

The Essentials of Respiratory Care, 4th Edition. Robert M Kacmarek PhD RRT FAARC, Steven Dimas RRT, Craig W Mack MM RRT. St Louis: Elsevier Mosby. 2005. Hard cover, illustrated, 839 pages, \$69.95.

Previous editions of this text have been a staple in many respiratory care programs. I find myself referring students to **The Essentials of Respiratory Care** to answer their questions so often it is almost routine. "Have you checked Kacmarek?" is my standard reply when students need some tidbit of information for their homework or clarification for their classes. This text is listed as one of the primary or secondary texts in almost all of our core classes. That says a lot about its versatility as a text.

With this new edition the authors attempted to preserve the text's utility as a reference tool while adding up-to-date clinically relevant information for respiratory care students and practitioners. Many chapters have been totally rewritten, such as the chapter on mechanical ventilation and the chapter on positive end-expiratory pressure. There are several new chapters as well. The text was reorganized to group subjects together more logically.

This edition begins with an attractive and durable hard cover. The table of contents is well organized and useful. This text is divided into 8 sections and further divided into 46 chapters. Sections are organized to include several chapters that cover various subjects relevant to the section heading. For example, Section I is "Respiratory Care Sciences and Infection Control" and contains chapters on basic chemistry, physics, and microbiology. These chapters are relevant for any respiratory care student or clinician. This method of grouping chapters into meaningful sections continues throughout the text.

The text's many other sections include "Cardiopulmonary and Related Anatomy and Physiology," "Neonatal and Pediatric Respiratory Care," "Basic Respiratory Care," and "Advanced Respiratory Care," just to name a few. The section headings appear to follow the curriculum of a respiratory care program. Chapters are written in outline form, following a logical sequence, with a bibliography at the end of each chapter. There are many tables and illustrations

throughout the text. The illustrations are of good quality, and seem to be improved over the previous edition. Chest radiographs are present where appropriate and are clear and easy to see.

The text's stated goal is "to present what we believe is the knowledge base required of respiratory therapists, in a logical and concise manner." The authors explicitly dismiss discussions on technical information and new technology, stating that such a text cannot remain current for long and that there are other volumes and periodicals on those subjects. They also state that, because of the book's format, it is best used as a secondary text, for quick reference and review. They believe this text is best suited for students preparing for their board examinations.

Respiratory care is expanding as a profession, and greater demand is being placed on its practitioners. The requisite knowledge base is broader than ever before. Does this text adequately represent the knowledge base of a respiratory therapist? I believe it does. The authors have put the wide variety of subjects in one volume that addresses both the basics, such as gas exchange and acid-base balance, and important topics such as hemodynamic monitoring, fluid and electrolyte balance, and renal anatomy and physiology. The text goes above and beyond my expectations of a respiratory care text. The authors include relevant information that we have often needed to search outside our texts to find. For example, in the section "Cardiopulmonary Assessment and Diseases and Their Management," in addition to a host of diseases, there are discussions on various assessments, work of breathing, respiratory mechanics, and pulmonary function testing.

I was also pleased to find a short discussion on indirect calorimetry in the chapter on nutrition. It is refreshing to see a detailed discussion on nutrition and its assessment as a core component of a respiratory care text. In the same discussion the authors state that indirect calorimeters are incompatible with bias-flow ventilators; however, there are now systems available that compensate for bias flow. This supports the authors' position that a textbook is not the correct format to discuss new technologies, and this point does not detract from the overall discussion.

Aside from the standard chapters on obstructive and restrictive diseases, there is a whole chapter devoted to acute respiratory distress syndrome, severe acute respiratory syndrome, and sepsis, which is a topic on everyone's mind these days. This chapter is informative and contains up-to-date information. These are just a few examples of how the authors consistently provide detailed and complete discussions on the various aspects of respiratory care theory.

As stated in the preface, part of the goal of this text is to be logical and concise. I found the section on neonatal and pediatric respiratory care to be a good example of logical flow and concise information. This was one of the sections that benefited from a complete rewrite. The first 3 chapters follow a progression from intrauterine development and anatomy through mechanical ventilation for the neonate. The next 2 chapters follow a similar progression for the pediatric patient. Each of the chapters in this section is well thought out and is packed with information. One consistent problem subject for students is fetal circulation. The description of the transition from fetal to newborn circulation is given chronologically and easily does in half a page of text what takes me about 40 min to discuss in class. There is a nice illustration that uses arrows to show the pathway of blood flow. This is an instance where a color graphic might have been superior to black-and-white, but printing limitations may have made it impossible for the authors to employ color.

