

ble) complications in these two subspecialties. Its editors and their internationally known 42 coauthors discuss in-depth these complications from the common to the uncommon and from the minor to the catastrophic.

This 35-chapter book, with over one-third of its references published between 2000 and 2006, is divided into three sections: Regional Anesthesia (16 chapters); Pain Medicine (16 chapters); and Medicolegal Perspective (3 chapters). The Regional Anesthesia chapters cover the often discussed complications such as bleeding, infection, and nerve injury, as well as the less-recognized complications such as myotoxicity. The chapters in the Pain Medicine section focus on complications from specific treatments and procedures such as chronic steroid therapy, epidural injections, radio-frequency treatment, and spinal cord stimulator placement. The last section covers medicolegal issues that can arise from complications, treatment, and nontreatment. Specifically, it discusses the results of closed claims analyses, the legal issues of opioid therapy, and informed consent documentation.

One shortfall of this book is that it lacks an in-depth discussion of ultrasound guidance and its potential impact on complications. In fact, the index does not contain the word "ultrasound" or its synonyms. We found only two sentences in the entire book that briefly discussed the use of ultrasound guidance. Granted, before 2007, few "large" studies specifically addressed how ultrasound-guided techniques affect complications. However, given its increased use in the last decade, this area deserved greater discussion. Finally, regional anesthesia and pain medicine overlap in terms of interventions, tools, and complications, resulting in some redundancies between chapters. However, with a few exceptions, the redundancies are small and the reader is quickly referred to an appropriate chapter for greater detail.

Each chapter in the first section has a similar outline, helping to ensure that the topics are presented consistently and that specific subtopics can be found quickly. This is less true in the second section, but enough so that the flow of reading from chapter to chapter is rather similar. All the chapters range between 6 and 18 pages. The authors make good use of "white space" and headings of varying font sizes to create a clean, easy-to-read layout. In addition, there is ample use of boxes, tables, illustrations, and images, all in a surprisingly esthetic monochromatic gray. They summarize key points, display anatomy, and illustrate techniques. However, there is a tendency in most chapters to exhaustively relist information in the text that is already nicely presented in boxes and tables.

The editors dedicated the book to patients, trainees, and colleagues, as well as their families. Did the editors accomplish their goal to produce a text that will benefit all? Yes, the editors clearly achieved their goals. The book is the right size for its content, breadth and scope. Any greater detail would likely lose an audience of professionals.

On the whole, this book is well written, well organized, nicely illustrated, and, most importantly, informative. Every anesthesiology department should have a copy; regional anesthesiology experts and pain physicians should have one as well!

Ty Weis, M.D., Andrew Herlich, D.M.D., M.D., F.A.A.P.,*
*University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania.
herlich@upmc.edu

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A Practical Approach to Pediatric Anesthesia. Edited by Robert S. Holzman, M.D., Thomas J. Mancuso, M.D., and David M. Polaner, M.D. Philadelphia, Lippincott Williams & Wilkins, 2009. Pages: 690. Price: \$87.00.

The science and art of pediatric anesthesia continues to expand at an almost relentless pace with new developments and innovative surgical procedures in the smallest of children, including those yet unborn (fetal surgery). Therefore it is a daunting task to produce a book on

pediatric anesthesia that is both comprehensive and easy to carry around as a quick reference. I think the authors/editors of this book have wisely chosen a safe middle ground.

A Practical Approach to Pediatric Anesthesia is a new paperback textbook on the subject of pediatric anesthesia with contributions from several well-known names in the specialty. The book is divided into 4 sections and has 37 chapters of varying length and breadth. Like all pediatric texts, the editors used the first section to highlight the uniqueness of the pediatric patient regarding to physiology and pharmacology. This section also contains a rather complicated (*vide infra*) discussion of fluid and electrolyte therapy, which is critical to the perioperative management of the pediatric patient.

The second section is a short discussion of the operational aspects of pediatric anesthesia. The authors have covered topics from pediatric anesthetic equipment to general perioperative care of children. Regarding the latter, they have included an extremely well-written chapter on pediatric pain management. This section concludes with some practical tips on pediatric operating room management and a brief foray into quality assurance and quality improvement.

Section three of this book is justifiably the longest, because it is an organ system-based discussion of anesthesia care for the pediatric patient. The approach is a head-to-toe format, beginning with central nervous system normality and abnormality. Each chapter begins with a short discussion of embryology and progresses to cover physiology and then clinical and pathologic correlates of interest to the clinician. Some may find this approach of "basic science to mask-vent-tube" a bit daunting, but the authors have deftly explained how biocellular derangements can impact anesthetic care. For example, the chapter on cardiovascular system explains the embryogenesis of Tetralogy of Fallot as being a result of "abnormal trunco-conal septation," making it easy to grasp the reasons for right ventricular outflow tract obstruction and hypertrophy, overriding aorta and high ventricular septal defect. The anesthetic implications of avoiding increases in pulmonary vascular resistance from hypoxia, preoperative anxiety, "Tet spells," and other reasons are all easy to visualize after reading the introductory pages. This section on systemic anesthesia is packed full of nuggets of information that will be useful to anesthesia trainees, nurse anesthetists, and anesthesiologists.

