

process, which typically includes discussion of the differential diagnosis, clinical features that suggest a specific cause, pathophysiologic basis, diagnostic testing, assessment of the effect of therapy, and pitfalls and common mistakes in the assessment and treatment of the problem in question. Not all chapters have all of those sections, and additional sections appear in certain chapters. Each chapter has several boxes and tables that summarize key information.

The cases are grouped by the clinical setting in which the case would present. Part 2 is "Common Presentations in the Out-patient Setting" (20 chapters), which describes presenting signs and symptoms frequently encountered in a pulmonary out-patient clinic. Part 3, "Common Problems in the Non-ICU Patient," (5 chapters) deals with most of the clinical problems respiratory therapists see in the acute hospital, non-intensive-care-unit (ICU) setting. Part 4, "Common Problems in the ICU Adult" (10 chapters) focuses less on presenting signs and symptoms and more on common problems encountered in managing pulmonary patients in the ICU setting that invite the use of problem solving skills.

The book was clearly intended for respiratory therapists, respiratory therapy students, physicians in training, and pulmonary nurses. The last 15 chapters (Parts 3 and 4) would be particularly useful to respiratory therapists who work more often in the acute care setting.

Not unexpectedly, this first edition does have its share of minor glitches. For example, Chapter 1 presents a substantial amount of information (on pages 28 and 29) on acid-base physiology but fails to summarize that information in a table or box. There are a few places where, when you read the text carefully—as one should when attempting to learn about such a complex topic as critical thinking—you are left with a big "Huh? What does that mean?" This confusion is sometimes related to the intensity of the subject matter, but sometimes it is the result of awkward wording. For example, on page 29, after appropriately stating, "... the well-prepared respiratory care clinician should have an excellent working knowledge of the chest x-ray," the authors then state, "Careful interpretation of the film enhances critical diagnostic thinking by enhancing diagnostic skills and by improving the appreciation of the response to therapy."

Another example is on page 210. The discussion of the pitfall of confusing vocal

cord dysfunction and asthma ends with the statement, "A high degree of suspicion should be present if the patient has little difficulty completing full sentences, can hold his or her breath, can abolish the laryngeal-induced sounds during a panting maneuver or cough and with sedation and anesthesia despite the severe respiratory distress. Laryngeal sounds may also decrease with switching from mouth to nose breathing and during talking." Although there is certainly some factual and probably useful information in that passage, it is confusingly written.

A third example occurs on page 31, where the author begins a good summary point but ends it awkwardly: "Thus, although anemia does not generally affect the P_{aO_2} , anemia can compromise the oxygen-carrying capacity of the blood and must be considered in patients with evidence of perfusion impairment." What *does* that mean?

Factual errors are fairly rare in this book but they do crop up, such as on page 33 where the author refers to the Gram-stain and culture and sensitivity as being helpful at identifying the specific cause of pneumonias for *protozoa or viruses*? Another example is in the arterial blood gas report on page 240, where the bicarbonate value reported as 28 mEq/L is not possible with the stated pH of 7.45 and P_{aCO_2} of 30 mm Hg. The actual bicarbonate value, as determined by the Henderson-Hasselbach equation, for that combination of pH and P_{aCO_2} must be approximately 21 mEq/L. And on page 241 Box 22-1, lists "atelectasis" under the common infectious causes of fever and new pulmonary infiltrate. Atelectasis would be appropriately classified in Table 22-1 as a noninfectious cause.

Overall the book is well written and the very complex subject matter is presented in a manner that makes it digestible. The tables and boxes are for the most part very well done and help organize the material. In particular the tables in most of the chapters interpreting signs and symptoms are very handy for helping to sort through the various possible diagnoses by reviewing the possible causes and suggestive clinical features. Of concern, however, was that Table 25-1, "Interpreting Signs and Symptoms of Atelectasis," included no signs or symptoms (ie, suggestive clinical features). Was the table mislabeled?