The ultimate meter of any text is how well it works in everyday situations. For the last 3 months, I have shared this edition with my students as well as using it to prepare for lectures. I found it easy to navigate and much quicker than a traditional text when looking for specific points. As in previous editions, the text is written entirely in outline format. Outlines allow the user to quickly find the desired information, rather than skimming through pages of text to find a specific point. The most consistent student complaint is that the text is difficult to read because of this format. I have observed with the third edition that as the student's knowledge-base increases, his or her ability to use this text efficiently does as well. When it comes time to study for examinations,

The Essentials of Respiratory Care is often the first book out of the book bag. I am sure this will hold true for the fourth edition as well.

Students, instructors, and practitioners have a variety of choices when it comes to respiratory care theory books. How does this book measure up to other texts in the same class? Because of its unique format, the authors are free to include large amounts of information in a compact and easily accessed package. As a reference manual I found this book superior to others on my shelf because of its detail and ease of use. Its extensive table of contents and comprehensive index contribute to the ease of use.

I agree with the authors' position that this book is best suited as a reference manual and not as a primary text. However, this is a quintessential piece of respiratory care literature. I believe it has a place in any student's book bag, as well being as a great complement to any respiratory care department's library. I found this book extremely useful in my daily preparations for teaching, and it pulls double-duty as a clinical reference.

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Respiratory Care Made Incredibly Easy!

W Chad Barefoot RN MSN CRNP and contributors. Philadelphia: Lippincott Williams & Wilkins. 2005. Soft cover, illustrated, 344 pages, \$35.95.

Respiratory Care Made Incredibly Easy! is presented as a new respiratory care reference for all acute-care nurses who have respiratory care patients. The foreword's author suggests this text is for nurses who work in medical-surgical, critical care, emergency, or pediatric nursing units, and is a supplement for hospice and home-care nurses. The foreword also recommends this text for nurses who require respiratory knowledge to be able to pass certification examinations in medical-surgical, critical care, or pediatric nursing.

The book includes 11 chapters, a glossary, a quick reference guide to laboratory tests, references and Internet resources, and an index. Each chapter is organized with a list of objectives, titled "Just the Facts." The text is highlighted and the type bolded to differentiate key concepts. The material is presented in a casual yet straightforward

manner and includes a "snapshot summary" in bullet format. I found the material clear and concise, and it held my attention. The illustrations and diagrams are ample and easy to understand, and many are nicely colored. There are cartoon-style figures scattered throughout, on the margins, which apparently are meant to be humorous, though I found them somewhat distracting in a reference book. Each chapter contains text boxes that highlight or reinforce important points. The "Advice From the Experts" section offers special tips from respiratory professionals. The "Now I Get It!" section notes particularly important aspects of respiratory disorders, procedures, tests, and treatments. The "Kids' Korner" section addresses concerns specific to children. The "No Place Like Home" section provides information on adapting care when the patient goes home. Each chapter ends with a quiz of multiple-choice questions and a scoring guide. The references and Internet resources seem to be current, as of my reading. I noted no typographical or grammatical errors.

Chapter 1 provides a succinct review of anatomy and physiology of the respiratory system, though the section on acid-base balance was over-simplified.

Chapter 2 was my favorite part of the text. It provides a thorough review on obtaining a health history, using a systematic approach for physical examination, which includes inspection, palpation, percussion, and auscultation, and a nice review of abnormal chest, respiratory patterns, and breath sounds. In other words, it's the "good old-fashioned way."

Chapter 3 covers common diagnostic tests, factors that interfere with those tests, pertinent nursing care, and what the tests may indicate. My main criticism relates to the section on arterial blood gas analysis and obtaining a blood sample. The explanation is far too brief for such an important diagnostic tool, and the description of obtaining a sample omits choosing an appropriate site and an explanation of how and where to perform an Allen's test. I liked the information on pulmonary function tests, though a diagram of lung volumes and capacities would have been helpful. The section on pulse oximetry could benefit from an illustration of an appropriate waveform, which is useful in determining the accuracy of the reading.

