

Foundations of Respiratory Care. Kenneth A Wyka MSc RRT, Paul J Mathews PhD RRT, and William F Clark PhD RRT. Albany, New York: Delmar Thomson Learning. 2002. Hard cover, illustrated, 1,032 pages, \$75.95.

It seems limiting to present a review of a book of this size and scope in so short a format. **Foundations of Respiratory Care**, a lengthy epistle, represents a Herculean effort on the part of the 3 primary authors and the 29 contributing authors. The preface describes this weighty volume—a hefty 5 pounds—as being “born of the need for a straightforward, well-organized text that could be easily read. . . .” “. . . written by respiratory therapists for respiratory therapists.” Though the latter statement suggests the target audience is the respiratory therapist *practitioner*, I’m sure schools should consider this as an overall text for respiratory care programs and compare it to its market rivals, *Egan’s Fundamentals of Respiratory Care*¹ and *Respiratory Care: Principles and Practice*.² I think it will give them a run for their money. Some challengers have come and gone on the market, but I think **Foundations of Respiratory Care** is here to stay.

The book is divided into 6 main sections: scope of practice, applied sciences, essential diagnostics, essential therapeutics, levels of delivery, and assorted applications. The sections comprise 33 chapters. The authors have, in my opinion, achieved their goal of providing an easy-to-read, straightforward, very practical, and well-organized text.

In addition to the primary audience of respiratory therapists and students, some areas of this text would also be of value to anyone entering health care. In particular the chapters that address reimbursement issues and the changing health care scene are very informative. For example, the chapter on adult critical care includes clinical practice guidelines, therapist-driven protocols, critical care paths, and quality improvement activities. The chapter on subacute care addresses reimbursement, the prospective payment system, and the resource-utilization group case-mix classification system as im-

portant subjects. The management chapter covers similar topics. These are issues important to all health care workers. The authors of all these chapters did a nice job of defining complex issues in a very simple fashion.

The first 2 chapters set the tone for the rest of the book with enlightening and interesting reading. These chapters discuss the history and scope of respiratory care and legal and ethical practice. I especially enjoyed the comment in the first chapter about Huang Ti (2697 BC), who outlined the tenets of traditional Chinese medicine in his text, which directs “the physician to maintain the patient’s health rather than to cure disease, holding that to wait for an illness to occur would be like forging weapons after the battle has begun or digging the well after you are already thirsty.” This sounds like good advice for our current cost-containment-conscious medical reimbursement organizations.

The second chapter has some valuable information on legal concepts, which is presented in a very simple manner, considering the complexity of the legal system. My favorite scientific concept presented was that of “Occam’s razor,” which is the principle of scientific parsimony, based on the principle stated by William of Occam (14th century): “The assumptions introduced to explain a thing must not be multiplied beyond necessity.” Sounds like good advice for all of us.

The remaining chapters cover the expected areas of physics, chemistry, microbiology, cardiopulmonary anatomy and physiology, pathophysiology of the cardiopulmonary system, cardiopulmonary pharmacology, patient assessment and history-taking, radiography for respiratory care, basic modes of care and critical care application of mechanical ventilation and so on.

What distinguishes this text is its use of 3 tools, which the authors title “Age-Specific Competency,” “Best Practice,” and “Spotlight On. . .” features. I found these to be very practical tips with direct clinical application. An example was “Age-Specific Competency on Dry Powder Inhalers,” which is in the chapter on humidity and

aerosol therapy. It explains that a dry powder inhaler cannot be used by a child under the age of 6, because correct use of the device requires an inspiratory flow > 50 L/m. An example of a “Best Practice – Safety Practices” in the chapter on radiology discusses the use of protective lead aprons and shields and radiation dose meters and when these are appropriate for respiratory therapists. A “Spotlight On New and Emerging Techniques” in the chapter on blood gases reviews the use of ultrasound devices for noninvasive measurement of blood sugar and the potential use of indwelling arterial blood gas sensors. The latter 3 samples are only intended to show the type of material that appears in these features, which I found very valuable, useful, and (almost without exception) informative and very interesting.

The text’s overall layout is well done, with a variety of educational approaches, which helps make the large double-column pages less daunting.

The majority of illustrations and photographs are of excellent quality. Particularly noteworthy are those in the chapters on: cardiopulmonary anatomy and physiology; history, assessment, and documentation; radiology; pulmonary hygiene and chest physical therapy; and protecting the patient and health care provider. The other chapters, with the exception of the chapter on airways, were also well illustrated. One stellar example is the radiology chapter, which provides computed tomography scans side-by-side with chest radiographs. This feature helps illustrate the usefulness of computed tomography and makes it easy to understand. Though it is hard to produce good quality radiographic images on paper, the selection of radiographs that show fairly obvious abnormalities helped overcome this difficulty. I’m particularly curious to find out what caused the diffuse edema on chest radiograph in the attempted suicide by hanging (case study 10–1). The answer is not within the text; only in the instructor’s manual.

The airway management chapter fell short by not providing illustrations and photographs adequate enough to enable complete understanding of the content. For ex-

ample, illustrations of the upper airway and good-quality illustrations of airways are conspicuously missing. Some of the drawings need to be redone. For example, Figure 20–5 is intended to illustrate a double-lumen endotracheal tube, but the drawing does not label the parts, distinguish the 2 lumens, or illustrate its placement in the airway.

