

**Noninvasive Ventilation Made Simple.** William JM Kinnear MD. Nottingham University Press: Nottingham, United Kingdom. 2007. Soft cover, illustrated, 144 pages, \$30.

This book discusses the clinical indications for and applications of noninvasive ventilation (NIV). Its 28 brief chapters span 139 text pages. According to the publisher the book is intended for “busy ward staff to ‘dip into’ to improve their skills and understanding”—a reference book for United Kingdom nurses unfamiliar with mechanical ventilation in general and NIV in specific.

In the opening chapter the author contrasts invasive ventilation and NIV and emphasizes that NIV can be used in patients with acute or chronic respiratory failure. Throughout, he uses the term BiPAP (bi-level positive airway pressure) to describe a ventilation method suitable for spontaneously breathing patients who need pressure support, and the term NIV to describe a ventilation method for patients who cannot breathe on their own. Although the author uses these terms consistently, BiPAP and NIV may mean different things to an American audience.

The discussion on masks emphasizes the need to balance patient comfort with leak-reduction, and adds that oronasal (and full-face) masks are more effective for patients in acute respiratory failure, whereas nasal masks work better with patients in the non-acute setting.

The chapter about ventilator circuits gives step-by-step directions for setting up BiPAP and NPPV circuits and placing the circuits on patients with acute and chronic conditions, respectively. The author describes titrating oxygen into the NIV circuit, which led me to think that the bi-level ventilators he refers to do not have air-oxygen blenders; in the United States many bi-level ventilators have oxygen blenders. The chapter on ventilator triggering focuses on the triggering and cycling difficulties that leaks create, and contrasts flow triggering, pressure triggering, time cycling, and flow cycling.

The book effectively describes the role of inspiratory pressure in treating ventilation deficiencies, and expiratory pressure in treating oxygenation problems. The chapter about inspiratory pressure describes rise-time, and the chapter about expiratory pres-

sure emphasizes that applied expiratory pressure can counterbalance intrinsic positive end-expiratory pressure, but that high end-expiratory pressure can reduce cardiac output. The author also discusses the need to set a back-up rate when initiating NIV. The chapter on monitoring emphasizes that clinicians should look for improved patient comfort and decreased work of breathing after initiating NIV.

Chapter 11 discusses when to intubate and when to use NIV. Intubation is preferable in respiratory arrest, upper-airway trauma, inability to clear secretions, inability to protect the airway, and unconsciousness, but NIV can be used to ventilate unconscious patients for whom intubation is not an option.

Interspersed throughout the book are chapters on NIV to treat specific diseases and disorders, including an introduction to respiratory failure, chronic obstructive pulmonary disease, left-ventricular heart failure, obesity hypoventilation, hypoxemic respiratory failure, clinical complications of NIV, neuromuscular disorders, and chest wall problems.

In his discussion of respiratory failure the author succinctly describes hypoxemic and hypercarbic respiratory failure—concepts familiar to an American audience, but in terms that may be unfamiliar. He emphasizes that there is strong evidence for NIV in exacerbation of chronic obstructive pulmonary disease and congestive heart failure, and that NIV also can be used with patients with pneumonia, asthma, or acute respiratory distress syndrome, although the evidence for its effectiveness in those conditions is not high-level. Later chapters discuss NIV for obese patients with sleep apnea, and patients with neuromuscular diseases, chest deformities, or bronchiectasis.

The author also emphasizes that patients in acute respiratory failure who do not improve after one hour of NIV should be intubated without delay, and that heated humidification is a useful adjunct to NIV. The discussion of inspiratory/expiratory ratio reminds us to allow enough expiratory time in patients with severe chronic obstructive pulmonary disease.

The chapter on alarms advises to set alarms to indicate if the patient is discon-

nected from the ventilator, and to keep the alarm-setting process simple. The chapter on NIV complications discusses the need to avoid both simple complications such as nasal-bridge sores and eye irritation, and more serious complications such as gastric distention and pneumothorax. The author also contrasts volume-targeted and pressure-targeted ventilation.

The chapter on weaning from invasive ventilation to NIV and weaning from NIV to supplemental oxygen includes sections on weaning from an endotracheal tube and from a tracheostomy tube to NIV.

The chapters include learning points, key words, terminology, and chapter summaries. The writing style and the 2-color text design are readable and accessible. The book also has some 2-color line drawings, including pressure-volume, pressure-time, and flow-time graphs; basic layouts of ventilators, circuits, and masks; and depictions of physiology at the alveolar level.

I noted an error in the table of contents. Starting with Chapter 18 and through the end of the contents, the page numbers in the table of contents were off by 2.