Chapter 4 includes classes of drugs used to improve respiratory function, surgical treatments, how to administer inhalation

therapy, and how to perform chest physiotherapy. The section on drug therapy completely omits anticholinergics. The discussion of nursing considerations with endotracheally intubated patients should include hyperoxygenation and hyperinflation before and after suctioning. I liked the sections on securing an endotracheal tube and end-tidal carbon dioxide monitoring. The section on handheld oropharyngeal inhalers has nice illustrations of types of inhalers, but incorrectly lists the administration of mucolytics. The section on nursing considerations of incentive spirometry provides a very nice patient instruction set. The discussion on mechanical ventilation is too brief; it provides only the bare minimum of information. There is no illustration of waveforms associated with mechanical ventilation. Discussion of continuous positive airway pressure should be included in the section on ventilator modes. I liked the inclusion of criteria for weaning. The depiction of the large-volume nebulizer is antiquated. The section on oxygen therapy did not include any discussion of humidification of dry gas. I liked the illustration of oxygen-delivery systems, but care of transtracheal oxygen needed more elaboration. The section on nursing considerations for transtracheal oxygen should also elaborate the requirements of tracheostomy care in the tracheostomy section. The discussion of miscellaneous treatments omitted mentioning the administration of chest physiotherapy via pneumatic, electric, or special bed. Other mucus-clearance devices include the Vest and positive-expiratory-pressure devices.

Chapter 5 discusses common acute and chronic respiratory infections and inflammation disorders, including their causes, pathophysiology, signs and symptoms, diagnostic test results for acute respiratory infections, and treatment options. There is a nice presentation on pneumonia. There is no mention of the need to nasotracheally suction children with respiratory syncytial virus in the "What to Do" portion.

Chapter 6 discusses common obstructive disorders, including the potential causes, recognition, and treatment of these conditions. There was no mention regarding the Standards for Asthma Management.

Chapter 7 discusses common restrictive disorders, including potential causes, recognition, diagnostic tests, and treatment.

Chapter 8 discusses several vascular lung disorders, including causes, pathophysiology, recognition, diagnosis, and treatment. I particularly liked the illustrations in this chapter.

Chapter 9 covers the characteristics of several traumatic respiratory injuries, their potential causes, recognition, diagnosis, and treatment. There should have been some emphasis on the inaccuracy of pulse oximetry with inhalation injuries.

Chapter 10 covers characteristics of laryngeal and lung cancers, their potential causes, diagnosis, treatment, and staging.

Chapter 11 reviews the potential causes of respiratory emergencies, and their diagnosis, recognition, and treatment. The illustrations were clear.

There were several notable omissions in this text. There was virtually no recognition of how respiratory therapists can assist the nurse. There is no discussion of clinical practice guidelines in the administration of respiratory therapy. There were no references cited in the body of the text; including references could have made it more convenient for the reader to find evidence for or against the views this book puts forth. The discussions on treatment of pediatric/neonatal patients is so limited, I doubt it would adequately prepare a nurse for routine care, let alone any specialty certification examination. Though there is material directly related to critical care, it is limited and offers no discussion of hemodynamic monitoring. There is also no discussion of organ donation or the ethics of end-of-life care.

In summary, **Respiratory Care Made Incredibly Easy!** is a reasonably complete and concise reference guide on the fundamentals of respiratory care. I think this text would be most appropriate for a medical-surgical nurse. A critical care, emergency department, or pediatric nurse preparing for a specialty certification would find this text useful, but it falls short of the details necessary to provide expertise in the care of a complex respiratory patient. Overall, I did enjoy reviewing this text from a nursing perspective.

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Capnography: Clinical Aspects. Carbon Dioxide Over Time and Volume. JS Gravenstein MD DrhC, Michael B Jaffe PhD, and David A Paulus MD, editors. Cambridge, United Kingdom: Cambridge University Press. 2004. Hard cover, illustrated, 441 pages, \$120.

