

## **Critical Thinking in Respiratory Care: A Problem-Based Learning Approach.**

Shelly C Mishoe PhD RRT FAARC, Melvin A Welch Jr MPH RRT, Editors. New York: McGraw-Hill. 2002. Soft cover, 708 pages, \$59.95.

The editors of this book state that a major goal is to provide information and learning experiences that develop an understanding of respiratory care content based on sound clinical decision-making. The book provides strategies to enhance cognitive and practical critical thinking skills by incorporating numerous individual and group exercises. Students are asked to solve practical problems in health care and respiratory care using a problem-based learning (PBL) approach. Faculty will find several options, with instructions on the use of the textbook, to incorporate PBL. Most educators believe critical thinking is essential for all areas of respiratory care. Respiratory therapists are becoming certified case managers as the health care industry responds to managed care.

**Critical Thinking in Respiratory Care** includes actual clinical cases for critical analysis, patient assessment, clinical application, discussion, and decision-making. The text is well designed and each chapter includes learning objectives, key words, critical content boxes, critical thinking exercises, and an end-of-chapter list of key points. It is ideal for use in traditional pathophysiology and medical and surgical respiratory therapy courses. The book focuses on biopsychosocial aspects of cardiorespiratory disease. There are 2 major sections: Part I consists of 10 chapters that provide a foundation in PBL, critical thinking, problem solving, and selected topics that are important to understand prior to attempting to solve the problems in the case chapters (the answers to which are *not* provided). Part II focuses on the development of critical thinking skills by way of cases that deal with common respiratory disorders. The cases included are the types most likely to appear in the National Board for Respiratory Care (NBRC) examinations. The PBL instructions accompanying cases encourage students to consider that there may be more than one correct answer and perspective.

Chapters 11–23 provide an overview of respiratory diseases, disorders, and treatment options. The reader is encouraged to seek additional sources for more extensive coverage of these techniques. Most of these chapters provide very comprehensive reviews of the problems in the case studies and extensive lists of references and Internet resources. Chapter 11, “Asthma”, does a good job of providing management recommendations from the National Heart, Lung, and Blood Institute. The authors of Chapter 12, on COPD, state that “Currently, the American Journal of Respiratory and Critical Care Medicine does not recommend elective use of invasive ventilatory support in ambulatory patients with COPD and hypercapnia,” but fail to cite the article from which that assertion arises. Chapter 14, “Acute Pediatric Upper Airway Emergencies,” relies on secondary references (textbooks and Internet resources), with only one refereed journal article cited. The authors of Chapter 15, “Obstructive Sleep Apnea,” provide an excellent review covering the spectrum of sleep apnea, and students will learn a great deal from the cases studies, references, and the listed sleep study resources. The book does an excellent job of covering cases in subjects where respiratory therapists need to develop critical thinking skills. The remainder of the chapters cover cystic fibrosis, pneumonia, acquired immune deficiency syndrome, tuberculosis, congestive heart failure with pulmonary edema, management of the burn patient with inhalational injury, neuromuscular disorders, and acute respiratory distress syndrome. Overall, the chapter reviews and critical thinking exercises are excellent. Some chapters are better referenced, but they all prepare students for the case exercises. The PBL approach is one of discovery, versus a traditional textbook review of a topic. Some of the chapter authors emphasize the case studies and critical thinking exercises and limit the length of their introductions and the number of references cited.

Respiratory therapy students and faculty alike will enjoy learning more about PBL in Part I. The time spent accomplishing the material on PBL puts everyone on the same page in terms of the expectations for the critical thinking exercises. Part II will re-

mind the reader why respiratory therapy is a profession for those interested in intellectual pursuits. Usually the most knowledgeable practitioner will raise the best case-related questions. Studying the case-related review and completing the critical thinking exercises will bring the reader to a higher level of clinical practice.

The editors and authors of this book have made a major contribution to the respiratory care profession and to PBL. The major beneficiaries will be the patients treated by the respiratory therapists who use critical thinking skills. Educators will enjoy moderating critical thinking exercises and should see their students’ performance improve on the decision-making sections of the NBRC clinical simulation examination. If you add only one required text to a respiratory therapy program this year, it should be **Critical Thinking in Respiratory Care**.