In summary, **Critical Diagnostic Thinking in Respiratory Care: A Case-Based Approach** goes a good distance toward

achieving its stated goal of "clarifying the process of clinical reasoning." The book presents problems to solve and takes the reader through the process of solving them. The reader will gain insight into the process followed by experienced clinicians as they organize and collect data, integrate it into one or more working hypotheses and then refine those plausible explanations for the clinical problem through a process of critical diagnostic reasoning into one or more diagnoses. This book should serve its purpose of aiding those who want to become more analytical in their reasoning and decision making, and ultimately, as the authors suggest, that should translate into more effective care for patients.

Melvin A Welch Jr MPH RRT-NPS

Health Science Department
Santa Monica College
Santa Monica, California

Cross-Examination: The Comprehensive Guide for Experts. Steven Babitsky Esq and James J Mangraviti Jr Esq. Falmouth, Massachusetts: Seak. 2003. Hard cover, 414 pages, \$99.95.

Most physicians avoid medical-legal work like the plague. The thoughts of being humiliated by a smarmy attorney or testifying against another physician are enough to make most physicians flee to the comfort and familiarity of their practices.

Over the past 20 years I have done a modest amount of medical-legal expert work—primarily because my colleagues fit the description above! This work has ranged from independent medical examinations (mostly in occupational medicine) to malpractice litigation to adventure or high-altitude accident liability. In reflection I have found the work stimulating and challenging and have also felt that it has, in part, been a responsibility to our profession.

I have always followed these rules: (1) never become involved in a case unless you do feel like an expert, (2) "call them like you see them" and never get swayed by what the attorney wants to hear, (3) don't do cases just for the plaintiff or defendant sides (don't get a reputation as a "hired gun"). Also, I have often been asked by plaintiffs' counsels to look at a case to see if it has merit, which has in numerous cases allowed me to say, "No, this is too 'gray.' I don't think there is enough here to drag a family through the cost and anguish of a prolonged proceeding." That approach is a

service to the encumbered system. Finally, I have found that more than 95% of the attorneys I've encountered to be smart, educated on the topic, honest, and enjoyable to work with! In my experience, the image of "the lawyer" has not been true. On the other hand, if you are an expert, you can turn the tables on a poorly prepared attorney and take some solace in that.

One can also pick up a lot of tricks along the way. In that light I found **Cross-Examination: The Comprehensive Guide for Experts** to be a superb and extensive handbook for physicians entertaining the idea of becoming involved in medical-legal expert testimony. Despite its length and some redundancy I found myself reading enthusiastically through the numerous examples of question-and-answer scenarios one might encounter, which include tips on how to respond well, honestly, and clearly, as well as how to be "one-up" on the attorneys.

The organization helps the reader to see issues from both the physician's and the lawyer's sides. Chapters 2 and 3 describe how an attorney prepares and how a physician should prepare for depositions and trials. Chapter 4 describes the juror's perception of what is going on and the techniques to communicate with the jury through one's testimony. The remaining chapters (5–10) further delineate the legal limits of the process, tactics to defeat the counsel's cross-examination, the handling of trick questions, and techniques to become a "dangerous" or "bulletproof" expert witness. Each chapter has an executive summary at the beginning and an extensive example of an actual trial question-and-answer session, with evaluation of poor and excellent responses. The book teaches one to listen very carefully to every word of the questions, to respond clearly and accurately, and to avoid being cornered. Most importantly there are excellent tips on how to avoid trick questions and in some cases turn the tables, leaving the attorney standing empty in front of the judge and jury. This book is very helpful for experts who come from either the academic or practice setting, both of whom can be extremely valuable witnesses.

Despite its length and boring façade (looks like it belongs in some legal library) this book is a must for physicians—both novice and seasoned—in this arena of medical-legal work. Reading this book should diminish one's fear of the challenge in an

unfamiliar setting. My hat is off to the authors.

