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BOOK REVIEW

Book Review: Infectious Disease Epidemiology

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Infectious Disease Epidemiology is a practical and concise guide which not only provides basic information and concepts used in epidemiology, but also the remarkable advances in this discipline as a result of progress in molecular biology, genomics, statistics and computing.

This handbook is divided into two sections. Section 1 is composed of seventeen chapters which summarize the basic methods and principles used for the study of infectious disease epidemiology. On the other hand, Section 2 discusses the most important infectious diseases worldwide, grouped in ten separate chapters according to their way of transmission, with an emphasis on their ability to cause morbidity and mortality and/or to spread to the general population.

In this book, some chapters with basic epidemiologic information such as outbreak investigations, study design, clinical trials, clinical epidemiology and basic statistical methods for application in epidemiology have been included. However, the novelty of its content is based on the introduction of new chapters on molecular epidemiology, spatial epidemiology, transmission-dynamic models of infectious diseases and economic analysis of interventions against infectious diseases. These chapters have been written concisely by prestigious experts in these disciplines, providing novel concepts on the progress of epidemiology in the recent years. The chapter about molecular epidemiology is particularly interesting, summarizing the tools and techniques currently available as well as describing the role of molecular epidemiology in public health.

The Spatial epidemiology chapter introduces new epidemiological approaches and describes how analyses of spatial phenomena by means of recent developments in statistics and computing may contribute to our understanding of infectious disease epidemiology and control. The objective of this chapter is to show the readers the most important concepts in spatial epidemiology

On the other hand, the chapter about transmission-dynamic models is another refreshing issue describing the models used to help understand the patterns that emerge from the complex interactions between pathogens and hosts. These models are capable of explaining the risk of infection related to the prevalence of infectious individuals. Moreover, as it can be seen in chapter 17, the risk of infection has some consequences to the spread of infection and the cost-effectiveness of interventions.

Meanwhile, Section 2 analyses some of the most important transmissible infectious diseases that affect the susceptible population. In general, these chapters describe fundamental aspects of these infections such as clinical features, mechanisms of transmission, diagnosis, treatment and prevention. In each chapter, this general description is followed by new information aimed at bringing our knowledge of these illnesses up-to-date.

From this section, chapters 20 and 21 are the most noteworthy. Chapter 20 details some vector-borne infections with a high incidence and prevalence worldwide such as malaria, dengue, visceral leishmaniasis, and which may cause disease

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to inhabitants and travelers in these endemic areas. The increasing number of visitors in these areas makes this information highly relevant and emphasizes the need to put protection measures into practice against these infections.

Meanwhile, chapter 21 summarizes the impact in terms of morbidity and mortality of health-care associated infections around the world. The increase of the older population, medical and surgical procedures, instrumentalization and longer stay in intensive care units has led to a considerable rise of these kind of infections. Therefore, a comprehensive control is essential to reduce their occurrence and the associated cost.

In summary, this book may serve to students and epidemiologists as a reference guide which provides basic and new concepts in infectious epidemiology. This is a book which is easy to read and set out in comprehensive but clear and precise scientific language.

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