procedure well. The many incorrect techniques that patients use are amazing! Simpler is better, and repeated review of the patient's technique is suggested. Although this point was briefly mentioned earlier, its importance could have been better demonstrated with a few case studies, as in the previous chapters. Other inhaler devices, such as the Diskus, Turbuhaler, Twisthaler, Aerolizer, and HandiHaler, are described in this chapter. Each device's proper use is discussed, and pictures of the devices help explain what they look like. There is a section on the use of nebulizers, which describes their advantages over metered-dose inhalers. One suggestion is combining medications, such as albuterol and budesonide (Pulmicort). Of note, Pulmicort's package insert states that Pulmicort should not be mixed with other medications because such combination therapy has not been adequately assessed. I have not mixed the 2 medications in my practice in the hospital setting, and instead have nebulized them separately.

Children can present a major challenge in aerosol delivery. The authors state that the "blow-by" method (directing the aerosol towards the child's nose and mouth, without placing the mask against the child's face) is unacceptable in the delivery of an inhaled steroid because of the increased risk of delivering the aerosol to the eyes and facial skin. Unfortunately, the authors do not suggest an alternative method of aerosol delivery for children who fight aerosol therapy. In these situations the respiratory therapist or caregiver is left to do the best he or she can.

Chapter 9 examines treatment of the asthma attack. This chapter will be of most interest to the health care worker in the hospital setting. The use of inhaled bronchodilators via metered-dose inhaler and nebulizer is discussed. The authors suggest the continued use of inhaled steroids during a hospitalization, which reinforces the daily use of an inhaled steroid no matter how you are feeling! I agree wholeheartedly! The care of a severe asthma attack that requires mechanical ventilation is reviewed, as is the use of bi-level positive airway pressure. The end of the chapter highlights what the asthma educator should discuss with the patient and family before discharge. Although not mentioned in the book, a follow-up call within 1–2 weeks by the asthma educator might help answer questions the patient may have after discharge or a physician visit.

Chapter 10 details the asthma action plan, which can provide better outcomes when well-devised and understood by the patient and family. Daily use of a peak flow meter is not recommended, but peak flow should be measured during an attack. The 4 steps of the action plan are explained simply and effectively. The written action plan shows exactly what needs to be done on a daily basis, and during an attack. Forms the authors use in their practice are shown in this chapter. The end of the chapter provides case studies and the actions plans that were developed in a few of the case studies.

The Asthma Educator's Handbook is easy to read, contains good questions and answers, and will provide those who are interested in becoming asthma educators with a solid foundation. Respiratory therapists and nurses who work in a hospital setting will find this information useful in becoming an asthma educator. Social workers and other who are not directly involved in patient care will find this book very useful in understanding asthma and helping educate patients and their families. I recommend this book to anyone who wishes to prepare for the Asthma Educator Certification Examination.

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REFERENCES

1. Expert panel report 2: guidelines for the diagnosis and management of asthma. Bethesda MD: National Institutes of Health, National Asthma Education and Prevention Program; 1997. NIH Publication No. 97-4051. Available from http://www.nhlbi.nih.gov/guidelines/archives/epr-2/asthgdln_archive.pdf. *Accessed February 12, 2008.*
2. Expert panel report 2: guidelines for the diagnosis and management of asthma—Update on selected topics. Bethesda MD: National Institutes of Health, National Asthma Education and Prevention Program; 1997. NIH Publication No. 97-4051. Update on selected topics. 2002. http://www.nhlbi.nih.gov/guidelines/archives/epr-2_upd/asthmafullrpt_archive.pdf. *Accessed February 20, 2008.*
3. Nelson HS, Weiss ST, Bleecker ER, Yancey SW, Dorinsky PM, et al. The salmeterol multicenter asthma research trial: a comparison of usual pharmacotherapy for asthma or usual pharmacotherapy plus salmeterol. Chest 2006;129:15–26.
4. Boushey HA, Sorkness CA, King TS, Sullivan SD, Fahy JV, Lazarus SC, National Heart, Lung, and Blood Institute's Asthma Clinical Research Network. Daily versus as-needed corticosteroids for mild persistent asthma. N Engl J Med 2005;352(15):1519–1528.

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Noninvasive Respiratory Support: A Practical Handbook, 3rd edition. Anita K Simonds MD FRCP, editor. London: Oxford University Press/Hodder Arnold. 2007. Soft cover, illustrated, 370 pages, $65.

This is a comprehensive text on the current indications for noninvasive positive-pressure ventilation (NPPV) and practical issues regarding its application. The book is organized into 25 chapters that cover a wide range of NPPV issues, starting with some basics about equipment and setup, and proceeding to acute and long-term applications, patient selection, patient monitoring, and home use. The chapters are concise, readable, well referenced, and up to date. There are numerous helpful pictures, tables, and algorithms. Most of the chapters are authored by Simonds, but there are several other well-known contributors.

This book will be very useful for all practitioners involved in applying NPPV, including pulmonologists, intensivists, respiratory therapists, and critical care nurses.

The first few chapters cover the basics of NPPV, including equipment, ventilators, interfaces and other accessories, ventilation modes, and how to organize an NPPV service. This provides a good general review of the indications and physiologic rationale for NPPV, as well as technological advances in NPPV, including newer masks, ventilators, and ventilation modes. The chapter on setting up an NPPV service is more relevant to European hospitals, and some of the recommendations do not apply to United States hospitals.