This book uses British spellings (“metre” instead of “meter”), units (eg, kPa), and terms (eg, HDU for high-dependency unit, and AMU for acute medicine unit) that American readers might find unfamiliar. The text has a key-words section, an index, and a brief bibliography, but no references.

**Noninvasive Ventilation Made Simple** succinctly describes the rationale for NIV and its safe and effective implementation in clear and concise language. However, it is written for a United Kingdom nursing audience that is inexperienced in mechanical ventilation. George Bernard Shaw stated that “England and America are 2 countries divided by a common language.” Because it uses key terms that are new or unfamiliar, this book may not “translate” well to an American audience.

**Phillip E Alkana MA RRT**

Division of Pulmonary, Critical Care, and Sleep Medicine  
Tufts Medical Center  
Boston, Massachusetts

The author reports no conflicts of interest related to the content of this book review.

**Ventilatory Support for Chronic Respiratory Failure.** Nicolino Ambrosino, Roger S Goldstein, editors. *Lung Biology in Health and Disease* series, volume 225, Claude Lenfant, executive editor. New York: Informa Healthcare. 2008. Hard cover, illustrated, 640 pages, \$249.99.

This is the 225th volume in the well-known and respected series *Lung Biology in Health and Disease* series, edited by Lenfant, a former Director of the National Heart Lung and Blood Institute of the National Institutes of Health. I am usually hesitant to review books from this series, as these tomes tend to be dense and difficult to read. Not so in this case! I enjoyed reading it and learned some new facts and approaches.

The book has 9 sections, 45 chapters, and 75 authors. Having so many authors has benefits and liabilities. In this case the positive is that there are representatives from around the globe, which leads to a very nice comparison of the different approaches to long-term ventilation in different countries. The usual down side of multi-author books is that differences in writing and organizational style can make the reading somewhat difficult, but in this book I did not find this a problem. Overall, about this book I would say that "more is more."

The editors did an excellent job of organizing a difficult topic. Ventilatory support for chronic respiratory failure is a broad topic that encompasses everything from weaning from invasive ventilation after a prolonged intensive-care course, to noninvasively managing patients with chronic neuromuscular disease, to treating chronic obstructive pulmonary disease with intermittent ventilation and pulmonary rehabilitation. The 9 sections are logical and appropriate for the topic. On small criticism about the sections is that, although they are identified in the table of contents, there is no visual or physical division in the book. I found myself looking back to the table to figure out if I had moved to a new section.

Some of the shorter chapters I wished were longer. For example, Vitacca's chapter on weaning protocols (a very important topic, on which there has been much research in the past 10 years) is only 4 pages long, including references. It is well written, but I would have liked more graphics and comparisons between the studies. Although all of the chapters were helpful information-wise, there were several that stood out for me. Epstein prepared the chapter on

the epidemiology and natural history of prolonged ventilation. He elegantly summarized and compared the numerous studies on the topic in a beautiful table that includes survival outcomes in individuals on prolonged ventilation. I also very much enjoyed the chapter on pulmonary rehabilitation by Field; it is very well organized and presents a thoughtful explanation of an approach and techniques physical therapists can use with ventilated patient in the intensive care unit.

The chapter by Rochester, on transcutaneous muscle stimulation for individuals with respiratory failure and muscle weakness, particularly chronic obstructive pulmonary disease, presents novel ideas and data.

Occasionally there is some content overlap between the chapters (eg, Chapters 18 and 24 had similar discussions about NIV interfaces), but less than I have seen in similar books.

Overall, I highly recommend this book for respiratory therapists, nurses, physicians, and other providers, to learn about invasive and noninvasive long-term ventilation. I will keep it readily accessible on my bookshelf at work.

**Joshua O Benditt MD**

Division of Pulmonary and  
Critical Care Medicine  
University of Washington Medical Center  
Seattle, Washington

The author reports no conflicts of interest related to the content of this book review.

**Allergy and Asthma: Practical Diagnosis and Management.** Massoud Mahmoudi DO PhD, editor. New York: McGraw-Hill. 2008. Soft cover, illustrated, 385 pages, \$43.15

Weighing in at less than 400 pages, and with a width of about 1.5 cm, this is one of the sleekest allergy textbooks available. An electronic version is available at <http://www.mobipocket.com>. The typeset of the paper version is easy to read, and the text is arranged in 2 columns per page. There are meaningful tables, figures, and flow charts in every chapter, which translate quite well into the electronic version. The book is intended for a broad audience, including medical students, primary and specialty physicians, nurses, and allied providers. There

are unique chapters that would interest many allergists as well. The book addresses the common traditional topics of asthma, allergic rhinoconjunctivitis, contact and atopic dermatitis, urticaria/angioedema, food and latex allergy, anaphylaxis, and venom hypersensitivity. It also has chapters on less common conditions, such as immunodeficiency, hypersensitivity pneumonitis, and allergic bronchopulmonary aspergillosis. The chapters on sick-building syndrome, pseudo-asthma, and complementary medicine may interest allergists. The chapters on therapy cover antihistamines, glucocorticoids, immunotherapy, monoclonal anti-immunoglobulin E, environmental control measures, and bronchodilators.

