

Pandemics—A Scientific Guide for Use in Varied ClassesDOI: <http://dx.doi.org/10.1128/jmbe.v17i2.1046>

Review of: *Pandemics: What Everyone Needs to Know*; Peter C. Doherty; (2013). Oxford University Press, New York, NY. 272 pages.

Would you like to be invited on a scientific journey to learn about pandemics with Peter C. Doherty, the co-recipient of the 1996 Nobel Prize in Physiology or Medicine? If you replied “yes,” you will enjoy this book. Doherty developed a comprehensive, well-written, easy-to-understand informational guide about historical pandemics. His book contains an introduction, 12 topic chapters, a conclusion chapter, a functional index, a list of abbreviations, and a list of numerous resources for further investigation by the reader (e.g., books, articles, and websites).

Doherty sets the stage for his discussions about pandemics as follows: “pandemics can cause panics, and the sense of imminent danger may be more universally contagious than any virus or bacterium. A lethal virus spreading rapidly and inexorably is, to most of us, a truly terrifying thought, so much so that it pushes other nightmare scenarios that generally hover at the edges of our consciousness (terminal cancer, leukemia, incipient dementia, stroke, quadriplegia, cardiomyopathy, and so on) into deep background.” Doherty not only describes pandemics and provides guidelines for appropriate actions in case a threat emerges, he also puts pandemics into perspective with regard to individual and community life.

In the first chapter, Doherty discusses some key aspects of infection and immunity. He provides answers to numerous questions such as: What is the difference between a virus and a bacterium? Why is it important to distinguish viruses from bacteria when discussing pandemics? Are colds and flu caused by hundreds of viruses? Would you describe mAbs [monoclonal antibodies] as drugs or vaccines? I found this chapter to be written such that students of every level can understand and enjoy it. In Chapter 2, he provides the reader with definitions of basic terms such as “pandemic” and “epidemic,” as well as technical terms such as “zoonoses” and “epizootic.” He also discusses whether or not all pandemics involve infection and whether plants play a role in pandemics. This chapter is helpful for beginners and advanced students

alike as Doherty not only assigns precise meanings to these terms but also emphasizes that “they are also [sometimes] used in much less precise and overlapping ways.”

In the following chapters, Doherty turns his attention to various infectious diseases that occur beyond the endemic level. For example, he talks about SARS (Chapters 3) and tuberculosis (Chapter 4). Furthermore, there are chapters that focus on virus vectors (Chapter 6), single-host human pathogens (Chapter 7), and the economics of pandemics (economic concerns and damage) in relation to the human-animal equation (Chapter 10). He also includes a chapter on bioterrorism (Chapter 11). In the twelfth chapter, various ways of protecting humanity from pandemics are discussed. More specifically, Doherty looks at individual measures, family protection, and issues associated with traveling and provides information about clinical and public health services. The conclusion (Chapter 13) is noteworthy, as he not only summarizes key learning points in the form of a bulleted list, but also adds valuable commentary on issues that may arise in current discussion about global infectious diseases.

In my opinion, Doherty’s book is a fascinating read about a topic that has been given much attention recently. His scientific discussions contribute to our understanding of infectious diseases of international concern. The question-and-answer format and the in-depth discussions of numerous infectious diseases make this publication an excellent textbook for students of infectious diseases on any education level in fields such as biology, microbiology, epidemiology, and immunology. I believe this book is also quite useful for in-depth discussions about pandemics during infectious disease topics seminars.

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• Use of antivirals during a pandemic should take into account the epidemiology of the pandemic, in particular the groups most seriously affected. • Timing of the use of antivirals during a pandemic should be guided by data derived from local surveillance. • Mass prophylaxis of children to "control" a pandemic is not recommended. • Information about the performance characteristics, side effects, and costs of the available agents should be used to select the specific antiviral drugs to be used for prophylaxis or treatment. There are important differences in pharmacokinetics, side effects, antiviral activity, and costs of the available agents. A guide for scientific writing. Bachelor Earth Sciences. Utrecht University April 2015. • These four elements are the main ingredients for a scientific report and are preceded by an abstract and followed by conclusions. They also usually form the main headings for the successive sections of a scientific report or paper. The IMRAD structure reflects in a way the process of scientific discovery through the empirical cycle. • The reason for its wide use and acceptance is that the IMRAD method provides a clear and logical structure that helps the reader to browse through articles more quickly to find relevant information. Furthermore, papers and reports written according to the IMRAD method contain all required information to evaluate the quality of the research without unnecessary details.