

a valuable resource for students and practitioners, this book is worthy of a hard cover.

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Chronic Obstructive Pulmonary Disease: A Forgotten Killer. Carol Midgley, editor. *Introducing Health Sciences: A Case Study Approach* series. Basiro Davey, series editor. Oxford UK: Oxford University Press/The Open University. 2008. Soft cover, illustrated, 108 pages, with DVD, \$37.50.

This book is one of 7 separate presentations that compose the text material for an Open University first-year introductory course in an undergraduate program in health sciences. As the foundation for a distance-education course, its DVD and Web site provide multimedia learning materials and activities. Some resources and activities are only accessible by enrolled Open University students, but this does not detract from the text's ability to stand alone.

The book is professionally presented, with liberal use of color photographs, charts, tables, and boxes. Interspersed through the text are "life snippets" from 2 women with chronic obstructive pulmonary disease (COPD), which personalize the text's academic points. The book's intended audience is novices; it introduces many global issues associated with disease in general and COPD in specific. The book is very easy to read and uses a global approach, both geographically and theoretically, which is refreshing. It assumes a very low entering knowledge base and discusses such concepts as scientific objectivity, statistical probability, and how chemical bonds hold atoms together to form simple and complex molecules.

One peculiarity that manifests the book's European roots is its use of the terms "respiratory nurse" and "clinical specialist respiratory physiotherapist," rather than the more familiar North American terms "respiratory therapist" and "pulmonary function technician." It also uses British spellings such as "humour."

Chapter 1 presents a very basic introduction to COPD and its morbidity and mortality. A couple of very interesting tables are provided. One compares the 10 leading health risks in the world, Europe, and Africa, based on 2000 data from the World

Health Organization. Europe has a predictable list of risks, similar to that in the United States. Health risks worldwide and in Africa are quite different; the number 1 and 2 health risks are being underweight and unsafe sex (the latter barely made the European list, at number 10). The other noteworthy table lists the leading causes of mortality globally in 2002 and the predicted leading causes in 2030.

The DVD has a fascinating 13-minute video that focuses on the personal experiences of individuals coping with COPD. It provides insight on the plethora of factors that contribute to COPD sufferers' limitations during physical and social activities. A common reason given for not attending social functions was the fear of having a coughing attack that would draw disapproval in a formal setting or unwanted attention in a casual setting.

Given the overall tenor of the book, Chapter 2 provides a surprisingly thorough discussion of the worldwide prevalence of COPD and which populations are most likely to contract it. Various studies are referenced, and the Latin American COPD prevalence study (PLATINO, <http://www.platino-alat.org>) is used to make several points. There is a revealing discussion on the role of sex in COPD development, and the contrast between developed nations and developing nations in the pattern of COPD. A theme throughout the book is that tobacco is the most important cause of COPD worldwide. Globally, approximately 15% of COPD may be due to occupational exposure. Although workplace health and safety are increasingly being addressed by a growing number of countries, smoky and dusty work environments continue to have a global impact. Another rarity in western society is home exposure to smoke from biomass fuels such as dung and crop residues, which, globally, remain an important cause of respiratory disorders, including COPD.

Chapter 3 focuses on respiratory anatomy and physiology. Considerable space is spent on such basic concepts as molecules, chemical bonds, balancing of chemical equations, and gas physics. The chapter ends with a brief description of the oxygen cascade. The majority of the 15-min multimedia presentation provides little that is not found in the text, but in a different format. The presentation ends on a high note, with innovative magnetic-resonance-imaging lung studies with inhaled magnetized hyperpolarized helium 3, in a healthy volun-

teer and in a patient with COPD. The images clearly show the marked contrast in gas movement and distribution between the normal lungs and those with COPD. There is also an excellent artificially colored electron microscopy image of respiratory epithelium, which shows cilia, mucus-producing cells, sputum, and a dust speck.

Chapter 4 describes the mechanisms involved in transporting oxygen from the lungs to the tissues via the cardiovascular system. The crucial relationship between hemoglobin and oxygen transport is well discussed in simple terms. A nice presentation is made on the impact of carbon monoxide poisoning on oxygen transport. Other topics discussed include cor pulmonale and the effects of hypoxia on cognitive function. Staying at the introductory level, the authors indicate that it would benefit a patient with COPD to breathe 100% oxygen rather than air for most of the day. This simplification is justified perhaps at the introductory level, but it does gloss over some important clinical considerations, such as that patients with COPD generally respond readily to small increases in $F_{I_{O_2}}$, and that when initiating oxygen therapy we must monitor for oxygen-induced hypoventilation, though that is fairly rare. I give this example because it represents the book's overall approach. The chapter ends with a brief discussion of the relationship between CO_2 and blood pH and how in COPD pulmonary dysfunction may lead to a low blood pH that can interfere with many body processes.

Chapter 5 gives an overview of the immune system and how chronic irritation affects the lungs. It presents how large numbers of phagocytic cells migrate to the lungs, where they release large amounts of elastase, which overwhelm the body's natural defenses and break down healthy lung tissue. This leads to loss of alveoli, as in emphysema, and chronic airway changes associated with bronchitis. The presentation is consistent with the target novice audience. There are 2 great figures in this chapter. One is a color electron microscopy image of a particle being engulfed by a phagocyte. The second is photographs of normal lungs, alveoli, and an airway juxtapositioned with pictures of severely emphysematous lungs, alveoli, and an airway with chronic bronchitis.