The clinical topics reflect the "bread and butter" of an allergy and asthma practice and are arranged in the easy-to-follow, standardized Lange series format, which consists of: definition, classification and epidemiology; pathogenesis; clinical symptoms and diagnosis; management; and related literature. This format works extremely well, although I wish the chapter on history and physical examination was larger and combined with the chapter on diagnostic tests, as they are excellent chapters that deserve more space. Often people have symptoms in several body systems, and the flow-chart in the wonderful chapter on cough lays the groundwork for the chapters on specific topics.

Asthma is covered in 6 chapters (pediatric, adult, exercise-induced, occupational, pregnancy, and pseudo-asthma), which give a very comfortable platform for managing most asthma. The chapter on pseudo-asthma will be much appreciated when initiating the investigation of an alternative diagnosis. The flow-volume loop from a patient with vocal-cord dysfunction leaves a lasting visual impression. Some of the chapters reference the 2002 National Heart, Lung, and Blood and Institute asthma guidelines, and readers should consult the more recent, 2007 guidelines (<http://www.nhlbi.nih.gov/guidelines/asthma/asthsumm.htm>), which provide a programmed diagnostic approach and updated information on asthma management.

The chapter on allergic rhinitis has a very useful figure and table that describe a step-wise treatment approach, which puts the various treatment options in perspective. Specific recommendations are, naturally, subject to differences in opinion. This book recommends topical azelastine for mild

asthma, but other sources (eg, Clinical Medicine Consult 2008, <http://www.clinicalmedconsult.com>) recommend that azelastine be considered for moderate and severe asthma, in conjunction with nasal steroids. This book also recommends immunotherapy for severe asthma, but the world health initiative on allergic rhinitis group (Allergic Rhinitis and its Impact on Asthma [ARIA] guidelines (<http://www.wheai.org>) indicate that immunotherapy may be appropriate for moderate or even mild asthma. Doses and detailed information on the nasal medications discussed can be found in databases such as Epocrates (<http://www.epocrates.com>) or Pepid (<http://www.pepid.com>). The “Is It Allergy?” Web site (<http://www.isitallergy.com>) provides detailed instructions on in vitro allergy testing, laboratory locations, and test codes (<http://www.isitallergy.com/knowforsure/allergytesting/orderthetest.html>).

Allergic skin disease can frustrate patient and provider. An example of the clinical pearls you’ll find in this book is the suggestion that a topical calcineurin inhibitor is a first-line agent for the early signs and symptoms of atopic dermatitis. Another is dosing topical corticosteroids with “fingertip units.” Using the body map that displays the distribution of rash can help narrow the list of possible contact allergens. Readers will often refer to the recommended diagnostic tests and treatment plan for chronic idiopathic urticaria. The suggested articles on urticaria in the section on evidence-based medicine will help providers better counsel patients.

The chapters on food, insect, latex, and drug allergies continue to dispense pearls and useful clinical tools. There is a food cross-reactivity chart that counsels parents on the probability of clinical reaction to related foods. Providers are instructed to retest patients who raise high clinical suspicion of venom hypersensitivity if the first set of tests are negative. A sample modified latex “glove-use” test is described, because in vitro immunoglobulin latex tests are the only commercially available tests. Radiocontrast pretreatment and drug desensitization protocols are also provided.

Also included are discussions on less common allergy and asthma topics, such as hypersensitivity pneumonitis, effects of pollution, immunodeficiency, human immunodeficiency virus (HIV), and complementary medicine. The table on hypersensitivity pneumonitis antigen is helpful for review

for examinations. The table on immunodeficiency lists typical infections that occur with a given dysfunction and the appropriate laboratory tests. In our community, primary HIV care is not typically provided by allergists, so the chapter that overviews HIV is appreciated. The chapters on complementary medicine make the case for not sidelining this aspect of patient care. A table lists the mechanisms of, symptoms addressed by, and adverse effects of common medicinal herbs. There are even chapters on serum sickness, complement disorders, and geriatrics.

I am amazed how the authors and editor covered so much material in this relatively small book. Clear organization and writing partially explain this feat. Assessing the relative contributions of allergy, infection, structural abnormalities, and nonallergic conditions to a patient’s symptoms is a core diagnostic goal in allergy care, and is facilitated by the material and tools in this text. I am already looking forward to the second edition!

**Karna Gendo MD**

Northwest Asthma and Allergy Center  
Seattle, Washington

The author reports no conflicts of interest related to the content of this book review.

