

ters were not produced in a uniform format. The absence of signposts (eg, pull-outs with key points, standardized headings) or standardized sequencing of information (eg, clinical manifestations, laboratory findings, imaging findings, et cetera) in the chapters challenges readers to follow complex discussions. The chapter formats seem to reflect each author's writing style.

The chapters' tables and table headings also differ considerably in style. Some tables present information clearly, in a manner that stands on its own, whereas others may be difficult to understand without reading the accompanying text. Tables borrowed from scientific articles represent many of the latter instances. Also, similar chapters present tabular information completely differently. For instance, the chapter on asthma lists drugs, indications, and dosages, whereas the chapter on chronic obstructive pulmonary disease lists only drugs, and in a manner that could lead to administration errors; the table could make it seem that theophylline is commonly used for chronic obstructive pulmonary disease.

Figure formatting is also inconsistent. Some chapters present treatments in easily understandable algorithms, whereas others present therapies in complicated tables or only in the text. These format differences were especially irksome in adjacent chapters that cover similar disorders. For instance, the chapter on pulmonary arterial hypertension does not provide figures to explain drug management, in contrast to the chapter on pulmonary thromboembolic disease, which is replete with algorithms and tables of diagnostic rules. The figure legends occasionally miss opportunities to explain the figure's contents. For instance, the legend for one chest radiograph simply states "Organizing pneumonitis in a patient with bird fancier's disease," and does not identify the radiographic features readers should note. The number of figures also varies. The chapter on pulmonary manifestations of the collagen vascular diseases make extensive use of photomicrographs and radiographs, whereas the chapter on idiopathic pulmonary fibrosis has largely dense text with few figures. When present, however, the color and gray-scale figures are magnificently reproduced and complement the text beautifully. For instance, the chapters on chest imaging, cytopathology, and dermatologic manifestations of lung disease could be free-standing books.

The reference list provides insight into the currency of a book's information. To be fair, the time from manuscript submission to book publication is measured in years. Considering that Fishman's is a momentous encyclopedic work it is not surprising that the most recent references are from 2006, and in some chapters the latest references are from 2005. The publication delay explains why some chapters omit important current information. The chapter on asthma, for instance, uses the old classification system based on asthma severity rather than control (as proposed in 2007 guideline updates). Although these guideline revisions became available after this book's publication, the authors could have anticipated the updates and listed the guidelines' Web sites. There are other examples of omitted information on cutting-edge topics: not much is presented on airway stents or bronchoscopic ultrasound, and only a few sentences mention pleural effusions after cardiac surgery.

This book's reference lists have other issues. Most of the chapters provide suggested-reading lists but no text call-outs to specific citations; this prevents readers from knowing on what papers the authors base their views. A few chapters use the customary system of call-outs and a numbered citation list. The suggested-reading lists could be improved by identifying the articles as reviews, original contributions, important related readings, or clinical practice guidelines. As they are presented, the reader must scan every list to guess which articles are worth reading—a tough assignment considering that some chapters have 50 or more references.

As in most large books with multiple authors, some statements conflict with statements elsewhere in the book, and these conflicts require reconciliation. For instance, the recommendations (in separate chapters) on diagnosis and treatment of arteriovenous malformations differ markedly. The chapter on principles of antibiotic use and selection of empirical therapy for pneumonia does not always agree with the chapter on acute bronchitis and community-acquired pneumonia, and these 2 chapters have considerable overlap.

So, does this book provide value for clinicians and scientists primarily interested in respiratory care and does it fill a gap in our computer-based information-management era? I believe it definitely does. No other available book on pulmonary medicine pro-

vides such a strong scientific foundation for understanding lung function and respiratory disease as does **Fishman's** in its opening sections. I have looked for other concise yet comprehensive reviews of dyspnea and control of ventilation, but have found none that rival this book. The later chapters that focus on specific lung conditions build on that scientific foundation. I emphasize that some of the book's features will challenge casual readers, and this book is not for everyone. But a committed life-long learner of pulmonary medicine willing to dive into the book can gain a comprehensive understanding of our field in a manner not allowed by online resources. Although I increasingly access electronic information as I run between patients, I will use **Fishman's** when I need to really *learn* a subject rather than simply identify a clinically relevant fact; this is the "information gap" that authoritative books will always be needed to fill.

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**Mechanical Ventilation**, 2nd edition. Neil R MacIntyre MD FAARC, Richard D Branson MSc RRT FAARC. St Louis: Saunders Elsevier. 2009. Soft cover, 243 illustrations, 528 pages, \$74.95.

**Mechanical Ventilation** is an outstanding text from the moment one starts to read it. Edited by 2 of the thought-leaders in mechanical ventilation, Neil MacIntyre and Richard Branson, the text has 25 chapters, 24 of which have been updated and newly referenced to reflect new technologies and evidence since the first edition. A new chapter on "unique patient populations" has been added. At 449 pages, plus an additional 15 pages dedicated to case studies, it is an easily accessible text that, for all but the most advanced clinicians, will serve as an excellent reference for complete everyday knowledge of mechanical ventilation. It is the most succinct, yet still clinically complete and useful review of mechanical ventilation I have seen. Throughout it remains true to the evidence, with little editorial bias, yet provides expert advice on topics about which our knowledge is limited. The chapters are

well referenced. Numerous gray-scale charts, graphs, illustrations, and photographs highlight key points and facilitate understanding of complex topics. A strength of this book is that many of the figures and tables are from national review courses and represent the core teachings on mechanical ventilation.