With contributions by 59 authors, **Capnography: Clinical Aspects. Carbon Dioxide Over Time and Volume** is an excellent addition to a reference library. Written mostly by physicians (with contributions by 2 respiratory therapists), this book would be useful for anyone interested in the traditional and emerging applications of capnography. The editors point out in the preface that this book is written as a series of essays rather than as a textbook. Each author incorporates conclusions from published studies and examples of first-hand clinical experience in each of the chapters.

I found the format in the first part of the book easy to read, in that each chapter provided a different viewpoint on the same capnography sub-topic, and the examples presented made this truly a Clinical Aspects book. The book is laid out in 4 parts: "Clinical Perspectives," "Physiological Perspectives," "Historical Perspectives," and "Technological Perspectives." Each section has a distinct style, and the information in each section is true to its heading. Twenty-six of the 42 chapters are in the "Clinical Perspectives" section, which is divided into 5 subsections on capnography applications for ventilation: adequacy of breathing, airway management, monitoring of ventilation, and weaning.

The remainder of the "Clinical Perspectives" section covers "Special Situations," which is a large section on circulation, transport of carbon dioxide, pulmonary flow, and carbon dioxide production.

The opening chapter, written by Gravenstein and Paulus, who are two of the editors, gives a good overview of capnography applications and normal and abnormal capnograms. This chapter establishes the reader's interest and provides essentials of capnography, which are developed throughout the book.

The following chapters cover various applications of capnography in all types of settings. Included are uses during anesthesia, in intensive care, and during pre-hospital admission. The contributing authors cite specific studies that illustrate capnography applications, and they include many anecdotal clinical scenarios that have been reported in the literature.

Basic key concepts are introduced, including verification of artificial airway placement and American Society of Anesthesiologists (ASA) standards. An interesting clinical application described is the use of capnography to determine correct placement of a nasogastric tube; Chapter 4, by Betadpur and Truwit, gives a detailed description of the technique.

The book's largest section is "Clinical Perspectives," which is on the use of capnography during mechanical ventilation. While these chapters are sometimes repetitious in describing basic aspects and application, each author provides his or her own insight into capnography as a clinical tool. The authors describe many unusual clinical scenarios where capnography was used, including during cardiopulmonary resuscitation, for determining airway placement and the adequacy of chest compressions, and as a tool for predicting survival. The ventilation section also includes chapters on capnography in noninvasive ventilation, sleep studies, and during procedural sedation. The sedation chapter provides a good review of the ASA definitions of the levels of sedation and the standards and recommendations from the ASA and the American Academy of Pediatrics for monitoring during sedation.

Several chapters introduce the emerging volumetric capnography techniques and show applications with neonates and in optimizing mechanical ventilation. There is a good explanation of the differences between time-based and volume-based capnography, and the subtle aspects of the angles and slopes of portions of the capnogram. Included in the section on optimizing mechanical ventilation is the evaluation of the phases of the capnogram to adjust ventilator settings, such as positive end-expiratory pressure to reduce dead space, and to see changes in pulmonary perfusion.

Chapters 20–24 explore the use of capnography to make determinations regarding circulation. Here, again, some of the material is repetitious from previous chapters, but each chapter stands alone on its merits. Chapter 21 extensively covers the use of capnography for detecting embolism and reviews capnography for dead-space determination. There is further information on the use of volume-based capnography for dead-space calculation, and there is an entire chapter on volumetric capnography that provides additional explanations of dead-space-ver-

sus-tidal-volume calculations. Chapter 22 introduces capnography in the indirect determination of cardiac output, utilizing a modified Fick equation and partial re-breathing technique. Clinical scenarios include evaluation of hypotension, thready pulse, hypovolemia, and using capnography to determine intra-operative bleeding.

Part 2, "Physiological Perspectives," has chapters that blend the clinical perspective with abnormal physiologies and how they manifest capnographically. There is a review of CO₂ transport, ventilation/perfusion abnormalities, and acid-base balance. Included are discussions on rarely considered clinical situations, such as inherited mitochondrial disorders, and clinically relevant situations such as cyanide poisoning and calcium disorders. There is also an excellent discussion on the effects of bicarbonate administration on CO₂ and other unusual acid-base presentations where capnography might be a beneficial tool.

Chapter 31 is very detailed. It provides extensive information about the theoretical basis of capnography and compares ideal and pathologic capnograms. There is a detailed explanation of volumetric capnography, with references and numerous abnormal capnograms.