#### **Airway Management in Emergencies.**

George Kovacs MD and J Adam Law MD. New York: McGraw Hill Medical. 2008. Soft cover, illustrated, 298 pages, \$69.95.

The management of airway emergencies has, unfortunately, become somewhat of a battlefield among specialties. In my hospital the disciplines of anesthesia, emergency medicine, and pulmonary critical care all vie for control of the emergency airway. But airway emergencies occur in various settings, so practitioners in several specialties encounter patients with airway difficulties. If a clinician is not equipped with the knowledge base and skills to rapidly assess and control airway problems, disaster can rapidly ensue. Many textbooks that deal with the emergency airway are geared toward a specific specialty or are too basic to be useful to a particular specialty. It is refreshing, then, to read **Airway Management in Emergencies**, which will be appreciated by a very broad audience.

This book evolved from the manual from a one-day airway course for Canadian emergency physicians. The book lends itself to reading in its entirety, unlike texts used primarily as occasional references. The content is general enough to appeal to nurses, medical students, respiratory therapists, and general practitioners, yet the details are deep enough to hold the interest of specialists such as anesthesiologists. I read it a month, before returning to the operating room to refresh my intubation skills, and felt as if I had recently completed a short but rigorous airway course.

The chapters progress in a relatively conventional fashion, beginning with basic techniques and airway physiology/anatomy, and progressing to direct laryngoscopy, alternative intubation techniques, difficult airways, rescue oxygenation, and special emergencies. The chapters all begin with a “Key Points” section, which, surprisingly (since these sections often lack substance), pack in useful details and practical points. Interspersed through the chapters are realistic clinical vignettes, which highlight particular airway concerns. These concerns are explored fully, with frequent reference back to the clinical scenarios. One of the more impressive features of the text is the numerous photographs and illustrations, which are detailed and extremely useful. The authors incorporate fluoroscopic images, photographs of real and simulated intubation, photographs of equipment, and step-by-step illustrations of technique.

The first 4 chapters lay a solid foundation for assessing the airway and making the decision to intubate, and stress the commonly overlooked importance of the bag-valve-mask. Chapter 2, “Definitive Airway Management: When is it Time?,” sets the tone for the rest of the text; it presents 5 complex but realistic cases in which we must decide whether to intubate. Bulleted text highlights the most pressing indications for intubation, but Kovacs and Law are careful to emphasize that the decision to intubate incorporates several clinical variables, including the potential for later clinical deterioration. This is a particularly important perspective, which, in my own practice I have found challenging to explain to medical students, residents, and nurses, who often want a concrete answer to the question “What are the indications for intubation?” Kovacs and Law go a long way toward explaining how nuanced airway problems can be, and in the case-review section at the end

of the chapter they succinctly examine clinical considerations brought up by the patient scenarios.

Chapter 3, "Airway Physiology and Anatomy," is the most useful introduction I have seen to anatomical considerations when assessing the airway, patient positioning, and directly visualizing structures during intubation. Kovacs and Law make liberal use of photographs from laryngoscopy and various illustrations that help visualize airway axes and classification schemes for glottic visualization, such as the Cormack-Lehane scale and percentage-of-glottic-opening (POGO) score.

The excellent use of illustrations is a consistent strength throughout the text. The fourth chapter, which stresses the importance of not fixating on endotracheal intubation as the primary airway technique, is a refreshing review of noninvasive airway management, including the simple face mask, nonrebreather mask, bag-valve-mask, and noninvasive ventilation. The authors offer several useful details and tips on the commonly overlooked subject of bagging.

Chapters 5 through 10 take us from a detailed section on tracheal intubation through to post-intubation management. Chapter 5, on tracheal intubation via direct laryngoscopy, should be required reading for everyone learning intubation, and is a useful reference for anyone who performs intubation. I imagine that this chapter would be less useful to the seasoned anesthesiologist who only intubates in the operating room, but could be a valuable review for those who occasionally respond to airway emergencies throughout the hospital and in the emergency department. There is a detailed explanation of equipment (eg, curved and straight blades) and techniques, and the authors take us through various clinical scenarios (eg, c-spine precautions, morbid obesity, pregnancy, the patient in extreme respiratory distress, and the pediatric patient) and how these influence positioning and equipment choice.

Chapters 6 through 8 explore alternative intubation techniques, rescue oxygenation, and awake intubation. I found these chapters fairly comprehensive and up to date on the available airway technology. The content ranges from the basic (eg, laryngeal mask airway, combitube) on through GlideScopes and fiberoptic techniques. These chapters are useful introductions to

advanced airway techniques, but are far from comprehensive. Clinicians who are already trained in advanced airway techniques would be better served by other texts with more in-depth discussions.

