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# Books, Software, and Other Media

**Asthma**. Graeme P Currie MBChB DCH Pg Dip Med Ed MP (UK) MD, editor. *Oxford Respiratory Medicine Library* series. New York: Oxford University Press. 2008. Soft cover, 112 pages, $24.95.

Asthma prevalence has increased in developed countries around the world, and asthma is frequently encountered by primary-care practitioners. It is a complex syndrome with diverse phenotypic presentations, and has become a major public-health concern with far-reaching societal costs and morbidity. This book is a highly readable, clinically relevant guide for the practitioner, and is the latest addition to the *Oxford Respiratory Medicine Library* series. Edited by Graeme Currie, from the Aberdeen Royal Infirmary, it is a slim volume that is ideal for on-the-go, evidence-based reading by the active clinician. The book concisely assesses the state of the art in asthma pathophysiology and treatment. The presentation of information is clear and has appropriately placed emphasis to inform a wide audience. The content is oriented to the primary-care physician, but it will probably be a helpful, informative read for nurses and respiratory therapists and a concise summary for the pulmonary specialist, with key references provided for further reading. Medical students and house officers as well would find this a useful resource upon entering an outpatient pulmonary training environment.

The text is divided into clinically relevant sections, identified on tabs on the margins. Thus, the book can serve as a quick pocket reference in the clinic or hospital. We found it a brief, engaging read, with illustrations and tables summarizing the key points. The book touches on a broad array of asthma topics, with accuracy and accessible style. Some of the information presented, including that on asthma epidemiology, economic impact, and specific medications, reflects asthma practice in the United Kingdom, but the principles set forth are consistent with experience in other developed countries. The section on pathophysiology is simplified but clear, and would provide the non-scientist with a view of key concepts in our understanding of asthma. The sections on clinical presentations of asthma, including exacerbations and difficult asthma, are succinct and outline a thoughtful framework for approaching the wheezing patient.

The approach to severity assessment and asthma management presented here is indigenous to the United Kingdom but is generally concordant with guidelines used in the United States. Importantly, the parameters for assigning the severity of an asthma exacerbation differ, and no framework is presented for assignment of relatively stable asthma to treatment group (eg, intermittent, mild persistent). However, the stepwise treatment approach recommended is logical, useful, and is not accompanied by a complex scheme for choosing an appropriate treatment. Though many of the sections "travel well," concepts presented in the section on asthma in primary care will largely be of interest to United Kingdom clinicians.

Overall we found this book concise, helpfully organized, and clearly written. To the extent that it reflects the approach to asthma in the United Kingdom, it is an interesting companion work to currently available asthma monographs from the United States. This insightful review of current asthma management can be read in a short time and carried for reference. Trainees and practitioners alike would be effectively updated in asthma by doing so.

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**Hyperbaric Medicine Practice**, 3rd edition. Eric P Kindwall MD, Harry T Whelan MD, editors. Flagstaff, Arizona: Best Publishing. 2008. Hard cover, 1,080 pages, $189.

The latest edition of Kindwall and Whelan's **Hyperbaric Medicine Practice** has arrived, after a 9-year hiatus since the last major revision (there were 2 minor revisions of the second edition), and with it a renewed debate about which is the best general textbook in the field. This book has held a preeminent place in the field of hyperbaric medicine since the first edition in 1994, but there are now 2 credible contenders, and the choice has never been more difficult. The contenders, in my opinion, are the European *Handbook on Hyperbaric Medicine* (2006), edited by Mathieu, and *Physiology and Medicine of Hyperbaric Oxygen Therapy* (2008), edited by Neuman and Thom.

The first edition of **Hyperbaric Medicine Practice** was a much-needed comprehensive text that addressed growing criticism of a field in which an uncertain scientific basis seemed reflected in the quality of texts available. Kindwall made clear in the introduction that he intended to supply details of the scientific background and would emphasize the practical application of these findings to patients. In that Kindwall succeeded admirably, and his work provided the bedrock of clinical practice for many hyperbaric physicians worldwide. Not unexpectedly, the world has moved on at a rapid pace since 1994, and the modern evidence-based approach to medicine—with its growing emphasis on the value of good clinical evidence—meant the original text needed revision to reflect this reality. It is by the rigor with which the contributors have assessed the current state of the evidence that this third edition will be judged.

In the preface Kindwall expresses the hope that this book will "remain an up-to-date reference text" and that "clinicians as well as researchers may find it useful." The text is therefore designed primarily for hyperbaric physicians, but is, for the most part, clearly written and with limited resort to jargon, so there is a wealth of information for physicians working in other areas, and for nurses and technicians in hyperbaric medicine. For the latter, the first section, on general considerations, is a particularly clear summary of an unusual field.

The book is handsome and in the classic, unadorned style of Best Publishing's recent suite of texts. It runs to 1,076 pages and so is only slightly weightier than the second edition (952 pages). It remains quite an im-

posing text: too big to balance on the chest in bed at night!