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## **Advanced Respiratory Therapist Exam Guide: The Complete Resource for the Written Registry and Clinical Simulation Exams.**

2nd edition. James R Sills MEd CPFT RRT. Original illustrations by Sandra Hogan. St Louis: Mosby. 2002. Soft cover (with CD-ROM), illustrated, 456 pages, \$52.95.

**Advanced Respiratory Therapist Exam Guide**, 2nd edition, is a comprehensive review text designed to help those taking the National Board for Respiratory Care (NBRC) written registry and clinical simulation exams. The book begins with a brief introduction that describes the 1998 NBRC Written Registry Examination Detailed Content Outline, describes the NBRC item coding system, and explains the written registry examination’s structure and difficulty levels. Registry written item type is also described, followed by a section on test-taking hints and the relative weighting of specific content areas in NBRC written registry exams. The clinical simulation exam is explained with a description of the case scenario and the information-gathering and de-

cision-making constructs. The scoring is explained, followed by a set of “do’s and don’t’s” for taking and mastering this exam style.

The book includes 17 chapters, which present the various content areas of respiratory care. Each chapter includes a rationale for including that chapter’s content (based on the NBRC exam matrix), comprehensive review of the material, exam hints, an extensive chapter bibliography, and test questions with answer keys that present the rationale for both the correct and incorrect responses. Review sections in the chapters are coded so that the reader can relate the content in that section to the NBRC exam matrix and to the level of difficulty to expect on the exam. The text, which includes exam hints and rationales throughout, does not claim to be a comprehensive review of the field of respiratory care, but rather an exam-specific review. Be sure to use this text in conjunction with a review text designed for the Certified Respiratory Therapist exam, since the NBRC exams emphasize content-specific information for the level of credential sought.

The book also includes a CD-ROM-based pre-test, post-test, and 10 clinical simulation scenarios. The exams mirror the NBRC exams in content emphasis, question style, and question difficulty. Patient scenarios of the NBRC clinical simulation exam are also matched on the CD-ROM-based clinical simulation exam. The exam is scored with an assessment of the candidate’s weaknesses and relates those weaknesses to the specific content areas. The CD-ROM will help students to assess themselves and to identify weak areas and also help them to gain familiarity with the computer-based testing style of the NBRC.

The text is designed for graduates of respiratory care programs that prepare students at the advanced respiratory therapist level. The book is not a comprehensive review of the field of respiratory care and thus cannot be generalized to broader populations. University educators and hospital respiratory care education personnel may find the book helpful in assuring curricular coverage of content at an appropriate level of understanding to assist their charges in preparing for their practice as respiratory therapists.

The book progresses logically through patient assessment, therapeutics, mechanical ventilation, home care, and special procedures. There is ample use of—but not over-reliance on—tables and easily understood

figures, which are used to summarize information presented. Each chapter is in outline form, which helps the reader find and review information in an efficient manner. The text is readable and at an appropriate level for the target audience. The content is well referenced, citing appropriate recent discipline-related texts. The index is comprehensive and specific enough to help the reader find general areas or exact content. The overall organization and up-to-date content helped the author achieve the goal of presenting an advanced registry exam guide.

The 17 chapters cover the scope of material required to master the advanced level exam. Understanding this content and presentation requires prior knowledge, as the text builds on an entry-level knowledge base. The chapters present accurate and up-to-date information and I found no errors. The graphs and tables enhance understanding of the concepts presented. Chapter subjects include: patient assessment, infection control, blood gas analysis and monitoring, pulmonary function testing, advanced cardiopulmonary monitoring, oxygen and medical gas therapy, humidity and aerosol therapy, pharmacology, bronchopulmonary hygiene therapy, cardiac monitoring and cardiopulmonary resuscitation, airway management, suctioning the airway, intermittent positive-pressure breathing, mechanical ventilation of the adult, mechanical ventilation of the neonate, home care and pulmonary rehabilitation, and special procedures. The coverage is thorough, the material is accurate, and the presentation is in a no-nonsense format that gets directly to the required information.

