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Simulators in Critical Care and Beyond. Edited by William F. Dunn. Les Plaines, IL, Society of Critical Care Medicine, 2004. ISBN: 0-963145-15-3. Pages: 129. Price: $60 (non-members of SCCM); $45 (members of SCCM).

It has been approximately 30 yr since simulators were introduced to the medical community, and a great deal of technological and educational progress has been achieved during this time. The book titled *Simulators in Critical Care and Beyond* is based on a compilation of 19 papers presented as a Postgraduate Course at the Society of Critical Care Medicine conference held February 21, 2004 in Orlando, Florida. With topics ranging from the history of patient simulation and its role in medical education to training concepts and course models and practical aspects of simulation, it represents the state-of-the-art of simulation in critical care at the time of this conference. It therefore can be regarded as an update of the book *Simulators in Anesthesiology Education*[1] published in 1998. It is well-suited to readers with different levels of experience in simulation, although those who have recently become involved in simulation or who are planning to start a simulator program might benefit most from this book.

The first few chapters provide a concise introduction to the role of simulators as educational tools for health care professionals, approaching the use of simulators from an historical, educational, and patient safety perspective. Two other chapters focus on the process of setting up a simulation center. The chapter by Richard Kyle (Director, Patient Simulation Laboratory, Uniformed Services University, Bethesda, Maryland) on technological resources for clinical simulation gives a very good overview of things to consider when planning the design of a new simulation center and acquiring the equipment for it. The section on custom modifications of simulation devices gives valuable hands-on advice. The paper by Gary Loyd, M.D., M.M.M. (Vice Chair for Education and Associate Professor, Department of Anesthesiology and Perioperative Medicine, Assistant Dean for Education/Patient Simulation, School of Medicine, University of Louisville, Louisville, Kentucky), on issues faced in starting a simulation center may at first seem to be tailored only for readers new to the simulation business. However, the balanced scorecard approach suggested to address strategic issues might—just as in industry—also be helpful for centers that are growing or restructuring.

The bulk of the chapters illustrate the wide range of applications of various types of simulators in critical care education of physicians and nurses. The book addresses the potentials and weaknesses of screen-based simulation, part task trainers and mannequin-based simulators—which most of the authors see as complimentary teaching tools rather than competing devices. The chapter by Amitai Ziv, M.D., M.H.A. (Director, Israel Center for Medical Simulation, Deputy Director and Director, Risk Management, Quality Assurance, Chaim Sheba Medical Center, Tel-Hashomer, Israel), and Haim Berkenstadt (Director of Neuroanesthesia, Department of Anesthesiology and Intensive Care, Deputy Director, Israel Center for Medical Simulation, Chaim Sheba Medical Center, Tel-Hashomer, Israel) gives an excellent example of a multimodality simulation center.

David Gaba, M.D. (Associate Dean for Immersive & Simulation-based Learning, Professor, Department of Anesthesia, Stanford University School of Medicine, Director, Patient Safety Center of Inquiry and Simulation Center, Veterans Affairs Palo Alto Health Care System, Palo Alto, California), points out early in the book that "simulation is a 'technique' and not a 'technology'" (p. 7) and "the success of a simulator program will not be determined primarily by the type or capability of the simulator used" (p. 9). This statement is supported by many of the authors, who emphasize that decisions regarding which simulation technology to use have to be based on the teaching goals and target populations. In addition, for maximum effect, simulator-based courses have to be carefully incorporated into existing curricula. Unfortunately none of the chapters tackles this challenging educational task in depth although, for example, Eugene Freid, M.D., F.C.C.M. (Associate Professor, Department of Anesthesiology, Director, University of North Carolina Patient Simulator Laboratory, University of North Carolina, Chapel Hill, North Carolina), gives a detailed description of a 1-week course on life support and critical care skills for medical students that combines simulator sessions with other teaching techniques. Concrete examples such as this one or the one presented by Bosseau Murray, M.D., Ph.D. (Professor, Department of Anesthesiology, Assistant Director, Simulation development and Cognitive Science Laboratory, Departments of Anesthesiology, Nursing and Surgery, Pennsylvania State University College of Medicine at the Milton S. Hershey Medical Center, Hershey Pennsylvania), on instructor training are helpful to those setting up new courses or improving existing simulation curricula.

As many simulation centers are currently setting up simulator-based multidisciplinary team training courses, the chapter by Geoffrey Lighthall, M.D., Ph.D. (Assistant Professor, Department of Anesthesia, Stanford University School of Medicine, Patient Safety Center of Inquiry, Veterans Affairs Palo Alto Health Care System, Palo Alto, California), will be of interest to many readers. He describes a model for and the experience with a multidisciplinary (medicine, surgery, and anesthesiology) and multiprofessional (physicians, nurses, and allied health professionals) critical care crisis management course. It also gives examples of how simulator experiences can contribute to (small) changes in the actual clinical care and highlights the importance of reinforcing the teaching points in the clinical environment.