Some chapters were brief but adequate, for example, the chapter on invasive mechanical ventilation and the chapter on neonatal and pediatric applications. Each could be represented by independent textbooks of their own; but I found the coverage sufficient for an introduction to these topics.

It was nice to see a chapter on geriatric applications, a subject not commonly covered in respiratory care curricula, but which is gaining more attention. The chapter begins with demographics related to age distribution of the population and makes a good point about the cost of health care: “. . . the burden of escalating health care costs can be especially devastating for [the elderly].” And regarding the Medicare program: “. . . withdrawal of managed care contractors leaves the future of Medicare Managed Care [for the elderly] an uncertainty.”

It was also refreshing to discover chapters on noninvasive ventilation, subacute care, home care, rehabilitation, health promotion, patient education, and management. These sections not only focused on the types of care provided in certain areas but also on issues of reimbursement, patient charges, and billing practices, coding systems, and fiscal issues for department managers. In the management chapter, definitions are provided for terms such as managed care, gate-keeping, and capitation. The human resource management section discusses issues of recruitment, training, and performance appraisal, and includes a sample evaluation tool for competencies for respiratory therapists.

It became obvious as I progressed from one chapter to the next that the contributing authors, almost without exception, were well versed in their specialties and provide very practical information. In the chapter on arterial blood gases, for example, one “Best Practice” item advises that “milking” (squeezing) the capillary sample site can increase the venous component of the sample and should be avoided. This chapter also includes an arterial blood gas puncture procedure and contains advice on quality control and quality assurance when using blood gas machines, and the difference between

the two. All these topics are important in clinical settings and represent the common-sense approach of the authors, which holds true throughout the text.

Ancillary materials for **Foundations of Respiratory Care** include an instructor’s manual and an electronic classroom manager. The instructor’s manual contains the answers for the questions that follow the case studies and the review questions at the ends of the chapters. The electronic classroom manager contains 2 components: a test bank, which contains at least 1,000 multiple-choice questions and an online testing tool, and an electronic image library that holds about 500 illustrations and photos from the text.

This book is readable, comprehensive, timely, and well organized. I’m in awe of the amount of work and time the authors spent in bringing it to market. Judging by those chapters about which I have some knowledge, I found few content or typographical errors. Practitioners, students, and educators should give this book a close look for selection either as a text or a reference. It will be time well spent.

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REFERENCES

1. Egan DF, Scanlan CL, Wilkins RL, Stoller JK. Egan’s fundamentals of respiratory care, 7th ed. St Louis: Mosby-Year Book; 1999.
2. Hess DR, MacIntyre NR, Mishoe SC, Galvin WF, Adams AB, Saposnick AB. Respiratory care: principles & practice. Philadelphia: WB Saunders; 2002.

Respiratory Medicine: An Illustrated Colour Text. Colin D Selby DM. Edinburgh: Churchill Livingstone. 2002. Soft cover, illustrated, 91 pages, \$30.

Respiratory Medicine: An Illustrated Colour Text is one in a series of “illustrated colour texts” by Churchill Livingstone publishers. Proclaimed on the back cover as

an “innovative textbook” incorporating “concise yet comprehensive text, colour photographs and line diagrams, short case histories for self testing, and key point boxes for quick revision,” the book comes up a bit short. Written for undergraduate medical students, mid-level practitioners, and perhaps even primary care physicians, the book should appeal to respiratory therapists and technicians as well. Pulmonary fellows and experienced clinicians are not the intended audience, as manifest by the limited breadth and depth of the material, but may find it useful as a rough template for their own lectures and teaching rounds. The author sets forth in his preface a laudable goal: “I have intended that it illustrates some of the visual appeal, breadth, and challenges of respiratory medicine.” Here he succeeds in providing an engaging introduction to respiratory medicine, though at a mere 91 pages, I suspect most readers will find the overall experience somewhat unfulfilling. Students may chafe at the lack of physiologic detail, and practitioners will probably be frustrated by very general and often vague treatment of therapeutic options. The closing sentence of the introductory paragraph on the management of pneumothorax is illustrative: “Suspicious symptoms such as haemoptysis or preceding breathlessness, especially in women, should raise the possibility of rare but important lung diseases.” The text continues without elaboration to review therapeutic options, including radiographic observation, pleural aspiration, tube thoracostomy, and surgical interventions. To be fair, lymphangioleiomyomatosis and complicating pneumothorax are mentioned in a preceding chapter, but there is no mention of other considerations such as catamenial pneumothorax or Langerhans cell histiocytosis.

The text is logically organized into 5 sections containing 40 two-page units. An introduction, “The Challenges of Respiratory Medicine,” segues to 4 units covering “Structure and Function,” 5 units on “Clinical and Respiratory Practice,” and 28 units grouped under “Respiratory Disease.” A final section, “Special Topics,” includes 2 units that address radiologic techniques and respiratory disease and the elderly. The former nicely outlines the major pulmonary radiographic techniques, though mention of positron emission tomography (PET) scanning is conspicuously absent. The later unit provides little more than a graphic illustration of aging populations in the United King-