. Part I (Public health, passion, persistence) is a tribute to Semmelweis (1818–1965), a Hungarian obstetrician who laid the foundations of epidemiology. He is also at the forefront of introducing the concept of hand washing in medicine, a move that was initially resisted by his colleagues but later accepted by the medical establishment in Hungary. After the death of Semmelweis, it was only when Pasteur's work on germ theory was known that the wider implications of Semmelweis's work to public health were recognized. Part II (Science and letters) shows how not only scientists and public health practitioners tried to understand the etiology of infectious disease but even artists, philosophers and

writers have animatedly participated in these endeavours. Daniel De Foe, known for having written the now classic *Robinson Crusoe*, is also credited for writing one of the most enduring accounts of plague (caused by the bacterium *Yersinia pestis*) that struck Europe in the 16th century.

The nightmare of plague, which struck India in 1994, is still vivid in the memories of most of us. Part III (What about the flu?) highlights the intrigues of influenza viruses. The pandemic (1918–19) of 'Spanish flu' killed 50 million people worldwide. Many questions about this pandemic that may have implication in tackling the current H1N1 (swine flu) pandemic still remain unanswered: What was the biological basis for 1918 pandemic virus pathogenicity? Why did 1918 virus kill so many healthy young adults? Could a 1918 like pandemic appear again? An editorial note here brings out the resistance (10.2%, 84 of the 824 samples tested) to antiviral drug oseltamivir among H1N1 viruses. All resistant strains share the same genetic mutation. He also argues that the clinical effectiveness of the vaccines currently used cannot be predicted accurately. Consequently, surveillance and prevention remain the major cornerstones in the control of H1N1 pandemic. Part IV (Public health progress) brings out the important factors that have significantly contributed to the control of infectious disease, which were a significant cause of mortality and morbidity in the past. These include: development of quantitative techniques of epidemiology, surveillance of morbidity and mortality data including establishment and role of CDC (Centers for Disease Control, Atlanta), and the start of training schools for public health. Part V (Ethics) is a very interesting account of ethical practices to be followed during any kind of research involving human subjects, so that the rights of the participants are protected. In this regard, I quote from the book – doing so is everybody's job: from data entry clerk to nurse to data manager to principal investigator.

Section II (Descriptive Epidemiology: Outbreak Investigations) has four parts. Part VI (Descriptive epidemiology and outbreak investigations) gives a full-fledged perspective of outbreak investigations and framework for evaluating public health surveillance systems for early detection of outbreaks as recom-

mended by the CDC working group. This would be extremely useful to those involved in studying the emergence and re-emergence of pathogenic microbes. Part VII (Investigating HIV/AIDS) is a brilliant account of forerunners of the discovery of HIV/AIDS: *Pneumocystis carinii* pneumonia (PCP), Kaposi's sarcoma and PCP among homosexual men, and follow up on these diseases. These initial epidemiological studies embarked the world on a new epidemic, a new pandemic with an enormous impact on individual and public health. The world has still not recovered from this jolt. Part VIII (Readily transmissible and emerging infections: identification, surveillance and control) is an account of the outbreak investigation of recent pandemics – worldwide outbreak of severe acute respiratory syndrome (SARS), internet enabled multiregion surveillance of rapidly emerging diseases, extensively drug-resistant tuberculosis (X-MDR TB), and the hospital and community acquired methicillin-resistant *Staphylococcus aureus* (MRSA). There is no doubt that we will have to continue to grapple with these in coming years. In Part IX (Food-borne diseases) it was not surprising for me to see the food-borne diseases in the elite category of SARS, X-MDR and MRSA. The sheer enormity, more than 200 food-borne illnesses transmitted by viruses, bacteria, parasites, toxins, fungi and prions has been estimated to cause 6–81 million illnesses each year. Another important fact is that two decades ago,



An artist's description of a plague doctor.

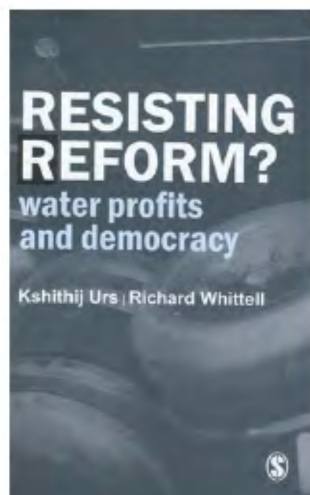
many of the pathogens of greatest concern (*E. coli* O157: H7, *Listeria monocytogenes* and *Cyclospora cayentanensis*) were not even recognized as a cause of food-borne illness. In this regard, the role of FoodNet (food-borne diseases active surveillance network) started by CDC in 1996 is laudable.

