

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.

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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.

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