

**ABC of COPD.** Graeme P Currie, editor. Malden, Massachusetts: Blackwell. 2007. Soft cover, illustrated, 39 pages, \$31.95.

As often stated by the various contributors to this book, chronic obstructive pulmonary disease (COPD) is a major health problem that is often underdiagnosed. The focus of this short, concise review of all aspects of COPD is therefore directed to primary care providers, in an attempt to improve diagnosis and management and ultimately improve quality of life for patients with this disease. The book is divided into 12 chapters, each 3 pages in length. Every page has a column of text alongside a column of graphs, photographs, or tables of supporting data. At the end of each chapter, in lieu of a footnoted bibliography, there are 3 to 7 references for further reading.

The first chapter defines the disease and discusses the epidemiology and risk factors associated with it. The 2004 United Kingdom National Institute for Clinical Excellence definition of COPD is presented, as is a differential diagnosis of other conditions associated with airflow obstruction that do not necessarily fall under the umbrella of COPD. Statistics on prevalence and mortality are presented, with the caveat that the data suffer from underdiagnosis and differences in definition. The data on morbidity and economic impact come predominantly from United Kingdom studies, which may limit generalizability for readers from other countries. The section on risk factors is very brief and would benefit from a bibliography for physicians interested in the studies discussed.

Chapter 2 discusses the pathology, pathogenesis, and pathophysiology of COPD. The table that lists the pathological changes of COPD is succinct and quite good. The section on pathogenesis is excellent; it presents the various cells and mediators responsible for the inflammatory response in the lung in a brief but very understandable fashion. Finally, the section on pathophysiology covers the basics but is almost too basic and seems superficial. This is the only chapter that does not give any references for further reading.

The third chapter deals with diagnosis of COPD. History and physical examination

are covered briefly, with the acknowledgment of the limitations of the physical examination. Two of the tables are very useful: one compares and contrasts COPD to asthma; the other presents a differential diagnosis for COPD, including suggestive features and further investigations to help differentiate the various other diseases. The section on spirometry is well done and includes a table of differences in the definitions of COPD severity in various guidelines.

Chapters 4 through 10 deal with all aspects of COPD management. The first of these chapters reviews smoking cessation. Emphasis is placed on the importance of brief interventions in the clinic setting, and there is some scripting of approaches. Behavior-change strategies are reviewed. Some informative tables on the adverse reactions and contraindications to pharmacologic intervention are also presented.

Chapter 5 presents a miscellany of non-pharmacologic management and touches on pulmonary rehabilitation, immunizations, mental health issues, and surgery, all within one very brief chapter. A substantial portion of the chapter discusses pulmonary rehabilitation, including education, exercise training, and nutrition. In the end, however, the authors do conclude that the benefits to quality of life decline with time and there is little or no improvement in medical care utilization, progression of disease, or survival. The section on surgical options is informative and would benefit from more elaboration.

Chapters 6 and 7 review drug treatment for COPD. Chapter 6 is a solid review of short-acting and long-acting bronchodilators, including benefits and adverse effects. The risks, benefits, and unclear role of inhaled corticosteroids are also presented here. A summary of inhaled treatments, along with a treatment algorithm in table form, is quite useful for a quick review. Chapter 7 continues on with oral treatments less commonly used, including theophylline, oral steroids, and mucolytics. Despite the brevity of each section, the possible benefits and important adverse effects are well covered. This chapter does a good job of reviewing drugs that may have marginal benefit to patients with severe COPD and who have maximized

the inhaler treatment outlined in Chapter 6.

Chapter 8 discusses the benefits of oxygen therapy, both in the exacerbation setting and as chronic treatment for hypoxia. This section is particularly informative, especially in providing useful guidelines for oxygen use during air travel. It would have been helpful if the  $P_{aO_2}$  values were expressed in kPa and mm Hg. The last section revisits inhalers, including metered-dose and dry-powder inhalers and nebulizers. Instructions for patients regarding proper technique for metered-dose inhalers, with and without spacers, are outlined step by step. It would have been useful to have a similar outline of instructions for nebulizer use and maintenance for physicians to review with patients periodically. From an information-flow perspective, the section on inhalers would seem to fit better at the end of Chapter 6, which reviews appropriate treatment with inhalers.

Chapter 9 describes the in-patient treatment of COPD exacerbation. The strength of this chapter is in the tables, which include differential diagnosis of increased dyspnea in a patient with COPD and a list of possible bacterial, viral, and pollutant causes of exacerbation. In the section on recovery there is a subsection regarding assisted hospital discharge. These appear to be multidisciplinary programs that enable a patient with a nonsevere COPD exacerbation to be discharged immediately from the hospital, with studies that support cost savings without higher mortality. Further elaboration of what components are included in a successful assisted discharge care package would have been very helpful.

Chapter 10 covers ventilatory support; the majority of the section discusses noninvasive ventilation. This is one of the most useful and informative chapters in the book. It presents an excellent review of noninvasive ventilation, including indications, mechanics, logistics, and monitoring. Tables provide a quick reference for the benefits of and contraindications to noninvasive ventilation. Invasive mechanical ventilation is covered in 2 paragraphs that mainly focus on the indications to move from noninvasive to invasive mechanical ventilation and

the poorer survival prognosis of patients who require invasive ventilation.