The CD-ROM is user-friendly and well organized. The pre-test is intended to be printed out. The answer key provides a rationale for each response, right and wrong, and gives an idea of where to focus study efforts. The post-tests for both the written and the clinical simulation exam are well written, and the presentation mirrors the new NBRC computerized format. The questions are at an appropriate level for these exams and help focus additional study on identified weaknesses. The CD-ROM is easy to install and ran smoothly without error for me. The format can familiarize the student with computer-based testing, which could eliminate some stress on exam day. I found the CD-ROM testing a great addition to this review text.

Overall, the book is an excellent source for students, graduates, and educators asso-

ciated with advanced respiratory care exam preparation. The CD-ROM could be used in hospital department settings to challenge the staff or as a form of mandatory documentation of knowledge maintenance. The book’s organization, exam hints, tables, figures, illustrations, practice questions, response rationales, and computerized practice exams contribute to the attainment of the stated goals. The information is up to date and expertly tailored to the NBRC exam matrix. The only frustrating feature was the limited number of review questions associated with each chapter. Although chapter questions are weighted to mirror the NBRC advanced respiratory therapist exam, and the reader is expected to use an entry-level exam review prior to using this text, the chapters are rich with information and many important questions are left unasked. That concern goes beyond the author’s intent, yet as an educator I thought it a shame not to include good questions that would further challenge the reader for the sake of the exam matrix. After all, the practice of respiratory care goes well beyond that which we can be tested for, regardless of exam format.

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**Law & Ethics for Clinicians.** Jacquelyn K Hall BSN MEd JD. Amarillo, Texas: Jack-hal Books. 2002. Soft cover, 392 pages, \$34.95.

Jacquelyn Hall’s book on law and ethics is a solid attempt at dealing comprehensively with the interactions between law and ethics in the clinical world. Though there is no way to write a book that can be all things to all people, and a lawyer may sense certain shortcomings in this book, it is a laudable attempt to set out clearly and precisely the legal issues and ethical conflicts that occur in everyday patient care.

**Law & Ethics for Clinicians** is adequately organized, with a comprehensive table of contents. An individual looking for information on a given legal topic would find it quickly. The amount and depth of the information varies from topic to topic, but the book’s general organizational scheme is helpful.

The book aims at getting clinicians to “lay down at last the tomes of ethics and

law,” because “good patient care is lawful and right.” From that lofty preface the author then lays out her theories of law and ethics and explains in compact, tightly-written prose the general concepts of the law.

This book is a good one for clinicians who want a “to the point” reference on law and ethics, but it is not as comprehensive as some other texts on this topic, and some of the more difficult areas of the law are oversimplified.

Ms Hall tells readers that the core principle of law and ethics is “do unto others as you would have them do unto you.” This recodification of the “golden rule” is referenced countless times in the book as the “downtoother’s” (do-unto-others) principle. As an author and lecturer, I have frequently given the same advice as Ms Hall, which, distilled to its essence, is: “people don’t sue people they like.” Though her explication of the ethical principles is sound and makes for good reading, it is but one example of oversimplification of legal issues in this text.

Moreover, not all the principles in the book are well explained. In one section Ms Hall writes that “more insurance means more lawsuits.” Her explanation of this is convoluted and difficult to follow. It also does not accurately state reality. Having liability insurance doesn’t make a person any more prone to lawsuits than having health insurance makes a person prone to pneumonia. Yet these few minor imperfections in a book that was obviously a labor of love should not cause a clinician to pass it by.

Key concepts in the book are well explained. Issues of strict liability and federal laws relating to health care are adequately detailed. Of course, the problem with any such book is that new cases and new statutes are created almost daily, and the laws differ radically from state to state. For this reason, if for no other, most clinicians won’t simply lay down their legal texts, nor will they stop consulting with legal counsel. But a smart clinician, armed with this book, could adequately inform herself on a wide variety of issues, and use the book to determine when either to do additional research or to seek professional legal counsel.