Chapter 9 backtracks a bit and covers rapid-sequence intubation. I liked that the authors put this chapter after a thorough discussion of intubation technique. Often, rapid-sequence intubation is mentioned near the beginning of airway texts, or is incorporated into the chapters on intubation. Kovacs and Law force the reader to step back and think again about preparation and anticipation, after having spent the past several chapters immersed in technique.

Chapter 10 briefly discusses confirmation of endotracheal tube placement and post-intubation care, including sedation, paralysis, and ventilator management, which, especially in the emergency department, often take a back seat to the intubation procedure, and nursing staff and RTs are commonly left to manage them.

Chapters 11 through 20 explore various details and concepts brought up earlier in the book. Chapter 11, "Approach to Tracheal Intubation," and Chapter 20, "Human Factors in Airway Management," stand out as "do not miss" sections. Both explore the human factors that affect the clinician and the whole team when managing an airway. These issues often are overlooked in the airway literature yet probably affect outcomes as much as technique does.

Chapter 13, "Airway Pharmacology," is a concise and useful reference that I find myself going back to again and again.

Chapters 14 through 19 examine specific clinical scenarios (central-nervous-system emergencies, cardiovascular emergencies, respiratory emergencies, the critically ill patient, the very young and very old patient, and prehospital considerations) and their implications for airway management.

I have very few criticisms of this book. Any text with such a broad audience will at times be too detailed for some and too general for others. In particular, experienced anesthesiologists will find the sections on advanced airway techniques lacking in depth. Critical care physicians will look elsewhere for discussions on noninvasive ventilation and ventilator management. Pediatricians probably would have appreciated a separate chapter on the pediatric airway, though the authors do manage to cover the topic quite well.

In summary, **Airway Management in Emergencies** is a comprehensive text that will have broad appeal among clinicians who deal with airway emergencies. From start to finish the book will prove most useful to emergency-medicine physicians and first-year anesthesia residents, but sections of the book will be useful to anesthesia attending physicians, critical care physicians, inter-nists, family practitioners, nurses, medical students, and respiratory therapists. To write a text for such a diverse audience while maintaining sufficient depth is a daunting task, but Kovacs and Law succeeded, and I enthusiastically recommend this book to anyone serious about learning more on the subject.

**David A Baker MD**

Emergency Services  
Harborview Medical Center  
University of Washington  
Seattle Washington

The author reports no conflicts of interest related to the content of this book review.

**CT of the Airways.** Phillip M Boiselle MD and David A Lynch MB, editors. *Contemporary Medical Imaging* series, U Joseph Schoepf, series editor. Totowa, New Jersey: Humana Press. 2008. Hard cover, color illustrations, 425 pages, \$179.

This small-format, hard-cover book is the first in a series entitled *Contemporary Medical Imaging*. It has 16 well-referenced chapters, edited by 2 of the true world leaders on the topic, with 27 contributors from around the world, 408 pages, and a 4-page index. The pages are printed on a very nice glossy paper, and the book's numerous images include many color images, which reproduced beautifully.

This well-focused book is intended primarily for radiologists and pulmonologists involved in the care of patients with airway diseases, but would also be appropriate for thoracic surgeons, pulmonary pathologists, and other physicians with similar interests.

Imaging technology is now sufficiently advanced and used often enough to warrant the writing and purchase of such a focused book. Its stated goals are to provide an up-to-date review of airway anatomy, physiology, pathology, and computed tomography (CT) methods related to airways disease; a

pragmatic compendium of the state of the art of CT for various common and uncommon airway disorders in adults and children; and an introduction to new and emerging techniques that are not yet standard practice. To these ends the editors have succeeded mightily.

As is often the case, when such a varied collection of contributors is brought together for a focused textbook project, the burden of contextual flow falls upon the lead editors. This book is divided into 4 parts. The first part is an introductory section on airway physiology, anatomy, pathology, and anatomical and functional seeking imaging methods. The next section is on large airway disorders and adults. The third section is on small airways disorders and adults. The final section is on pediatric large and small airway disorders. The editors quite successfully managed the overall content flow and section and chapter organization; each chapter has a similar look and feel.

The editors have done a superb job in covering this field in its entirety, based on the state of the art. Some of the information will probably be new to readers with an interest in airway imaging. Much of the material can be found in other imaging textbooks, but not nearly to the breadth, depth, and extent in this beautiful book. Although the technology in this field is advancing fairly quickly, the "shelf-life" of this book should be fairly long.

I unhesitatingly recommend this book to all those who have a special interest in airway diseases.

**Eric J Stern MD**

Department of Radiology  
University of Washington  
Seattle, Washington

The author reports no conflicts of interest related to the content of this book review.