The book follows the previous 2 editions in grouping the contents in 3 broad sections: general considerations (eg, history, physics and physiology, multi-place and mono-place chambers, and economics); disorders approved for hyperbaric treatment; and disorders that remain investigational for hyperbaric treatment. There are now 41 chapters and 53 contributors, which is one more chapter and 6 more contributors than in 1999. As in previous editions, 6 chapters are solely by Kindwall, and these are for the most part in the first section. Kindwall and Whelan contributed to a further 7 chapters. Unlike some of its competitors, therefore, this text represents a broad range of the leading names in the field, and is truly a collaborative work.

To the credit of all concerned, there are relatively few typographical errors, and the writing style is generally clear and concise. Each chapter is referenced separately. The index is short and a little idiosyncratic. For example, the index entry on "necrotizing fasciitis" takes us to the first page of the appropriate chapter, but "necrotizing infections" takes us to a section about bacterial numbers in infected tissue exposed to hypoxia in the chapter on basic mechanisms in infections. I suspect many readers will be reduced to searching through the chapter that seems most relevant to find a specific item of interest. A minor criticism is that the publisher used 2 different referencing styles in different chapters (one that lists the citations in alphabetical order; the other that lists the citations in the order they are cited in the text), which tends to be confusing.

The book is in a rather small format (16.5 × 25 cm). The pages are laid out in a single-column format and subdivided into sections by simple headers. The paper quality is improved over the previous edition. The text is dense, with little space between sections within a chapter or under the internal headings. I found the effect generally somewhat dated, but that is not a reflection on the content, and the information is delivered efficiently. There are some well-presented color plates in addition to the black-and-white plates in the second edition. These are very welcome and for the most part are useful illustrations of important clinical findings. The same clarity applies to the text, where the fonts are limited in number and easy to read. The editors avoided a busy style in favor of a simple approach that I find conducive to comprehension. The sequential development of most chapters is quite logical and easy to follow.

I was not surprised that there were few changes in the majority of the chapters in the first section. Though there is little new in some subjects, such as physics and physiology, it is a little disappointing that the history chapter does not describe any developments since 1999, and that the chapter on multi-place chambers does not update us on the rapid development of rectangular multi-place facilities. Neither chapter is extensively referenced (the multi-place chapter has only 4 references), and none of the citations are more recent than 1990. On the other hand, some chapters have been extensively rewritten, including the one on the economics of running a hyperbaric facility, and others are now more fully referenced, such as the comprehensive discussion on treating critically ill patients in the mono-place chamber. It is not clear why the chapter on basic mechanisms of hyperbaric oxygen in infectious diseases has been moved to the second section and swapped with the chapter on carbon monoxide poisoning; the latter (which has been substantially updated) seems eminently suited to inclusion in the second section, on accepted indications.

In the section on accepted indications there is one less chapter in the new edition, and several other changes. Diabetic feet are considered in a new chapter, and fungal infections have been relegated to the investigational-applications section. It is not stated in the title perhaps because it is obvious to United States physicians, but "accepted" here means accepted by the Undersea and Hyperbaric Medical Society. These chapters give a generally good overview of the rationale for hyperbaric-oxygen treatment for these conditions. The section begins with a summary of decompression sickness that closely reflects the views and practice of the 2 highly experienced authors (Elliot and Kindwall). The discussion is a thorough introduction to the subject, but some of the recommended practices sounded somewhat historical to my ears. For example, they continue to recommend a "trial of pressure" in equivocal cases. They recommend 100% oxygen at 18 m for 20 min and deem the trial positive if the pain diminishes or increases, but negative if there is no change. My interpretation is that such a trial has not been formally evaluated as a diagnostic test and that current practice is a full therapeutic protocol as a trial of pressure. Similarly, the section on adjunctive therapy does not seem to accord with the Undersea and Hyperbaric Medical Society's current recommendations, and does not mention the only randomized controlled trial of an agent for this purpose (published in 2003).

The text is stronger on the non-diving indications. Most are logically set out and extensively referenced. I particularly enjoyed those on gas gangrene and necrotizing infections. Others contributors have tackled their subjects well, but have only accentuated the thin basis in evidence for some of these indications. Perhaps the best example of this is the chapter concerning intracranial abscess. The chapter on chronic osteomyelitis is very well set out, with many attractive tables and diagrams, but I was disappointed with the recommendation to use unvalidated scoring systems to justify amputation in these cases. A textbook of this ambition should have such practices adequately referenced or acknowledge their speculative nature.

The third section is, I think, the most useful for those with some hyperbaric experience and who want a summary of some emerging indications for hyperbaric oxygen. Though such summaries rapidly go out of date, it is often useful to read a thoughtful synthesis from an expert in the field, as a basis for interpreting recent evidence. A good example is the insightful summary on traumatic brain injury. I was also pleased to read a rational, if short, summary of the evidence for various neurologic indications, including multiple sclerosis and cerebral palsy. These are topics of great interest to many practitioners and patients outside the field, and perhaps deserved a more complete treatment.

In summary, **Hyperbaric Medicine Practice** remains one of the few truly useful comprehensive texts in the field. Though a little dated and in need of a more thorough overhaul in places, it remains an approachable and succinct summary of what is becoming a wide field. I highly recommend it as a first textbook for hyperbaric physicians in training, and it continues to be useful to more senior practitioners. Combined with a good diving medical text, it serves as a good grounding to rational practice. The price tag is a reasonable $189, and it should be on

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 Abode 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