The final chapter of the "Physiological Perspectives" section covers the "single-path model," which is the true theoretical basis for volumetric capnography. The author provides the inquisitive reader with specific calculations used in today's instruments. The original published studies that validated the single-path model concept are referenced and discussed, giving a thorough understanding of the inferences.

Part 3, "Historical Perspective," has 5 chapters, which describe the development of time-based and volumetric capnography and how instruments were created to meet research and clinical needs as the understanding of respiratory physiology was increasing. Smalhout and Fletcher, who were early pioneers of capnography, are contributing authors of this section. An interview with Liston, who built the first instruments, is also included.

The final section, "Technological Perspectives," departs from the rest of the book's clinical approach, but this is necessary for a thorough understanding of capnography. These chapters address the technical specifications, standards, and design considerations of the instrumentation. Chapter 40 details the measurement techniques—

infrared, acoustic, colorimetric, and mass-spectrometric—used in today's instruments. Jaffe does an excellent job of presenting instrument technology, design, and function at the component level. A comparison of mainstream and sidestream measurement techniques includes a pro's and con's table. The final chapter is devoted to flow-measurement technology. Included are excellent descriptions of the designs and styles of pneumotachographs used clinically today. The chapter discusses how flow is integrated and matched with the capnography signal for the volumetric capnography application.

I found this book very informative, and the format made it easy to read in multiple sessions. Each chapter is a select body of information that stands alone, and the cumulative information gives the reader the entire scope of capnography. The illustrations and tables appropriately supplemented the text rather than just restating the same information. Since capnography is a graphical portrayal, the figures were invaluable in understanding the subtle difference in clinical applications. This book would be useful to physicians, nurses, and respiratory therapists, both as a reference and as a teaching aid to enhance the clinical application of capnography.

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Supportive Care in Respiratory Disease.

Sam H Ahmedzai and Martin F Muers, editors. (*Supportive Care* series, Sam H Ahmedzai and Declan Walsh, series editors). Oxford, United Kingdom: Oxford University Press. 2005. Hard cover, illustrated, 540 pages, \$135.

Supportive care is a comprehensive, concentrated, and interdisciplinary approach to the care of individuals with chronic illness. Supportive care attempts to ameliorate symptoms and improve the quality of life throughout a patient's course of illness, from curative and life-prolonging interventions through dying and death. In 2002, over 10% of people over the age of 65 died from chronic obstructive pulmonary disease, lung cancer, and other respiratory disorders.¹ The cumulative burden of chronic progressive respiratory disorders is increasing in concert with the increase in the percentage of

aged people and the increasing prevalence of tobacco- and occupation-associated lung disorders.² The vast majority of patients with late-stage chronic obstructive pulmonary disease or lung cancer experience troublesome shortness of breath, and this symptom is prevalent across progressive terminal diseases.³⁻⁴ **Supportive Care in Respiratory Disease** is part of a new series from an international cadre addressing supportive care, and it is unique in its focus on the comprehensive care of patients with diseases that affect respiration. The text fills a sorely needed gap in the care of the chronically ill, beyond pain and end-of-life needs.

Although the authors of this book's 32 chapters come from more than 10 countries, the book has a British flavor and a strength for those practicing in the British National Health Service, reflecting its primary origin in the United Kingdom. However, the text's strength is its strong grounding in theoretical models and primary research from an international perspective, and thus it has applicability wherever medicine is practiced. Its approach is contemporary and reflects the trends in health services toward disease management, interdisciplinary team approaches, and earlier combined palliative and curative therapies.

The material is well selected and organized, reflecting a comprehensive approach from both a scientific basis and a holistic focus on patient-centered and family-centered outcomes, such as a full chapter on health-related quality of life and another on complementary and alternative medical approaches. The book is useful as a comprehensive synopsis of supportive respiratory care for health-care practitioners, including respiratory therapists, nurses, and physicians, and as a sufficient reference manual in a subject where there had been none. It provides overviews on specific clinical issues with sufficient detail in the art and science of medical practice to aid in practice and provide contemporary and classic references for further information.

Supportive Care in Respiratory Disease is organized into 7 parts. Part I provides an excellent introduction into supportive and palliative care theory as it relates to pulmonary disorders and symptoms, and provides sufficient anatomic and physiologic background.