The fourth and final section of this book discusses special situations in anesthesia. It begins with a chapter on fetal surgery, a subspecialty that is becoming increasingly relevant with the steadily growing number of fetal surgical interventions being performed. The section continues with an incredibly informative chapter on neonatal anesthesia and resuscitation. There is a great chapter on anesthesia for the preterm, very-low-birth-weight infant that highlights several problems peculiar to these smallest of all patients. This chapter is packed full of practical tips including choosing the right electrocardiogram leads, selection and placement of blood pressure cuffs to avoid bone fractures, and careful attention to thermometry and thermoregulation.

Even though this is an excellent text for both residents and pediatric anesthesia practitioners, it does leave itself open to some criticisms. After reading the first two chapters of the book, my first response was to put it down with a vow never to continue. Getting through the "philosophy of oxygen consumption," "surface law," and "allometric scaling" in a chapter that was supposed to be discussing practical fluid and electrolyte management was a bit tedious. For a purported practical textbook, I thought these first two chapters were rather "heavy." However, the more I read of the book the clearer it became that one cannot judge a book by its first two chapters. It may be prudent to revise these chapters in future editions of the book. I also thought the single paragraph discussion of ultrasonography was rather limited. It is obviously impossible to cover all aspects of pediatric anesthesia in a mid-range book like this. Still, a chapter on pediatric ultrasound for vascular access and regional block would have been useful, given the increasing popularity of this tool.

In conclusion, this is a well-bounded, well-written book with extensive up-to-date references that many who take care of children will find

useful both as a portable reference for the operating room and as a quick desktop consult. This is a good mid-range pediatric anesthesia book that should grace many departmental and personal libraries.

Olubukola O. Nafiu, M.D., F.R.C.A., Mott Children's Hospital, University of Michigan, Ann Arbor, Michigan. onafiu@med.umich.edu

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International Anesthesiology Clinics: Education in Anesthesia. By Catherine Kuhn Lineberger, M.D., Melissa Davidson, M.D., Sandra Curry, M.D., J. Michael Vollers, M.D., Robert L. Willenkin, M.D., Kathy Denchfield Schlecht, D.O., Gary E. Loyd, M.D., M.M.M., Heidi M. Koenig, M.D., Stephen J. Kimatian, M.D., Sara H. Lloyd, Ph.D., Jill M. Eckert, D.O., Berend Mets, M.B., Ch.B., Ph.D., F.R.C.A., F.F.A.(SA), Elizabeth H. Sinz, M.D., and Jeffrey M. Taekman, M.D. Hagerstown, Maryland, Lippincott Williams & Wilkins, 2008. Pages: 162. Price: \$343.00 for individual annual subscription.

Educating the next generation of anesthesiologists is a challenging and rewarding task with a large societal impact. Most physician educators, however, have no formal training in how to teach effectively and instead rely on their own past educational experiences. The 2008 edition of *International Anesthesiology Clinics* addresses this issue and serves as an excellent introduction to teaching and learning theory with practical application to anesthesiology education.

The book begins by discussing a taxonomy of learning, describing the student's evolution from basic knowledge acquisition to synthesis and evaluation. The role of each component in anesthesia resident education is discussed, including its application to the Accreditation Council for Graduate Medical Education general competencies. This taxonomy can be used in curriculum development and as a means of encouraging higher levels of learning.

The next part of the book delves into various teaching and learning styles, with a dedicated chapter on the adult learner. There is a particularly interesting discussion on teacher-centered *versus* learner-centered education. Appropriately, this discussion is followed by two chapters on learning pathology. One of these chapters gives a concise, practical approach to diagnosing and remediating cognitive learning problems. The other chapter describes how student attitudes, and not necessarily motivation and interest, can affect learning. In other words,

the learning problem can be an attitude problem. The author states that a teacher's job is more than teaching subject matter. It may involve the slow and possibly stressful task of attitude change.

There are two chapters dedicated to the challenging task of learning assessment. The author discusses recent research which identifies best practices for formative evaluations. In essence, the core principle is ongoing evaluation and feedback. There is an especially good section on summative evaluations and its application to the Accreditation Council for Graduate Medical Education Outcome Project, which is dedicated to accrediting programs based on actual accomplishments instead of their potential to educate. The inference is that quality learning should not be assumed from quality teaching and that, instead, quality learning should be measured directly.

As learning assessment improves and becomes more widespread, there will likely be an increased need for remediation. The section on remediation and due process explains that the goal of remediation should not be to eject trainees from programs. Rather, it should be to elevate the principle of feedback to a higher level and advance the student along the taxonomy of learning.

The next chapter discusses the legal background for residency training. There is a concise explanation of the legal implications of resident recruitment, clinical performance, patient care, institutional regulation, and interruption of training. This is followed by a section on chemical dependency and impairment, stating the prevalence in young physicians in residency programs. There is a discussion of risk factors and also suggestions on intervention and treatment avenues.

Finally, there is a section on the ever-expanding role of technology in education. We are currently training a generation of physicians who have nearly infinite access to information coupled with the capability of instantaneous communication. The author discusses useful applications of this technology, including learning assessment, teamwork, and procedural skills. The use of simulation is included in this section.

This concise, enjoyable text provides an introduction to the essential components of anesthesia education: Proper teaching, assessment of learning, appropriate feedback, and effective remediation. With the help of this book, educating the next generation of anesthesiologists will be more effective and rewarding.

Jeremy D. Kukafka, M.D., University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania. kukafkaj@uphs.upenn.edu

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