Section III (Analytic Methods) has seven parts. Part X (Analytic methods) is an account of STROBE (Strengthening the Reporting of Observational Studies in Epidemiology). It gives a checklist of 22 items for conducting cohort studies, case-control studies and cross-sectional studies. This is a monumental work and would go a long way in standardizing the practice of epidemiology. In view of its all-pervading importance, this chapter is also available on the websites of *Annals of Internal Medicine* (www.annals.org) and *Epidemiology* and *PLoS Medicine*. For details on further use, it would be advisable to access STROBE website (www.strobe-statement.org). The remaining parts of this section deal with different approaches to examine bias in infectious disease epidemiology, assessing surveillance methods, understanding results and using computers to improve validity of data collection. Much of these have been discussed using actual data published in the literature.

This book is an absorbing account of various facets of infectious disease epidemiology including critical concepts and real-world examples. The language is extremely simple and lucid. There is no jargon usually associated with epidemiology texts. Exercises given at the end would be very helpful in knowing the skills developed and understanding of the subject by the readers. This book is a must for medical microbiologists, epidemiologists, public health professionals and infectious disease experts.

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Resisting Reforms? Water Profits and Democracy. Kshithij Urs and Richard Whittell. SAGE Publication India Pvt Ltd, B1/I-1 Mohan Cooperative Industrial Area, Mathura Road, New Delhi 110 044. 2009. ISBN: 9788178298740 (HB). x + 170 pp. Price: Rs 395.

Among all the natural resources water has always stayed on the forefront of concerns about its scarcity. The situation is acutely alarming. With the increasing urbanization the pressure on drinking water sources has considerably amplified. There is more than sufficient water on the planet, but its use-patterns dictate the availability as well as scarcity. Several agencies and intellectuals including civil society organizations indicated numerous alternatives to resolve the problem with rare successes. On one hand there are suggestions to reform the situation through economically pricing water or privatizing the resource and on the other there is a strong group arguing for the state responsibility to provide safe drinking water. The book under review is an attempt to demystify the reform arguments and advocate the case of water as a public good. It is focused on Karnataka particularly on Bangalore, let alone those remote water starved areas of the state where even today clean tap water is a distant dream. Even though the book is written by and argued for the urban people, it provides general discussions on: (a) access to water as a fundamental right of people, (b) responsibility of the state to supply of water free of cost and (c) privatization of water supply having disastrous implication for urban poor and violates the fundamental rights given in the constitution of India to its citizens. It

is not a well researched book, but a document written by an activist for the activists with a straight jacket pre-decided opinion.

The book is organized in six poetically titled chapters. The authors begin with 'Reforms for sale' and at the outset make clear intentions of their analysis. No reader is expected to look for any impartial analysis and the subjectivity is clear from the first sentence. First, the authors set before the readers the canvass of their arguments. They have focused on the recent attempts of policy makers to convert water as a market commodity and handing over the responsibility of water supply to some private agencies (multinationals). Objectively understood, any reforms in organization and delivery mechanism of a resource provide only one of the solutions, where, the state responsibility is not a solution but it perpetuates the existing problems. It is quite another issue to see if any reform measure is equitable in its content or otherwise and that challenges the need for fresh thinking. Equity can be accommodated and fundamentally ensured by tailoring the reform measure, but the authors keep that option out of their discussions. In the process of arguments the authors disparage the justification given for private sector participation in water supply and management. They argue the case seemingly logically, leaving wide gaps in their sequencing of arguments and generalizations; it is a poor research. They explain the implications of management of water supply by multinational private companies (on the basis of cost recovery and profit incentives) on the poor of the cities, assuming probably that the poor will be made to pay, and if yes the poor will also comply to do so.

Under the title 'Neutering democracy', the authors bring out how different organizations (state departments, semi-government organizations, NGOs, International Institutions such as World Bank, DFID, AusAid, UASaid and private companies) involved in different phases of development projects bypass the democratic processes. They mean here the public participation in decision-making, planning and implementation by those actively engaged (local people and people's representatives) in the projects. The authors call this an attempt to sterilize the democracy by these institutions – a piece of class ignorance by the authors – who feign ignorance of the functioning of the Indian administrative and demo-