**Fishman's Pulmonary Diseases and Disorders**, 4th edition. Alfred P Fishman, editor in chief; Jack A Elias, Jay A Fishman, Michael A Grippi, Robert M Senior, Allan IPack, co-editors. New York: McGraw-Hill. 2008. Hard cover, 2 volumes, 2,740 pages, color illustrations. \$425.

At first, the invitation to review the fourth edition of **Fishman's Pulmonary Diseases and Disorders** seemed daunting, considering that this beautifully bound, 2-volume

text has grown to 8 kg, 2,734 pages, and 157 chapters authored by the world's leading experts in lung disease. The primary editor, Alfred Fishman, is a pioneer and senior statesman in pulmonary physiology. The 1980 first edition shepherded me through my fellowship. Now closer to the end than the beginning of my career, the chance to explore the fourth edition offered nostalgia and an opportunity to brush up on fundamental principles of lung disease. For my effort, I was not disappointed. This book is a giant in its field and provides a comprehensive resource for anyone interested in understanding pulmonary medicine thoroughly, deeply, and comprehensively. But I get ahead of myself.

In approaching the review, I chose the perspective of the **RESPIRATORY CARE** readership: respiratory therapists, and physicians and scientists with a major interest in respiratory care. I also kept in mind our new era of "information management," wherein the rapid electronic publication of new discoveries with nearly immediate access to information at the point of care is becoming technologically feasible and widely expected. In a crowded field of Internet information purveyors, a general textbook must provide substantial value and fill a unique niche to be successful. From this perspective I examined the general organization of the book. The text's 17 parts divide the book into physiologic functional principles, diagnostic procedures, signs, symptoms, and disease conditions. The opening sections on physiological principles is so well written and comprehensive that it provides a road map for all that follows. The pages are color-coded to help the reader navigate between different sections. The publisher did not include a CD-ROM or provide a Web-based repository for online access to the book's materials, but this omission is not relevant, because this is a major text that is not intended for quick "look ups" on a computer screen. It requires serious attention and thoughtful commitment of time.

The book focuses on pulmonary medicine, but because "pure" pulmonary practice encompasses some aspects of critical care, 8% of the pages present information on acute respiratory failure, which is the subject of the 17th and final part. This section covers mechanical ventilation, intubation, ethics, hemodynamic monitoring, and other critical care topics primarily of interest to clinicians in respiratory intensive care units. Brief discussions scattered elsewhere

in the book present other aspects of critical care. For instance, a chapter on surgery discusses chest trauma. Diving injuries, thermal burns, and air embolism are discussed in chapters on environmental and occupational disorders. Critical care management of asthma is presented in the chapter on asthma, and management of massive pulmonary embolism is discussed in the chapter on pulmonary embolism. This organization complicates access to critical care topics because they are so widely distributed. However, this is not a general critical care textbook, but a book on pulmonary medicine, which encompasses only a subset of critical care topics. **RESPIRATORY CARE** readers may actually prefer this presentation because the critical care information, although limited in scope, is presented in depth by leading experts who integrate pathophysiologic principles that are commonly abbreviated in general critical care texts.

The book, however, also occasionally splits topics and tucks the parts into different sections. For instance, empyema as a "pleural" condition is in the section on "lung" infections rather than the "pleural" section where it belongs. Similarly, mediastinitis is in the section on lung infection rather than the one on the mediastinum. Consequently, these important conditions receive only brief discussions by authors who seem more versed in pulmonary infections than what appears to be "add-on" topics for their chapter assignments. Although similar examples exist, the most important topics get solid coverage in appropriate locations, and the extensive index assists in finding the few errantly placed text segments.

As the book's greatest strength, the list of contributors is prestigious. Weibel wrote the chapter on functional design of the lung, Altose on pulmonary mechanics, Wagner on gas exchange, and Reynolds on lung defense mechanisms. Those and other contributors to this book are the pioneers who defined the subjects of their chapters or now conduct the most important research. Many editors of pulmonary books enlist authors who are conveniently located in the editor's institution, but Fishman sought out elite authorities, based on expertise rather than professional address. This strength cannot be overstated, and it indicates Fishman's influence and prestige that he could enlist so many world experts.

As might be anticipated in a book with over 240 international contributors, the topics are covered in great depth but the chap-

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.

**John E Heffner MD**

Providence Portland Medical Center  
The Oregon Clinic  
Portland, Oregon

The author reports no conflicts of interest related to the content of this book review.

**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.

**Jeremy C Pamplin MD MAJ MC USA**

Critical Care Medicine  
Madigan Army Medical Center  
Fort Lewis, Washington

The author reports no conflicts of interest related to the content of this book review.

The opinions in this review are the private views of the author and are not to be construed as the views of the Department of the Army or the Department of Defense.