Part II provides one of the best synopses yet assembled of mechanisms of dyspnea and its assessment in clinical practice and

research, limited only in its depth by space constraint and in its clarity by the state of the art, in that much remains unknown in this field.

Part III deals with various modalities to manage dyspnea, and this section is far-reaching in its comprehensiveness and presented with excellent precision. The book's presentation of therapies occasionally suffers from being too concise and therefore not providing sufficient detail to guide individual patient management. For example, although the drug-management chapter includes nearly a dozen different classes of medication, only 2 paragraphs concern bronchodilators, which is not enough to provide balanced guidance across symptom experiences or disorders. The chapter on oxygen therapy, by contrast, includes depth in available research knowledge, combined with practical guidelines and nuanced detail. It includes information on subjects such as the multiple storage and delivery systems that will better serve researchers, physicians, respiratory therapists, and nurses. Two excellent chapters on exercise and rehabilitation cogently support the utility of cardiovascular evaluation, and interventions such as education, breathing retraining, and exercise prescription. The section is well rounded by chapters in nonpharmacologic and psychosocial interventions, nutrition, and occupational therapies. These chapters are, by necessary design, too short to provide sufficient clinical management skills to specialized practitioners, such as respiratory and occupational therapists, but serve well the goal of providing a solid basis in multidisciplinary management. The management section provides an excellent overview of diverse modalities for both the practitioner and researcher interested in respiratory management.

Part IV applies the modalities of dyspnea management to specific clinical entities, including obstructive and restrictive disorders, upper-airway pathology, disorders of insufficient respiration (especially neuromuscular and motor neuron disease), and hyper-ventilation disorders. The chapters in this part attempt to associate the background pathophysiology and management strategies from the prior sections into inclusive and cogent care strategies for specific conditions. The chapters are busy, due to the laudable goal of comprehensiveness, but often they miss the mark in achieving a cohesive dis-

ease-management approach. Lapses also include inadequate information in disease trajectory and prognosis in the emphasized disorders, and inadequate practical applications of ethics in palliative and end-of-life care.

Parts V and VI address cough, hemoptysis, and respiratory-associated pain disorders. The pain section suffers from having insufficient space to summarize background, mechanism, and management, but the authors provide key points and adequate references.

The last part, which addresses certain diseases, is excellent, but unfortunately it tackles only cancer, human immunodeficiency virus, and tuberculosis. Although other disorders are addressed elsewhere in the text (eg, cystic fibrosis is discussed in the section on cough and hemoptysis), inclusion and review of other primary respiratory disorders—most notably chronic obstructive pulmonary disease and idiopathic pulmonary fibrosis—in Part VII's format would have added to the reference-shelf utility of the text and its organizational structure.

The text appropriately avoids excessively controversial issues; it provides balanced and grounded data where available and avoids speculative claims or expert opinion on under-researched interventions. Although the book is comprehensive in theoretical and physiologic background, assessment of symptoms and patient experience, and palliative approaches and therapy, it has sparse data on cost, with the exception of an introductory chapter on economic analysis, and it fails to incorporate its interdisciplinary approach into individual management chapters. Sleep medicine is also under-represented in this first edition. The text has an extensive and useable index, and overall is a comfortable and asthetic read. Figures, graphs, and photograph-radiographs are in grayscale black-and-white.

Supportive Care in Respiratory Disease is a desperately needed addition to the world's medical literature, as a well-written and scientifically-supported summary of the expanding knowledge base in supportive and palliative care. The text has as its strength a solid foundation in contemporary health-care-delivery theory and a comprehensive backbone of the available knowledge in pathophysiology and therapy of respiratory symptoms. The volume succeeds in bring-

ing together the art and science of respiratory medicine and is a major contribution.

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Adventures of an Oxy-Phile. Thomas L Petty MD. Irving, Texas: American Association for Respiratory Care. 2004. Soft cover, illustrated, 96 pages, \$5.95.

It is hard to separate the writer from the writing when the author is a living legend. Equal parts autobiography, journal, operator's manual, and advice column, **Adventures of an Oxy-Phile** imparts Thomas Petty's perspective as both a pioneer in the field of oxygen therapy, and, ironically, as a long-term-oxygen-therapy (LTOT) patient.

