

the shelf in every comprehensive hyperbaric facility.

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Respiratory Care Patient-Driven Protocols, 3rd edition. University of California San Diego, Respiratory Services. Irving, Texas: Daedalus. 2008. PDF, illustrated, 184 pages, \$130.

Therapist-driven and patient-driven protocols have been in use for over 20 years, and range from very simple oxygen-titration protocols to complex assess-and-treat algorithms used when a physician orders an "RT consult." Proponents of patient-driven protocols argue that these clinical pathways improve resource allocation and lower costs, and there is evidence in the medical literature to support those assertions. It is likely that the clinicians who pioneered patient-driven protocols also advanced the respiratory care profession by elevating professional expectations. In today's resource-restricted health-care atmosphere, many respiratory care departments use patient-driven protocols to efficiently manage resources. Yet, surprisingly, many respiratory care departments still lack patient-driven protocols.

The development and implementation of a new patient-driven protocol from inception to full functioning can be a daunting task. It can take several months and many man-hours to develop an algorithm or protocol, educate staff, conduct quality-assurance audits, and fine-tune a protocol. Some respiratory care departments have reduced the protocol-development man-hours by starting with a protocol from another institution. The RC World Listserv (https://listserv.iupui.edu/cgi-bin/wa-iupui.exe?a0=rc_world) and the American Association for Respiratory Care help site (<http://www.aarc.org/help>) often receive requests for protocols on various subjects and modalities.

The 3rd edition of **Respiratory Care Patient-Driven Protocols** is now available to help respiratory care departments to develop

new and to improve existing protocols. This collection of protocols was developed by the University of California's Respiratory Care Services Department, and is published by Daedalus Enterprises. The CD-ROM contains the patient-driven-protocol manual in an Adobe Acrobat PDF file, and 25 patient-driven-protocol algorithms in Microsoft Visio format, which allow the reader to print high-quality color versions of the protocols. Macintosh users may have difficulty viewing the files; Visio is not available for Macintosh computers, so a third-party program is needed to view them. On my computer I easily accessed and printed the PDF file.

The manual's sections are: Acknowledgments; Overview of Patient-Driven Protocols; Patient-Driven Protocols; Intensive-Care Patient-Driven Protocols; Pediatric Patient-Driven Protocols; and Bibliography. The manual appears to be a reproduction of the University of California San Diego (UCSD) Respiratory Care Services procedure manual.

This 3rd edition was clearly a collaboration by 35 different clinicians, including respiratory therapists, physicians, and nurses. The authors acknowledge that they used the American Association for Respiratory Care (AARC) clinical practice guidelines in developing the protocols, but there are differences to meet the unique needs of the patients at the UCSD medical center.

The overview briefly describes operational structure, patient evaluation, initiation of a patient-driven protocol, discontinuation of therapy, and the history and an explanation of protocol use at UCSD medical center. These give helpful insights into a highly functioning respiratory care department's management of protocols.

The first section contains 17 separate protocols, on oxygen delivery and titration, oximetry, pulmonary hygiene, artificial-airway management, and inhaled-medication delivery. The protocols all have a similar format, which includes: overview, purpose, scope, contraindications, related protocols, documentation, assessment of outcome, justification of discontinuing, and re-evaluation of therapies. The overviews provide thorough explanations; for example, the oxygen-device-selection protocol contains concise and useful descriptions of various oxygen devices.

Part II contains 4 intensive-care patient-driven protocols: extubation protocol; ventilator STEER (screen for contra-indications,

test for readiness with rapid-shallow-breathing index, exercise, evaluate progress, and report information to clinicians) protocol with an addendum for synchronized intermittent mandatory ventilation with pressure support (SIMV/PS); STEER for cardiothoracic service postoperative (day 1) open-heart surgery; and metered-dose-inhaler protocol for ventilated patients. The protocols in Part II follow the same format as those in Part I. Because of the depth of each protocol, there is considerably more explanation given in the overview sections.

Part III contains 2 pediatric protocols: metered-dose-inhaler protocol, and a weaning protocol.

This manual is intended as a reference tool for respiratory care departments developing their own patient driven-protocols. All the protocols are thorough, well explained, easy to understand, and include bibliographies sufficient to support the algorithms. The algorithms are very readable and easy to understand. The wide variety of protocols included should meet the needs of numerous facilities and patient populations.

