The book is divided into 4 parts: “The Basics,” “Disorders of the Upper Airway,” “Disorders of the Lower Airway,” and “Non-Airway Disorders That Present With Respiratory Symptoms.” The first part reviews the general approach to patients with respiratory disorders; it covers basic anatomy, physiology, and pulmonary function testing. The second part reviews common upper-respiratory problems such as allergic rhinitis, sinusitis, pharyngitis, and laryngitis. Part 3 examines lower-airway problems, including group, asthma, chronic obstructive pulmonary disease, cough, sarcoidosis, and bronchiolitis. The final part includes chapters on sleep apnea, obesity, vocal-cord dysfunction, pulmonary embolus, hemoptysis, and gastroesophageal reflux.

Each chapter includes, in this order: a table of contents; a case presentation that introduces the chapter; key clinical questions and learning objectives; the epidemiology, pathophysiology, differential diagnosis, diagnosis, and treatment; and future research directions of the particular respiratory disorder. This chapter conformity makes the book easy to read, and the fact that the author co-wrote every chapter gives the book an evenness and consistency. The subsections on pathophysiology and future directions are particularly well-written and interesting. They will provide medical students, residents, and seasoned physicians with the necessary background to understand respiratory disease processes and what the future holds. That said, I believe busy primary care practitioners will be primarily interested in what treatments work today.

There are a few problems with the book. Most importantly, there is no mention of levels of evidence when the authors make treatment recommendations. The authors failed to tell which treatment recommendations are based on expert opinion and which are based on analysis of randomized controlled studies. Although some chapters reference Cochrane reviews as the source of recommendations, other chapters rely on dated articles. For instance, in the section on allergy avoidance strategies (page 40) the recommendation to use impermeable bed coverings is based on a 1992 article. Recent evidence suggests that that method is ineffective.1 When evidence-based recommendations are included, they are often buried in the text alongside expert-opinion-based recommendations.

There are other problems: the pediatric and adult asthma chapters present overlap-
tive questions in the chapter on pulmonary critical care:

Q: What are the major causes of arterial hypoxemia?
A: Hypoventilation, ventilation-perfusion inequality, shunt, low FIO2, and diffusion impairment.

Q: How does one assess oxygenation?
A: Skin color, pulse oximetry and blood gas analysis.

Q: How does one assess ventilation?
A: End-tidal CO2 monitoring and blood gas analysis.

Q: What is a tension pneumothorax?
A: An injury to the lung allowing intrapleural air to collect without escaping via the chest wall...

Furthermore, the intentional lack of explanation will often force the reader to go elsewhere to learn about the subject. In addition, these rapid-fire questions bear little resemblance to the actual questions on the board examination. There are a number of overly simple true/false question, such as:

T/F: The more risk factors a patient has, the greater the chances of developing a DVT?
T/F: Only patients with known risk factors develop DVTs [deep vein thrombosis].

Many questions are repeated, occasionally even verbatim.

There is a chapter that intentionally includes more board-type case presentations with multiple-choice questions. However, even this section has too many true/false questions to emulate a board examination. Overall, this strict adherence to a rapid-fire question-and-answer format is one of the principle weaknesses of the book. As a board review, some of the answers are “too easy.” And, as a general pulmonary medicine review for the rotating student, the answers often lack adequate explanation to serve as a primary review.

For the most part, the answers seem to be reliable, but occasionally opinion is stated as fact, and a few of the answers are outdated. The authors did a good job of sticking to safe, time-honored topics.

One other deficit is the almost complete absence of radiographs. Though the book contains textual descriptions of the radiographic and histologic appearance of various diseases, there is only one chest radiograph image in the entire text, and there are no histology or gross pathology images.

In conclusion, this book does succeed in being an affordable, quick read that covers a breadth of pulmonary topics. However, it suffers from being insufficiently broad or thorough for board review. It would function a bit better as a general review for the non-board-taker, but the rapid-fire question-and-answer format is better for assessing knowledge than for a primary review of it. The text further suffers from the near-complete absence of exemplary images. I would not recommend this text as a pulmonary board review and would caution the general pulmonary reviewer that it could serve as an adjunct but not a primary review source.

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This book approaches the understanding of the respiratory system in an integrated fashion, which clearly surpasses the rote teaching method (ie, memorization). The text describes the normal respiratory anatomy and physiology, and integrates the concepts discussed with lung disorders throughout. Additionally, the pathophysiology, diagnosis, and treatment are discussed. This integrative format is an ideal adjunct for problem-based, evidence-based, systems-based, or more traditional curricula.

The book has 2 parts. Part I, “Basic Medical Science of the Respiratory System,” consists of 7 chapters, and Part II, “Clinical Assessment,” has 3 chapters. At the end of each chapter are several questions designed to reinforce the concepts discussed. Unfortunately, there is no bibliography, although several of the figures are referenced. I found the index useful and referred to it many times during my review. The book’s color format is based on various shades of blue, which at first seemed pleasant, but some of the figures would have been clearer with additional colors.

Chapters 1 through 3 provide a cursory overview of lung anatomy and physiology, with figures, tables, and diagrams that are appropriate, not overdone, and easy to follow. Chapter 1 gives an abbreviated overview of the respiratory system that prepares the reader for what lies ahead in the succeeding chapters. Chapters 2 and 3 describe the anatomy and physiology of the upper and lower respiratory tracts, respectively, and their embryonic development. Chapter 2 also discusses disorders of the nose, pharynx, and larynx, whereas Chapter 3 describes defense mechanisms (at the physical, humoral, and cellular levels), some of the lung’s metabolic functions, and fetal pulmonary circulation. The figures and tables support the text and are appropriate.

Chapters 4 and 5 address ventilation, gas exchange, perfusion, and gas transport. Particularly helpful, again, are the illustrations and tables, which visually reinforce concepts that can be difficult to grasp from just the written word. Chapter 4 provides a good description of dead-space characteristics, the distinction between minute and alveolar ventilation, and the definitions of various lung volumes. One minor discrepancy I noted was that the text uses the term “Vt,” for tidal volume, but most of the figures and tables use “TV.” The description of pulmonary mechanics, especially the section on the compliance and elastic properties of the lung, is well written. The explanation and illustrations of airway resistance and work of breathing are well done. Some of the figures in Chapter 4 require close scrutiny because of their use of blue shading. In Chapter 5 the principles of hydrostatic, colloid osmotic, and colloid oncotic pressure are presented in relation to fluid balance in the lung. The concepts of filtration and reabsorption (ie, fluid dynamics) are not easily explained, but the author’s attempt is noteworthy in this challenging subject. A couple of the figures are somewhat complex and may require a little extra attention, although they are important to understanding the concepts presented. Ventilation-perfusion relationships are addressed, along with consequences of their mismatch. Oxygen and carbon dioxide transport are described, which provides a springboard to the discussion of the oxyhemoglobin dissociation curve and the various factors that shift the curve (eg, temperature, pH, and 2,3-diphosphoglycerate). The various forms of hemoglobin and their effects on the oxyhemoglobin dissociation curve are also addressed.