**Peer Review and Manuscript Management in Scientific Journals: Guidelines for Good Practice.** Irene Hames. Malden, Massachusetts: Wiley-Blackwell. 2007. Soft cover, 312 pages, \$42.

One way to judge the quality of a garment is to roll up its sleeve to examine the workmanship of the seams. This review is a rolling up of the sleeve, of sorts. The Journal decided to invite a staff member to evaluate this book on peer review and manuscript management; in doing so, it also examined its own peer review process.

Early on, under the heading “What is This Book Trying to Achieve?”, Hames observes that science journals usually rotate editors to ensure freshness of vision. Thus, many editorial offices are often in flux, starting out as somewhat ad hoc operations, with most staff learning “on the job.” Once computers and file cabinets are in place, the staff needs to set up its own protocols, tailored to the individual needs of the editor and readership. For many academic editors, editorial tasks are only a small part of their professional activities, performed in addition to their research and clinical duties—all the more reason for setting up protocols that can protect and make best use of scarce, valuable time.

The publishing industry, like many trades, has a “medieval” aspect, in that skills are transmitted via daily interaction between apprentices and more experienced members of the guild. You can start with a degree in journalism or technical editing, but you learn most of the skills you need from those who have been honing them for years. The house style that keeps a journal appearing the same from issue to issue—an aspect of publication that takes considerable time and effort to achieve, but that most readers take for granted—can be considered the “guild secret.” Hames is indeed a master in this trade, and this is her handbook, with practical advice obviously gained from long experience.

The cover bears the logo of the Association of Learned and Professional Society Publishers, which endorses the book as a vital resource for any small or beginning office. It can serve also as a reminder of good practice to the staffs of large established publishing houses. Hames advises that, regardless of pressure from management to produce immediate, tangible results in setting up an office protocol, a period of careful thought and planning is vital and pays off in the long run.

According to the book’s foreword, Hames set up the editorial office for *The Plant Journal*, for which she still serves as managing editor, and she is also a knowledgeable and popular speaker at professional meetings. In draft the book itself was reviewed by professionals with similar backgrounds (the author’s peers), including 3 anonymous reviewers. A book on peer review that has undergone its own peer review makes for a satisfying specimen of a dragon swallowing its own tail, an ancient symbol depicting a closed cycle of development.

Hames places peer review in proper perspective, noting that when thorough and rigorous it serves as the foundation for scholarly publishing, on whose integrity depend grants and promotions in the academic world, best practice in the clinical world, policy formulation in the political world, and sometimes (and more controversially) financial reward in the commercial world. Thus, its charge to maintain standards and to ensure transparency, fairness, and “that reporting is as truthful and accurate as possible” (page 3) must be taken seriously.

By this book’s standards, RESPIRATORY CARE’s requirement of 3 reviewers for most submissions places it in a minority group (17%) among sister journals. Most journals (75%) require only two. (Professional hearsay has it that a journal with a highly technical subject such as drug efficacy can require that a single submission be reviewed by a broad spectrum of specialists, numbering up to 100 people.) Hames describes reviewers as a precious resource that should be treated with respect and care. Because of increasing financial and time pressures, researchers, academics, and clinicians are less available to perform the review task for “the good of science” or the profession. Most reviewers undertake the task with quid pro quo in mind, understanding that the tradition will serve them well in their turn as authors.

The standard way of thanking reviewers is with an honorary annual roll call, but Hames also mentions the move toward offering continuing medical education credits for manuscript review, based on the fact that reviewers, who are always kept in the correspondence loop between authors and editors, inevitably learn a lot in the process. (RESPIRATORY CARE recently initiated a program that offers Continuing Respiratory Care Education [CRCE] credits to respiratory therapist reviewers, beginning with all reviews completed as of July 1, 2008. Credit

will be provided only for reviews judged acceptable by the editor: an initial review is worth 2 CRCE credits; review of a revised manuscript is worth 1 CRCE credit.)

A growing challenge to all journals is that ease of access to the Internet and thus to online programs is increasing submissions, including by authors from less developed countries. Hames faces this challenge head on; she remarks that these submissions from the larger international community are sometimes substandard and sometimes—because of different cultural standards for original work—have problems of plagiarism. But she notes that the most common flaw of such submissions is poor English, and she offers graceful solutions to this delicate dilemma that requires careful handling. She suggests that such papers be returned to authors “for language improvement and the reminder that this is being done in their best interests, as it is felt that [the paper] cannot receive a fair review in its current state” (page 39). The book uses 2 types of graphically highlighted sidebars to drive home its main points: one dedicated to guidelines that can be considered “golden rules”; the other dedicated to aspects of peer review that may be problematic and about which to be especially careful; these “beware boxes” provide clear (and, in my experience, true) warnings, such as “Beware! Sending manuscripts to reviewers in which the standard of language is very poor is unfair and may frustrate or anger them” (page 38).