Dr Petty initially made respiratory care history in 1965 when he challenged preconceived and ill-founded fears by "giving oxygen to (so-called) chronic obstructive pulmonary disease cripples." His subsequent studies on the benefits of LTOT laid the cornerstone of nocturnal and ambulatory oxygen therapy. A pulmonologist and a professor of medicine at both the University of Colorado Health Science Center, in Denver, Colorado, and the Rush-Presbyterian/St

Luke's Medical Center, in Chicago, Illinois, he has spent over 40 years inspiring students, challenging assumptions, and crusading for positive change. Dr Petty no doubt savors his role as instigator of spirited debate. Although he may be best known as a researcher and professor, he has never stopped "doctoring" patients.

Dr Petty is now the founding chairman of the National Lung Health Education Program, promoting the "Test Your Lungs, Know your Numbers" campaign, and encouraging primary-care physicians to use office spirometry for diagnosis and management of chronic obstructive pulmonary disease and other diseases. He writes the "Ask Dr Tom" column for the Web site YourLungHealth.org, which is but a single mouse-click away from the icon (an appropriate term) featuring his photograph on the Web site of the American Association for Respiratory Care (AARC). He apparently enjoys fishing, writing books, and producing a seemingly endless stream of articles and on-line columns in his spare time.

Dr Petty's approachable demeanor, often enhanced by bow-ties, makes him seem like a country doctor; one nearly expects him to arrive at an international conference in a horse and buggy—little black bag in hand. After 3 open-heart surgeries and a subsequent lifetime membership induction into the oxygen-using fraternity he fairly founded, he wrote this book to help instruct and guide the patients he has never ceased to serve.

Adventures of an Oxy-Phile is an affordable paperback, just small enough to fit into a purse or jacket pocket. The price tag (6 bucks) is no surprise. We're talking about a man who once advocated the use of a calibrated plastic bag for measuring lung volumes. The font choice is acceptable for aging eyes, although selecting a font one size larger would not have hurt, considering the target audience. The black-and-white photographs and snapshots are serviceable but somewhat deficient in definition and contrast.

The first half of the book is divided into 1-or-2 page vignettes that cover everything from self-image to travel issues to sexuality to safety considerations. The second half of the book, mostly written by fellow oxygen users, features a series of light-reading stories and adventures of people using their supplemental oxygen to improve their quality of life. By the end of the book the reader can hardly wait to take delivery and start

using the latest high-tech home oxygen outfit.

The 20 vignettes offer simple, common-sense information that reinforces and supplements the knowledge patients should be getting in pulmonary rehabilitation programs and from their home LTOT providers. He advises patients to get their own pulse oximeter and that they "maintain an oxygen saturation of 88–90% or higher under all conditions, if possible." While that is good advice on face value, there appeared to be an assumption that the patient would be working closely with his or her physician when titrating oxygen for activity or changing condition. He even offers some experiments to demonstrate oxygen dynamics—teaching patients, for example, that oxygen washout prior to a blood draw for arterial blood gas measurement can take 20 min or more. It would have been appropriate to include a strong admonishment to work closely with the primary physician when titrating oxygen level and to inform him or her about changes in condition.

As a former home-care oxygen provider, I welcomed Dr Petty's brief but sage advice on the over-rated use of bubbler humidifiers, which commonly create more problems than they solve. Although not specifically mentioned in this book, one common problem is that the bubbler can lead the patient to the incorrect assumption that, because it is bubbling, oxygen is therefore being delivered at the nasal prongs. However, if the top is askew, the oxygen can be leaking out the top of the humidifier, and the patient is receiving little or no oxygen. Dr Petty offers interesting "how-to" advice so patients can reliably confirm that oxygen is reaching the nasal prongs.

I strongly dispute his suggestion, put forth in the "Up In Smoke" vignette, that "it is silly, if not absurd, to have signs posted outside the home or workplace (that read): 'No Smoking—Oxygen in Use.'" While he correctly explains that oxygen is nonflammable, and that oxygen tubing would need to be directly ignited before it would burn, he also suggests "nobody should be that stupid." In fact, he had previously stated that "horrible facial burns have happened" to patients who smoke with their oxygen on; and most home care providers can cite examples of burned extension tubing and cannulae resulting from direct ignition of the tubing or cannula from a burning cigarette or other open flame. Some people have actually burned their face and nasal passages

more than once, because they did not learn their lesson the first time.