That said, I do have some difficulties with this manual. First off, the copyright was confusing. The copyright states that UCSD Respiratory Care Services has proprietary rights to the protocols and that they cannot be used without permission. This would be a disincentive to purchasing this manual if one were not allowed to use the protocols as a basis for developing new protocols. I contacted UCSD Respiratory Care Services and asked them how hard it is to obtain permission to use their protocols. They indicated that they had no problem with departments using UCSD patient-driven protocols as long as they acknowledged UCSD Respiratory Care Services as the source material: "For department use there is no problem, and permission will be readily granted... We encourage others to utilize this resource to develop their own program and edit the original documents for their institutions." (Richard M Ford RRT FAARC, personal communication).

I suggest that the next edition of this manual include a chapter on protocol training. What certification process do respiratory therapists undergo to become qualified to render a patient assessment? Protocol education and testing is often necessary for patient-driven protocols to be successful.

My final criticism is about the manual's lack of discipline in formatting terms. The term for fraction of inspired oxygen appears

both as F_{IO_2} and F_{iO_2} . Likewise, the use of subscripts is not uniform; in some sentences the 2 in O_2 was subscripted in one instance and not in another. And some abbreviations are not defined (eg, STEER, and CT, which in this manual stands for cardiothoracic). This may seem like nitpicking, but with a price of \$130 (\$90 for AARC members), I think attention to these details is warranted.

This manual is an excellent resource for respiratory care department directors and medical directors looking to develop or improve their own protocols. It is easy to read and the algorithms are easy to follow. It does not contain all the information needed to develop patient-driven protocols, but it does provide many useful examples of successful protocols that could easily be modified to suit the needs of other facilities.

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Paediatric Respiratory Medicine. Jeremy Hull, Julian Forton, Anne H Thompson. *Oxford Specialist Handbooks in Paediatrics* series. New York: Oxford University Press. 2008. Soft cover, 880 pages, \$69.50.

Clinicians who need quick but comprehensive highlights about pediatric pulmonary diseases will be delighted with this new book, which, though small, contains extensive information germane to the clinical practice of both generalists and pulmonary specialists in pediatrics, as well as health-care professionals in training. Similar to some online reviews that quickly highlight important facts, diagnostic options, and current therapies, this text provides pertinent bulleted specifics about common respiratory symptoms and signs, respiratory conditions,

supportive care, and common pulmonary-specific procedures. Where there is data, the authors present it; where there is none, they clearly state that they provide their own approaches based on clinical experience. There may not be consensus on these suggestions, but the reader is at least presented with 1 or 2 options used by these experienced clinicians.

As the spelling of the book's title implies, this is a British text, but the information provided is pertinent to patients in all countries. A few of the medication names will need to be translated by United States readers (eg, salbutamol is albuterol), and there are mentions of therapies used in the United Kingdom but not the United States (eg, urokinase for fibrinolysis in children with empyema, and pithidine for sedation), but this is not a serious drawback. The text is more specific than others in print regarding devices (eg, aerosol devices and oximeters). Performance differences between devices from different manufacturers are also presented. This information is time-sensitive, because new products come to market, but it provides practical information for the immediate future.

The text provides very broad overviews on presenting features, such as cough, chest pain, and stridor, but even in these sections there are clinical pearls that specialists will enjoy reading and exploring further. (For instance, psychogenic chest pain is the second most common etiology in children, accounting for up to 30% of cases.) The section on specific conditions is very current, including such new findings about surfactant protein mutations that cause interstitial lung diseases, and the genetics of Saethre-Chotzen syndrome. These will clearly be of use mostly to pulmonary specialists. In both sections, lists of possible investigations and diagnostic tests, including their sensitivity and specificity, are provided, but the relative yield for each procedure is not ad-

ressed. Not all topic sections include references, and readers are expected to pursue the literature if they wish to learn about any topic in more depth.

The section on supportive-care measures is particularly helpful. Other pediatric respiratory medicine texts tend to describe therapies within a discussion of each disease. This text approaches these topics in a more general but practical way, contrasting hospital and home oxygen delivery methods, criteria for weaning long-term oxygen therapy at home, and noninvasive positive pressure therapy for children. Each topic section provides clinical pearls and practical insights, without exhaustive details.

The section on common pulmonary procedures will be of most use to trainees. It provides practical points, such as chest-tube insertion location, bronchoalveolar lavage volumes, and differences in exercise-challenge methods. In some cases (eg, exhaled nitric oxide measurement) details are provided about the specific products used to make the measurements. Common pitfalls of procedures are also addressed, and the details of changing a tracheostomy tube are addressed in this text better than elsewhere.

Those who use this text as an introduction to pediatric pulmonary topics will find it a rich source of highlights and options. This text is not designed to supplant previous texts in this subspecialty, but instead to be used as a quick and practical reference by the busy clinician who needs a useful overview on a variety of clinical pulmonary issues relevant to children. For those who want to learn more in this discipline, this book has enough clinical pearls to make for enjoyable reading.

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