The book’s timeliest chapter is on the conversion from paper-based to online submission and review. At a recent professional conference, such conversion was referred to as a time of “creative destruction.” Anyone who has experienced this test of one’s abilities can appreciate this expression, and anyone who is facing such conversion would do well to read this chapter. The book cites 16 months as the average time to go from paper to online, from initial configuration to launch day. RESPIRATORY CARE’s fairly recent conversion took 2 years. One challenge to small offices, not fully articulated in this excellent chapter, is that of undertaking this conversion *while also* meeting publication deadlines and retooling all supporting documents (eg, review packets, author instructions, Web site text). Hames covers all the crucial aspects of the conversion, from the choice of system, custom configuration, and data transfer, to dealing tactfully with “grumbling” users. I have heard the editorial role after electronic conversion described as that

of “cyber-shepherd,” a job description amply and well detailed here.

In reading this solid instructional manual, my attention was briefly galvanized by 2 remarks about the Impact Factor. The first mention (on page 113) of this citation metric was a casual one, in the context of budgeted page allowance:

If a journal is trying to increase its Impact Factor, which virtually every journal is trying to do, introducing greater stringency for acceptance in the range where there are many manuscripts of similar quality can help achieve that objective . . .

The second mention (on page 159) was an admonition to editors against using unethical means to manipulate a journal’s Impact Factor. I was hoping that Hames, a veteran insider of the scientific publishing world, would offer a candid assessment of the pros and cons of this powerful index that many in the profession see as an alien tool of evaluation that distorts science reporting and has far too much power.

The only reservation I had with the book overall is attributable to Hames’s *déformation professionnelle*, a French term that translates as “professional bias” or “vocal idiosyncrasy”—the tendency for one’s viewpoint to become warped or distorted according to the practice of one’s daily work. The *déformation* here is Hames’s tendency to be all-inclusive and hyper-organized. She covers every possible eventuality in the peer review process, from varieties of conflict of interest (dual or competing commitment), to personal animosities between research groups, to examples of reviewer reminder messages that grow with increasing insis-

tence from a gentle reminder to a note “with perhaps the suggestion that they abandon the review” (page 69). How can these traits be a fault? They can’t, but many veteran editors, with a sigh of recognition, will recognize these joyless and sometimes oppressive traits (the “Miss Grundy syndrome”) as their own.

On the other hand, workers new to the profession can only be thrilled at finding such a detailed book at the beginning of their careers. Especially interesting in this regard is the appendix of exemplary editorial documents (such as a change-of-authorship form and a reviewer-guidance form) borrowed with permission from journals such as *The International Journal of Psychoanalysis* and *Polar Research* (the journal of the Norwegian Polar Institute). These examples of working documents offer rare and enticing views into the idiosyncrasies of other editorial offices, and are much more interesting than the generic templates that are usually included in such manuals. The final appendix is devoted to alternative models of peer review (pre-submission peer review, post-publication peer review or commentary, open public peer review, author-initiated peer review), most of which have been made feasible by the move toward open-access publication. Some of these innovations will be incorporated into the classic publishing process, but from a brief review of their drawbacks the reader can better appreciate how the traditional peer review process has lasted as long as it has.

Hames discusses aspects of editing that should resonate with many of her colleagues who take the time to read this valuable book, including: the challenge of writing concise yet comprehensive author instructions that

do not overwhelm the author in minutiae or alienate the user with demands; the “comfort cushion” of clinging to a paper record in a digital world, in case of system or network failure; and the advantages of hard copy over computer screen for some tasks. The book is extensively and valuably referenced, and many of the listed sources are available online; it sent me source-hunting for, among other things, a “good exposition on the usefulness or otherwise of key words in scientific journals” (page 49).

Publishing has long been known as “a gentleman’s profession.” To read **Peer Review and Manuscript Management in Scientific Journals** is to appreciate that this is literally true in the publication of scholarly scientific articles, where the integrity of the enterprise depends on the good faith of all concerned: authors to undertake studies that conform to ethical standards and to submit reports that are not manipulated; reviewers to give freely of their own time, to pay attention, and to discern flaws; editors to have not only extraordinary powers of discrimination but also to keep confidentiality and to ensure that all involved in the review process are treated fairly and given due credit. The book offers all “grubs” toiling away with nose to paper (or to computer screen) a keener appreciation of their minor but real role in the scientific tradition. RESPIRATORY CARE’s staff is presently considering implementing several of the book’s suggested protocols. The editing and index are, as one would expect, impeccable.

**Katherine Kreilkamp**  
Assistant Editor  
RESPIRATORY CARE  
Seattle, Washington