The book is thoughtfully divided into 5 sections: technical aspects of mechanical ventilation; cardiopulmonary physiology's interaction with mechanical ventilation; therapies adjunctive to mechanical ventilation; clinical application of mechanical ventilation; and case studies with questions, which are excellent for board review.

I found the book fully accessible and likely to be of value to a broad range of readers, including students, nurses, respiratory therapists, technicians, non-critical-care-trained physicians or physician extenders, and critical care fellows and staff. The book's target audience, however, is clearly students and clinicians preparing for boards. It is not intended as nor sufficiently detailed to be an independent text for the practicing critical care physician, but I found that the section on technical aspects filled several knowledge gaps I had from my fellowship—particularly the chapter on humidification and aerosol therapy and parts of the chapter on noninvasive ventilation. Given its concise review of key topics, it would make an excellent review of mechanical ventilation for board review in any specialty or field. Indeed, with respect to the book's stated aim to serve as a "practical and useful text for clinicians and students," and to overview the newest technology and concepts of mechanical ventilation, the text far exceeded my expectations. Probably its greatest strength is that it sufficiently explains complex topics in a way that I think will be understood by students. It is an ideal text from which an experienced clinician can build a core lecture series for novice providers.

Each chapter includes an outline, statement of objectives, a list of key terms, a list of key learning points, and review questions. Together these enhance comprehension and facilitate accessibility. Again, the questions are a good resource for board review, and the answers are at the end of the book, but without explanations or references.

The technical introductory chapters give an exceptional overview of the mechanics behind mechanical ventilation and an orga-

nized and coherent overview of the current classification schema for ventilation modes. The critical care community is often challenged by the lack of standardized and consistent terminology for describing mechanical ventilation. Although these first 2 chapters are technical reading, they acknowledge that challenge and establish a standard framework for the remainder of the text, and thus reduce some of the complexity of mechanical ventilation for the student.

The remaining chapters of this section focus on topics that are less often emphasized in the study of mechanical ventilation but are of great importance. The chapter on patient-ventilator interface is well written and offers a good overview of monitoring endotracheal tube placement and tube care, including suctioning and cuff-related issues. The chapter on monitors and displays is dedicated to flow sensors, gas analyzers, and alarm systems—all issues that are often overlooked and understudied. Like the other chapters in this section, the chapter on humidification and aerosol therapy is particularly well written and discusses topics that are rarely focused on during student study, multidisciplinary rounds, and clinical discussions, but are incredibly important.

The section on physiology deftly integrates cardiopulmonary physiology and its interaction with a mechanical ventilator. This section gives a strong review of the topic.

The section on adjunctive therapies includes a chapter on ventilator-associated pneumonia that is a great overview on the subject. It effectively discusses the difficulties in diagnosing ventilator-associated pneumonia, in a fashion that is "digestible" and understandable for clinicians. Its discussion of diagnosis and management, although avoiding many of the controversies about this disease, succinctly gives a reasonable approach. The chapter on nutrition therapy gives a useful review of the present literature.

The section on clinical applications is well written overall. The chapter selections are generally appropriate for this type of text, as is the level of detail. The chapter on management of parenchymal lung disease covers only ventilator management of acute lung injury and acute respiratory distress syndrome (ARDS) and is a fair reflection of the current literature, heavily influenced by the ARDS Network's finding about low tidal volume.

Well referenced, it is a good resource for rapid review of these common indications for mechanical ventilation. The new section on mechanical ventilation of unique patient populations (including patients with traumatic brain injury, neurologic disease, lung-transplantation, burn injuries, and perioperative respiratory failure) gives an interesting, brief overview and good general recommendations, but I am not certain a single chapter can do justice to such a broad topic. The chapter's brevity and experiential approach highlight the limitations of the current literature on these subjects. The chapter on prolonged mechanical ventilation reflects the importance of this growing patient population and the growing body of literature about it. The chapter on extracorporeal therapies, though interesting, seems beyond the scope of this text's intended readership.

Overall, the second edition of **Mechanical Ventilation** is an excellent introductory text for students of critical care, particularly respiratory therapists, critical care nurses who wish to expand their understanding of mechanical ventilation, and the busy academic provider who needs a quick reference on the fundamentals of mechanical ventilation for board review or from which to generate core teaching materials for trainees. Although it avoids some of the details and controversies of advanced mechanical ventilation, its focus on fundamentals and the basics of new technologies contributes to its effectiveness. Its greatest strengths are its choice of material, its figures and tables, and its concise, understandable reviews of complex technical aspects of mechanical ventilation, pulmonary physiology, and the potentially confusing literature on clinical applications. This book will become part of our core reading for residency training, and I highly recommended it.

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