Robert B Schoene MD
Department of Medicine
University of California
San Diego Medical Center
San Diego, California

Principles of Pulmonary Medicine, 4th edition. Steven E Weinberger MD. Philadelphia: Saunders. 2004. Soft cover, illustrated, 403 pages, \$44.95.

Now in its 4th edition, **Principles of Pulmonary Medicine** provides an excellent introduction to the fundamental mechanisms, manifestations, and management of respiratory diseases. The book is written with pre-clinical medical students in mind, but its readability and clinical scope make it suitable for others seeking a basic overview of pulmonary medicine. It lacks the depth and clinical emphasis to be of substantial use to seasoned practitioners and those in the advanced stages of their training. The newest edition retains the strengths of previous versions, with concise, stimulating, and comprehensible prose combined with a generous number of figures and tables. In addition, it offers improved graphics, more radiographic images, and updates on advances in basic sciences, diagnostic tools, and treatment options.

The opening chapter briefly reviews the fundamentals of respiratory anatomy, lung mechanics, and the physiology of ventilation, circulation, diffusion, gas transport, and gas exchange. The following 2 chapters provide an overview of the presentation and evaluation of patients suffering pulmonary disease. For the most part the remainder of the book is divided into sections on airway disease, parenchymal disease, pulmonary vascular disease, neuromuscular disease, infectious disease, and respiratory failure. Each section begins with an overview of the pertinent anatomy and physiology, and the chapters discuss specific respiratory diseases in detail. There are also chapters on pleural disease, mediastinal disease, and lung cancer. The appendixes review analysis of pulmonary function tests and arterial blood gases.

It is particularly important for an introductory textbook to correlate basic pathophysiology with the radiologic, pathologic, and clinical manifestations of individual diseases, and **Principles of Pulmonary Medicine** fulfills that expectation admirably. Throughout the

book the author sequentially discusses the etiology and pathogenesis, pathology, pathophysiology, clinical features, diagnosis, and treatment of each disease. Consistent use of that format takes the reader seamlessly from pathophysiology to clinical presentation to diagnosis to treatment. It also allows the reader to anticipate the flow of material and easily retrieve specific information.

The discussion of respiratory failure and pulmonary function tests are not as cogently presented. Topics central to respiratory failure are scattered throughout the book (ventilation-perfusion relationships and abnormalities of gas exchange in Chapter 1, arterial blood gases in Chapter 3 and Appendix 3, respiratory control in Chapter 17, disorders of the respiratory pump in Chapter 19, and the pathophysiology and treatment of respiratory failure in Chapters 27, 28, and 29). Alternative and additional figures of the 2-alveolus model illustrating ventilation-perfusion mismatch, shunt, and hypoventilation would be helpful. The causes of hypoxemia and the response (or lack thereof) to interventions to improve gas exchange, such as increased alveolar ventilation and supplemental oxygen, are arguably the most difficult concepts for students to understand and merit more detailed explanation. The discussion of pulmonary function tests would benefit from less emphasis on midexpiratory flow rates and a more integrated discussion of how spirometry, lung volumes, and diffusion capacity are used to differentiate common obstructive, parenchymal, neuromuscular, and pulmonary vascular diseases.

This 4th edition provides a thorough update on pulmonary medicine, with major developments incorporated into each topic. For instance, the chapter on pulmonary embolism describes the expanding role of contrast computed tomography angiography and introduces the use of D-dimers in diagnosis. Also covered are the impact of highly active antiretroviral therapy on respiratory infections in individuals with acquired immune deficiency syndrome and the use of positron emission tomography for lung cancer diagnosis and staging. In addition to incorporating new information on pathogenesis, pathology, and therapy, the chapter on asthma includes a new table that outlines asthma severity and corresponding treatment. Reference to prominent ongoing areas of research, such as lung cancer screening with chest computed tomography, is made in an appropriately succinct, neutral