Chapter 6 focuses on the diagnosis of COPD. The text proposes that there are 2 methods of diagnosis. The first is chest ra-

diograph or computed tomography. An excellent figure shows a chest radiograph of a patient with advanced bullous disease, beside a remarkable computed tomogram of a similar patient with severe emphysema. The second diagnosis method is lung-function assessment via spirometry and measurement of gas transfer, diffusing capacity, and arterial blood gases. Although published in 2008, the book refers back to the 2005 and earlier Global Initiative for Chronic Obstructive Lung Disease (GOLD, <http://www.goldcopd.com>) guidelines for staging, including "Stage 0: At Risk," which was dropped in the 2006 and 2007 versions of the GOLD guidelines.

Chapter 7 looks at COPD management. It begins with the socioeconomic and psychological costs, followed by COPD treatment. A table nicely summarizes COPD treatment, and the text elaborates on measures that can improve the quality and duration of life. There is a nice section on prevention, but it lacks the clarity and profundity of the GOLD guidelines, which loudly proclaim the centrality of COPD prevention.

Chapter 8 provides a 3-page perspective on what it means to have COPD in a world that still largely overlooks its impact. To make the point it includes 2 newspaper excerpts: one on the battle against cancer; the other on the formation of a support group for COPD patients. Although cancer and COPD kill roughly the same number of citizens in the United Kingdom each year, the tone of the pieces is dramatically different. The book concludes with an upbeat look at cutting-edge research on COPD treatment.

This book provides a very easy read, with some interesting side trails and elaborations. It meets its objective of providing an insightful overview of COPD and its impact on individuals and society. A non-health-professional or a first-year university student would find this book a useful introduction to COPD. For the clinician with more than cursory knowledge of pulmonary anatomy, physiology and pathophysiology, this book would at best provide light reading.

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Infection Prevention and Control: Theory and Practice for Healthcare Professionals. Debbie Weston. West Sussex, United Kingdom: John Wiley & Sons. 2008. Soft cover, illustrated, 348 pages, \$60.

This book is quite timely, given the increased media and public scrutiny on health-care-associated infections. The foreword sets the stage as it informs the reader that in developed nations 5–10% of in-patients get health-care-associated infections, which have enormous costs to health-care systems. Many of these infections are preventable with basic infection-control principles.

The book is organized into 2 parts. The first part has 8 chapters and gives a historical perspective on infection control by looking at past epidemics, and then discusses the modern problem of health-care-associated infections in more detail. It is important to note that the book focuses primarily on the United Kingdom's health-care system, and readers who are not familiar with that system may have difficulty following some of the text. However, the basic principles are the same for all readers, so the book does not lose its relevance.

Chapter 2 provides a basic overview of microbiology and is a good review for those with limited exposure to this topic. Notably missing is a description of fungal organisms, particularly *Candida* species, which are important causes of health-care-associated infections. Chapters 3 and 4 provide an adequate review of the collection and processing of specimens used to diagnose infections, but a few statements are not quite correct. For instance, regarding blood-culture collection, the author states that circulating bacteria in the blood are at their highest level when the patient is febrile, but we now know that is not the case: bacteria level is highest just prior to fever onset. Also, the author states that *Staphylococcus aureus* can be a contaminant in blood cultures, which is generally considered untrue. With regard to specimen processing there is no mention of automated systems for identifying or susceptibility-testing bacteria, which are now used in many microbiology laboratories. Also, *Clostridium difficile* infection is now typically diagnosed via toxin assay or cytopathic effect in cell culture, rather than via culture, as stated in the book. Chapter 5 gives a basic review of immunology, again

mostly for people without a prior background in this subject.

Chapter 6 outlines the basic infection-control measures, including hand hygiene, personal protective equipment, appropriate handling of sharps, and cleaning of equipment and the environment.

Chapter 7 gives an excellent review of the types of health-care-associated infections and appropriately emphasizes the importance of distinguishing between colonization and infection, particularly with regard to catheter-associated urinary tract infections. However, with regard to central-venous-catheter-related bloodstream infections, a review of the mechanisms of catheter contamination would be helpful.

Chapter 8 deftly tackles the increasing problem of antimicrobial resistance and provides an excellent summary table of the classes of antibiotics. One misstatement is that combination antimicrobial therapy can help combat resistance; that is generally considered untrue for routine bacterial infections, and is more important for specific organisms, such as the mycobacteria. Also there is no mention of antimicrobial stewardship, which is increasingly used to prevent development of resistance.

The second part of the book consists of 12 chapters, each dedicated to health-care-associated infections caused by a specific organism, including methicillin-resistant *Staphylococcus aureus*, *Mycobacterium tuberculosis*, *Clostridium difficile*, group A *Streptococcus*, meningococcus, norovirus, bacterial enteric pathogens, blood-borne viruses, severe acute respiratory syndrome (SARS) virus, influenza, prions, and *Legionella*. Each chapter gives an overview of the epidemiology and diagnosis of the disease caused by the organism, as well the specific infection-control measures required when the disease is suspected or diagnosed. For the most part these chapters are excellent, and in the cases of SARS, influenza, and prion diseases, give very interesting historical perspectives as well.

Despite the outstanding information provided in the second part of the book, there are a few noteworthy problems. First, the chapter on tuberculosis states that only individuals with multidrug-resistant tuberculosis should be placed in negative-pressure isolation rooms, and that only certain health-care personnel need to wear masks when caring for patients with drug-sensitive tuberculosis. However, it is generally accepted that all patients with known or suspected