Rather than address oxygen safety and smoking cessation in a single brief vignette, 2 separate essays would have given each of these important topics due consideration. Although in-depth smoking-cessation advice is beyond the scope and tone of the book, a discussion about the benefits of quitting and where to start with a quit plan would have been helpful and appropriate. Likewise, a more in-depth discussion of oxygen safety would have been good.

Communicating the subtleties of safely handling oxygen is a delicate undertaking. Too stern a warning can create unnecessary anxiety for some patients who may remember or know of the 1937 Hindenburg disaster, but who may be unaware that hydrogen was the gas that fueled the horrific accident. Too weak a warning and some patients will proceed with an inappropriate, cavalier attitude toward oxygen. Although this book generally strikes the correct balance, a more in-depth discussion would have been useful, and would have been consistent with the "No Smoking—Oxygen in Use" message patients should be hearing from their home-care respiratory therapists: oxygen vigorously accelerates combustion and should not be stored in an enclosed, unventilated space. Smoking in the immediate vicinity of oxygen or oxygen tubing should be strictly verboten.

The second half of the book is composed of short stories written by various oxygen patients, clinicians, and one author identified only as the "Energizer Bunny." One of the most engaging was written by Mary Burns RN, who described the antics and adventures of patients aboard the first cruise ship to allow LTOT on board. Her light-hearted account of frantically slogging through the necessary bureaucracy just prior to the ship's departure brought some historical perspective to the challenges of international travel with LTOT. The stories provide a potpourri of perspectives and are presented as notes and commentaries written from one friend to another. They serve to initiate and welcome oxygen users to their exclusive "club."

The book includes a series of appendixes that respiratory therapists and physicians will find as helpful as the lay audience. The book's Table 2 should be posted in the office of every general practitioner who prescribes LTOT. It includes patient-selection

criteria, oxygen dosing, and expected outcomes in a simple chart format. If physicians would review this when writing oxygen orders, home-care providers would save countless hours of clarifying or completing inadequate or inappropriate LTOT orders.

Appendix C offers a careful overview and comparison of the various LTOT systems, with frank observations by Dr Petty. As a member of numerous Food and Drug Administration advisory committees and as co-chair of the 2005 Sixth Oxygen Consensus Conference, he has strongly influenced many of the recommendations and regulations that drive the LTOT business. He clearly has little patience with Medicare and insurance carriers who argue for inferior technology based on the “modality neutral” concept. And he has even less patience with a few LTOT home-care providers who create confusion by misrepresenting some is-

sues. He understands and anticipates the arguments and offers a brief but no-nonsense rebuttal in this book. Many physicians and respiratory therapists who are confused by the issues may find his frank discussion to be an eye-opening experience.

Our patient reviewers were uniformly impressed with **Adventures of an Oxy-Phile**, and found the book genuinely helpful. Sol Gould, of Laguna Woods, California, said “This book is an absolute necessity to anyone who has been diagnosed as having chronic obstructive pulmonary disease.” Mr Gould found that the book answered all the questions he had about oxygen, and said that he could identify with almost every vignette. Another reader, Norman McAdoo, of San Clemente, California, was clearly touched by Dr Petty’s ability to speak to him as a fellow patient, and appreciated the warm, human touch that is evident throughout.

The book concludes with a brief listing of suggested additional reading for both clinician and layman. The fact that Dr Petty is an author of most of the essential reading is less a symptom of any egocentricity and more a testimony to the far-reaching contribution he has made to the understanding and use of long-term oxygen therapy. **Adventures of an Oxy-Phile** is both a light read and a user-friendly tool aimed at LTOT users. Clinicians can also gain insight into both the technology and the people who depend on it.

Adventures of an Oxy-Phile is available via the AARC’s online store, at <http://services.aarc.org/source/Orders/index.cfm>. Click on “Manuals and Books.”

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Early concept of ambulatory oxygen therapy
Cartoon by Alvin Barach MD, 1958
From *Adventures of an Oxy-Phile*, Thomas L Petty
Irving Texas: American Association for Respiratory Care, 2004