The book then discusses the acute application of NPPV. The chapters cover the use of NPPV in chronic obstructive pulmonary disease (COPD) exacerbation, hypoxemic respiratory failure, neuromuscular diseases, chest wall disorders, cystic fibrosis, and bronchiectasis. These sections are well written and thoroughly referenced. Chapters later in the book address NPPV in the emer-

gency department, post-extubation respiratory failure, weaning from mechanical ventilation, and perioperative use. The strong evidence base for NPPV in COPD exacerbation, acute cardiogenic pulmonary edema, respiratory failure in immunocompromised patients, and weaning from mechanical ventilation in patients with COPD is included and current. The rationale and evidence for NPPV in other less strongly supported situations, including asthma, pneumonia, acute respiratory distress syndrome, and post-extubation respiratory failure is discussed in detail. There has recently been an increasing amount of literature supporting the use of NPPV in postoperative respiratory failure, which I thought should have been addressed either in the chapter on hypoxemic respiratory failure or in a chapter by itself.

There is a very good chapter about setting up NPPV, which includes information about indications, patient selection, relative and absolute contraindications, and instructions for mask fitting, ventilation modes, initial settings, patient monitoring, and duration of NPPV. Cough-assist techniques and physiotherapy are detailed in a very informative chapter. The physiology of cough and the numerous techniques for cough assistance and secretion clearance are explained thoroughly. There is also a chapter on problem-solving in NPPV. Problems include persistent hypercapnia, hypoxemia, air leaks, ventilator asynchrony, confusion, and claustrophobia. Detailed action plans are described for these common situations. Those involved in starting patients on NPPV will find this chapter useful, since these problems are often challenging.

The book has several chapters on patient selection and outcomes of long-term NPPV. These sections cover the common causes of chronic respiratory failure that requires home NPPV, including neuromuscular diseases, chest wall disorders, cystic fibrosis, bronchiectasis, interstitial lung disease, and COPD. These chapters are outstanding. I particularly enjoyed reading Simonds's chapters on neuromuscular diseases and chest wall disorders. They detail the evidence base for NPPV in that patient population, the pathophysiology of the conditions, and the benefits of NPPV. Practitioners caring for these patients will find these chapters very helpful.

There are 2 chapters on discharging patients on home NPPV and problem-solving in long-term NPPV use. These chapters detail the numerous potential advantages of NPPV over ventilation via tracheostomy. The practical issues of managing complications of long-term NPPV use and equipment maintenance are covered.

There are a few chapters on NPPV use in children. The acute indications for NPPV are discussed, although the evidence base is limited. Home ventilation in children is also covered, including the common disorders that lead to chronic respiratory failure and the evidence base for NPPV.

There is an excellent chapter on sleep-disordered breathing. This is a thorough review of obstructive sleep apnea, including pathophysiology, symptoms, diagnosis, and treatment. Continuous positive airway pressure therapy is discussed in detail, including mask selection and setting the optimal pressure. The evidence base for continuous positive airway pressure in obstructive sleep apnea is reviewed in detail, as are other therapies for obstructive sleep apnea, including weight loss, surgery, and dental appliances.

The last several chapters discuss home mechanical ventilation in Europe, and legal and ethical issues. These chapters are addressed more toward a European audience. The ethical principles of beneficence, avoiding maleficence, respecting individual autonomy, and distributive justice are always important to review, especially with regard to this patient population.

In summary, this is a very thorough, nicely written book. The reader will gain a better understanding of the expanding evidence base for NPPV in both the acute setting and the long-term setting in patients with chronic respiratory failure. The practical NPPV issues, including patient selection and monitoring, selecting an interface, ventilation mode preference, pressure settings, complications, and problem-solving, are covered in detail.

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Alpha-1 Antitrypsin Deficiency—Clinical Aspects and Management. Thomas Köhnlein and Tobias Welte. Bremen, Germany: Uni-Med Verlag. 2007. Hard cover, illustrated, 103 pages, €44.80.

Alpha-1 antitrypsin (AAT) deficiency is a common but under-recognized condition that predisposes to chronic obstructive pulmonary disease. It is estimated that fewer than 10% of expected individuals with AAT deficiency are clinically recognized, and there is evidence of a long diagnostic delay between initial symptoms and first recognition by health care providers. Because respiratory therapists (RTs) can play an important role in recognizing AAT deficiency and facilitating diagnosis, the book **Alpha-1 Antitrypsin Deficiency–Clinical Aspects and Management** is a welcome addition to the field and as a resource for RTs.

The book is concise (103 pages) and is a compilation of chapters written by German authors, including some very well recognized authorities in the field. The chapters include an introduction (35 pages, which presents a very nice overview of AAT deficiency, oxidant-antioxidant balance, and protease-antiprotease hypothesis), a discussion of clinical aspects (15 pages), diagnostics (11 pages), and treatment (31 pages), including usual therapy of chronic obstructive pulmonary disease, augmentation therapy, surgical approaches (eg, lung-volume-reduction surgery and transplantation), and gene therapy. The appendix (3 pages) discusses various registries and patient resources, including the Alpha-1 Foundation and the Alpha-1 Association. The book's foreword is written by an august scholar of AAT, Dr Eriksson, who, with Dr Laurel, first described AAT deficiency in 1963. The foreword is a brief description of Dr Eriksson's work in the Malmo (Sweden) cohort, which offers important insight into the natural history of AAT deficiency, and is content-rich.

In the context that the book is a concise treatise on the field, its coverage of AAT and AAT deficiency states is admirably thorough. Indeed, this book might well be used by a respiratory clinician or investigator interested in getting an overview of the field as a prelude to gaining a richer clinical understanding or entering the field as an investigator. The chapters are brief (generally 2–5 pages) and readable in short, stand-alone sessions. Citations, which are included as "Further Reading" or "References," are topical and are a resource to the reader who wishes to delve further, though the text itself certainly provides a solid foundation in basic aspects of AAT and its deficiency, as well as some of the pathobiology of resultant emphysema and liver disease.