Chapter 11 is a quick overview of long-term care of COPD patients in a primary care setting and a very brief look at palliative care. Again emphasizing the need for early detection, 2 simple questionnaires are presented: one to help evaluate the risk of COPD, and the other to help differentiate COPD and asthma. The second questionnaire is somewhat confusing, because you get more points toward the diagnosis of COPD if you answer "no" to the question "Breathing problems in the past 3 years?" References to studies that support the reliability and validity of these questionnaires would be very useful. Other tables are more helpful in providing a dyspnea score and suggested checklists of issues to review for initial and subsequent clinic visits. As COPD is a chronic and progressive illness, this section would have benefited from providing more information on how to assess quality of life and details on coping strategies to help patients as their disease progresses. The most disappointing section was on palliative care. Elaboration on distracting techniques, coping strategies for both patients and caregivers, as well as end-of-life issues would have been very useful to help primary care providers during this very difficult period of patient care.

The book ends with a chapter on future treatments. Approaching COPD from a variety of angles, including improvement in bronchodilators, better medications for smoking cessation, and treating the inflammatory mediators, the chapter provides a nice overview of treatments for physicians to keep an eye out for in the future.

This concise primer on COPD would be very valuable for respiratory therapists, nurses, medical students, and residents in their early years of training. It can be read in a single sitting and covers all the basics of COPD. The further-reading lists at the ends of the chapters are useful in pointing out important consensus guidelines available to providers. Practicing primary care physicians might find it useful for a quick review of the basics, with perhaps more gleaned from review of pathogenesis, oxygen therapy, and noninvasive ventilation. However, it would not likely be a book that primary care providers would return to over and over, because of the very basic nature of many of the chapters and the lack of a

bibliography to further review cited studies.

**Nancy K Sugg MD MPH**

Division of General Internal Medicine  
Department of Medicine  
Harborview Medical Center  
University of Washington  
Seattle, Washington

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**Chronic Obstructive Pulmonary Disease.**

Robert A Stockley, Stephen I Rennard, Klaus Rabe, and Bartolome Celli, editors. Malden, Massachusetts: Blackwell. 2007. Hard cover, illustrated, 892 pages, \$264.95.

This is a comprehensive book on chronic obstructive pulmonary disease (COPD) and is edited by 4 acknowledged international scholars. The editors' objective is that the text "will provide both background and an update necessary for physicians/scientists/health care workers with an interest in COPD." The editors embarked upon a project to meet the need for a comprehensive textbook that covered normal and abnormal physiology, the latter being particularly related to patients with COPD, and to address a spectrum from basic to clinical science that was missing. The original editors, Rennard and Stockley, asked 2 world-renowned clinician translational scientists, Celli and Rabe, to join them in the task. The book succeeds quite well in accomplishing its mission. The book is organized into 7 major sections, each of which is subdivided into multiple chapters. The sections include "Physiology," "COPD and Allied Conditions," "Host Defenses and Inflammation," "Pathogenesis," "Clinical Considerations and Complications," "Current and Future Treatment," and "Pharmacotherapy: Developing Therapies." This effort does effectively achieve its goal of an excellent blend of both the basic science and the clinical science of COPD. The book is 892 pages, with a comprehensive index.

The reference list is quite good, although there appears to have been a delay in the publication of the book, since some of the more recent articles that are important to this field were not included. The chapters on pharmacoepidemiology of COPD (Chapter 65) and Guidelines (Chapter 67) do include more recent references. Figures and tables are also extensively used and are quite effective. Although in the preface the edi-

tors talk about the book providing background and an update for physicians/scientists/health care workers who have an interest in COPD, in my view, clinicians, nurses, and respiratory caregivers such as respiratory therapists will benefit the most.

The first section, on pulmonary physiology, is well done by expert writers, and the information will be particularly useful to respiratory clinicians and therapists. Basic structural/function relationships, muscle physiology, circulation, and gas exchange are intertwined with the physiology of breathlessness, exercise limitations, and cardiopulmonary exercise testing in COPD, in cough, as well as sleep.

Section 2 contains valuable information on a number of relevant allied conditions such as cystic fibrosis, bronchiectasis, obliterative bronchiolitis, and asthma. The relationship of these problems to COPD is explored. These sections are practical and timely. Included in this section are particularly interesting and useful chapters to clinicians, including the natural history of COPD, clinical presentation and evaluation, and monitoring and outcomes.

Section 3 is devoted to host defenses and inflammation, and the section discusses timely issues such as mucociliary clearance, mucosal immunity, pulmonary surfactant, and the role of macrophages, eosinophils, neutrophils, lymphocytes, cytokines, leukotrienes, and mesenchymal cells. In addition, there are chapters on airway epithelial defense, repair and regeneration, cigarette smoking, emphysema, and lung endothelium.

Section 4 is on pathogenesis, with thorough chapters on lung development, animal models, proteinases and COPD, oxidants, cigarette-smoke-induced disease, air pollution, viruses, bacteria, and genetic factors. In addition, interesting chapters on alpha-1 antitrypsin deficiency, body weight, and lung connective tissue are included.

Section 5 will be particularly useful to respiratory therapists, nurses, and clinicians, for it is practical, with chapters on aerosols and delivery systems, gastroesophageal reflux, upper-airway disease, pulmonary embolism, lung cancer, infection, mechanical ventilation, and comorbidity. These chapters also quite successfully achieve their goals and are very well written.

Section 6 is somewhat of a mix of current and future treatments, with chapters devoted to primary care, pulmonary rehabilitation, social support, long-term mechanical