One aspect that has been discussed since the beginning of simulation in medicine and that will probably become even more important in the future is the challenge of simulator-based performance assessment. John Schaefer, M.D. (Assistant Professor, Department of Anesthesiology, Director, Peter M. Winter Institute for Simulation Education and Research, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania), highlights the fact that performance evaluation and feedback should be integral components of a "Medical Simulation Learning System." The paper by Melinda Fiedor, M.D. (Clinical Instructor, Pediatric Critical Care, Department of Critical Care Medicine, University of Pittsburgh, Children's Hospital Pittsburgh, Pittsburgh, Pennsylvania), and Michael DeVita, M.D. (Course Director, University of Pittsburgh Human Simulator Center, UPMC Presbyterian Hospital, Associate Professor, Critical Care Medicine and Internal Medicine, University of Pittsburgh Medical School, Pittsburgh, Pennsylvania), presents one example of performance evaluation on a team and on an individual level during simulated cardiac arrest. However, only the paper by John Boulet, Ph.D. (Assistant Vice President, Assessment Services, Educational Commission for Foreign Medical Graduates, Philadelphia, Pennsylvania), and David Swanson, Ph.D. (Deputy Vice President, Professional Services, National Board of Medical Examiners, Philadelphia, Pennsylvania), is explicitly devoted to methodological issues of simulator-based performance assessment. This is one area of medical simulation that will clearly be a major continuing challenge in the future. In summary, there is something here for nearly everyone interested in immersive and simulation-based learning, which—as time goes on—means virtually all of us.

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Reference

1. Simulators in Anesthesiology Education. Edited by Henson LC, Lee AC. New York, Plenum Press, 1998

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Principles & Practice of Pain Medicine, 2nd Edition. By Carol A. Warfield and Zahid H. Bajwa. New York, NY, McGraw-Hill, 2004. ISBN: 0-07-144349-5. Pages: 938. Price: $99.00.

The growth and interest in the practice of pain medicine over the past decade by an increasingly diverse group of practitioners (*e.g.*, anesthesiologists, neurologists, psychiatrists, and physical medicine and rehabilitation practicioners) reflects the multidisciplinary nature of the field of pain medicine. The continued interest in pain medicine has also been paralleled by an increase in the number of textbooks on pain management and medicine. For many practitioners of pain medicine, it is often difficult to find a comprehensive yet manageable textbook of pain medicine. Some review-type textbooks do not provide enough clinically meaningful information, and the bulk of some of the larger, although comprehensive, textbooks, makes them unlikely to be read from cover to cover.

In the new (second) edition of *Principles & Practice of Pain Medicine*, Drs. Warfield and Bajwa have assembled an internationally recognized group of pain medicine experts from a variety of specialties to produce a rather comprehensive yet readable textbook of pain medicine. As noted in their preface, the editors have modified the contents of the second edition (along with the title, which was *Principles and Practice of Pain Medicine* in the first edition) to reflect the breadth and growth in the field of pain medicine. All of the chapters have been significantly updated from the first edition, and new chapters covering topics such as legal and ethical issues and business administration have been added, as the field of pain medicine touches on many facets outside clinical medicine.

One of the first things the reader notes is how effortless the text is to read. The chapters are well-written and organized with a sufficient number of tables and figures to complement the text. A reader can easily read through several chapters in one sitting. The book consists of 87 chapters divided into major sections of anatomy and physiology (three chapters), general principles and evaluation (eight chapters), psychological evaluation and treatment (five chapters), pain by anatomical location (20 chapters), pain syndromes (21 chapters), pain therapies (22 chapters), and administration and the law (eight chapters). Anesthesiology-trained pain physicians would probably be most familiar and comfortable with the sections on anatomy and physiology, pain syndromes, and pain therapies, and these sections are relatively concise in their description of the pathophysiology, diagnosis, and management of each particular pain state. However, what anesthesiology-trained pain physicians will especially appreciate about this textbook are the chapters and sections regarding topics that may not be part of their clinical practice or may not be emphasized in their training.

For instance, the several chapters on headaches may be a valuable resource for practitioners who do not routinely see patients with headaches. In addition, chapters on acupuncture and outcome measurements in pain medicine provide a resource that may not be present in other pain textbooks. Finally, the new section on administration and the law is a worthwhile addition to this edition, as our current practice environment requires us to consider many nonclinical aspects when we practice pain medicine. The editors should be commended for including and addressing some of the current topics in pain medicine today. One feature that might increase the value of this textbook would be to consistently include diagnostic and procedural coding for all procedures. The chapter on spinal canal endoscopy included coding for diagnosis and procedural coding; however, other procedural chapters did not. This is certainly a minor issue that should not dissuade anyone from acquiring a copy of this excellent textbook.

The field of pain medicine has seen tremendous growth in the past decade and continues to evolve to incorporate many clinical and nonclinical aspects. In the second edition of *Principles & Practice of Pain Medicine*, Drs. Warfield and Bajwa have done a commendable job in updating their textbook to provide the community with a relatively comprehensive yet concise textbook of pain medicine. This textbook may also be useful for those preparing for various certifications in pain medicine. All practitioners of pain medicine will find this textbook a valuable addition to their library.

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