Though much of my critical review of this book focuses on the legal insights it offers, the chief value of this book may lie more in its ethical insights for the busy clinician. Ethical values are difficult to codify and even more difficult to discuss, yet this author does a fine job of bringing into focus subjects such as the physician-patient rela-

tionship and the ethics of clinician education. In a chapter titled “Be Free” the author explores the subjects of autonomy, cognitive theory, egoism, and existentialism in concise form. Her writing on these complex issues demonstrates that she understands clinicians and their needs.

No book on ethics and law can be all things to all people, but this one is a fine attempt, and one can only hope that more editions will be forthcoming.

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**Writing and Defending Your Expert Report: The Step-by-Step Guide with Models.** Steven Babitsky Esq and James J Mangraviti Jr Esq. Falmouth, Massachusetts: Seak. 2002. Hard cover, 404 pages, \$99.95.

This is an outstanding book. For anyone who is now or is even contemplating preparing and writing expert reports, this is required reading. I have been preparing expert reports for nearly 30 years, yet I learned much from reading and rereading this valuable reference work, which pointed out many errors that I have, unfortunately, been making over the years. It also reinforced many of the appropriate things I do but that I learned in the school of hard knocks. Fortunately, not all lawyers are as malevolent and devious as those featured in the sample cross-examinations in this book, but you can never predict when you might come up against one of those attorneys. Following the guidelines in this book will spare you some potentially very uncomfortable sessions in deposition or in the witness chair.

**Writing and Defending Your Expert Report** is well organized, comprising 16 chapters and 2 appendixes. The Chapter 1 introduction is especially well written, providing easy-to-understand basics of preparing an expert report. Chapters 2 and 3 provide an extensive legal background about expert reports, with many case law citations. Although primarily meant more for attorneys, these chapters also provide a useful background that allows the expert to understand the basis for many of the book’s recommendations. Chapters 4–8 provide the basic how-to-do-it of writing an expert report. Chapters 9–11 provide many suggestions for reinforcing the credibility and reliability of your reports and opinions. Chapters 13–16 point out how one can avoid getting into difficulties while on the witness

stand and also help in dealing with an aggressive cross-examining attorney if, despite reading this book carefully, one still makes one or more of the many potential errors. Appendix A provides additional general advice from other authors and Messieurs Babitsky and Mangraviti. Appendix B provides 12 sample reports, along with focused critiques.

The authors emphatically succeed in their aim of preparing the reader to produce an expert report that cannot be effectively challenged by an opposition expert or attorney. It is clear that they have had great experience in reading and critiquing numerous expert reports. Their positions are clearly stated, logically sound, and supported by legal precedent. In a book of this nature there is room for differences of opinion and/or emphasis, but I found nothing that was inaccurate. Despite involving both legal and scientific technical concepts, this book is quite readable and understandable.

The cover of the book is business-like and conservative, but of good quality. The paper and type are also of good quality and quite readable. I found only a few typographical errors. There are no illustrations. The case law references are appropriate and current and the index is adequate.

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**Evidence-Based Herbal Medicine.** Michael Rotblatt MD PharmD and Irwin Ziment MD. Philadelphia: Hanley & Belfus. 2002. Soft cover, 464 pages, \$35.

Somewhere around 80% of the world’s population uses herbal plant medicines because they have no access to or money for orthodox western therapies. Increasingly in the western world there has, perhaps for philosophical reasons, been a swing back towards herbal therapies. Despite industrialization, about 50% of our current therapies are derived from plants, and we are belatedly rediscovering a whole range of potential herbal therapies. The difficulty with this rediscovery is that there is very little evidence to support the use of many plant medicines in their proposed clinical indications.

Increasingly doctors are encountering patients who wish to take herbal alternatives or who are taking them in combination with orthodox medicines; it is for this reason that

a reliable reference book has been overdue. This book is a timely attempt at providing an evidence-based approach to plant therapy in a subject overwhelmed by advertising hype, misinformation, and wishful thinking. It is intended primarily for use by prescribing doctors but will also be of interest to other medical professionals, particularly as nurse prescribing increases.

The book consists primarily (325 pages out of 460 total) of a series of plant monographs, which are extremely well researched, scientifically evaluated, and well presented. The book uses a symbol rating to indicate at a glance the evidence available, which is very convenient for busy doctors. This same symbol system was used by James Duke in his book *The Green Pharmacy Herbal Handbook*, a less scientific attempt at providing lay people with information about plant medicines. As is always the case, there is going to be some debate about which plants should be included in these monographs. There are some American plants included, such as pokeroot, that are unknown in Europe. Not listed are a number of commonly used plants from various parts of the world (eg, *Tripterygium* as a treatment for arthritis, artichoke for diabetes and hyperlipidemia, and pau d'arco, greater celandine, and mistletoe for cancer). Each section, however, is extremely well referenced and each section provides a simple, definitive conclusion.

I would dispute some of the opinions rendered, such as that the benefits of cranberry are likely to be small, that the use of feverfew is still not established in migraine prophylaxis, and that the use of garlic for blood pressure and cholesterol is still controversial, but overall I think that very sound conclusions have been reached. It is also important that the book provides an assessment of safety for plants the efficacy of which has not yet have been proven. *Lack of proof of efficacy* is not the same as *lack of efficacy*, and the use of a plant could still be considered as long as safety is assured. The possibility of liver disease secondary to kava use has been raised, but from my personal experience, living in a kava-consuming so-

ciety in the South Pacific, I think this problem must be rarely if at all related to consumption of kava.

Preceding the monographs there are short sections on plant chemistry, quality control, and herb/drug interactions. Quality control is very difficult to maintain unless a particular chemical (such as hypericin from St John's wort) is known to be the active ingredient and is used as a standard. Doctors need to be aware of the variability of content of some products as well as the problem of plant misidentification. Chemical content differs with different extraction processes, and there are problems with storage and shelf life, which makes clinical trials difficult and efficacy difficult to prove. The brief section on plant chemistry provides a superficial overview that contributes little to the book and would be better omitted. It is difficult to write about herb/drug interactions, because new interactions are discovered all the time. It might be better not to list known interactions, as they may falsely reassure medical practitioners that there is no risk of drug interaction when in fact an interaction has recently been discovered. It is also best to leave out the doses of herbal therapies because they are so variable and dependent on the method of manufacture.

The summary lists the plants the authors think suitable for medical prescription. Despite an evidence-based approach there will be some debate about these conclusions. I would question whether the case for the use of chaste tree for menopausal problems has been made definitively. I would also suggest that use of ginkgo for dementia and garlic for hypertension and hyperlipidemia has been substantiated and that they should be included in this list. Professor Edzard Ernst, who wrote the introduction to this book and provided many of the meta-analyses that form its evidence base, reached somewhat different conclusions in his publication, *Herbal Medicine, A Concise Overview for Professionals*. Perhaps for political reasons there is no mention of the cannabinoids (marijuana and its derivatives) as a treatment for vomiting and other medical conditions, although there has been exten-

sive research and this is now a therapeutic option in some countries.

I found the sections on Chinese, Indian, and Mexican traditional therapies and the section on aroma therapy disappointing; because of their brevity they contributed little and were inappropriate in an evidence-based book. Each of these is a sizeable topic on its own, and there is even less research here than in European or North American therapies. The discussion on adulteration of plant medicine with orthodox therapies needs to be expanded; this seems to be particularly common with Indian and Chinese medicines and is under-recognized. A case could be made for a special section on the use of herbal therapy in pregnancy and childhood, as this is increasingly common and there is greater concern about potential complications.

This book is valuable as a reference but does not help the orthodox physician looking for herbal alternatives to treat clinical problems; a more clinically based presentation would have been useful. Unfortunately, the index does not contain any cross-referencing to clinical conditions, as is found in books such as *The Commission E Monographs* and *Physician's Desk Reference for Herbal Medicines*. This makes it of limited use to doctors unless they already know something about herbal therapy and which plant might be relevant to the condition they wish to treat.

"Herbal therapy," although it is the commonly used term, is perhaps not the correct term for the title of this book, as many types of plants are used. "Evidence-Based Phytotherapy" would be a more appropriate title. The book is a very well written, well presented, and very useful collection of monographs for medical reference. I think that it could have been more clinically based to provide a practical guide to plant therapy for practicing doctors. Such a "hands on" book for doctors is still awaited.

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