

either in the margin or in conjunction with a highlighted passage.

Offline Use

The biggest concern I hear from residents about the online resources our program provides for them is an absence of downloadability and an inability to use a text offline. Happily, that is not an issue with this title. The Inkling App allows for downloads of portions or the entire book to your mobile device for offline use. I downloaded the entire text to my iPhone 6 plus *via* hotel Wi-Fi in less than 15 min and tested it in airplane mode to ensure no Wi-Fi access. Aside from the videos, the book is fully functional offline including the “test yourself” function on some of the diagrams and postchapter assessments. The videos of course worked fine when Wi-Fi was reestablished.

Perspectives and Summary

For the practicing anesthesiologist, this book may not represent a paradigm shifting text; it is a solid review resource for topics you may have long-since forgotten. I found the videos and figures very helpful ways to access things that I had mentally misplaced or never quite grasped. For my aging brain, the audio–visual components were a help over reading text alone, and the review questions kept me honest about knowledge gaps. With MOCA (Maintenance of Certification in Anesthesiology Program) 2.0 nearly upon us, the more clinical chapters may fill a need for a refresher in some areas that are not in your daily practice, but it is too soon to tell.

For the initiate to anesthesiology, this book represents an excellent gateway into the specialty, with a variety of approaches to providing content and built-in active learning aids. As the American Board of Anesthesiology BASIC examination has only been conducted once, it is impossible to say for certain, but the content outline seems to map nicely in many cases, and the search engine can help search keywords efficiently. I will be happy to recommend *Clinical Anesthesia Fundamentals* to my students and residents as a great option for early-on learning.

In either case, this reasonably priced (\$99.99 list price, available for less at some outlets), resource can indeed find a role in the collections for students, residents, and practicing anesthesiologists alike. It is versatile and forward thinking and should resonate in particular with millennial learners and technophiles. In my opinion, it represents the most comprehensive effort at multimedia integration into a traditional textbook to date and has raised the bar for future texts in this area. The authors should be applauded for an excellent effort at redefining what an introductory textbook should provide.

John D. Mitchell, M.D., Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts. jdmitche@bidmc.harvard.edu

(Accepted for publication November 23, 2015.)

Crisis Management in Anesthesiology, 2nd Edition.

Edited by David M. Gaba, M.D., Kevin J. Fish, M.Sc., M.B., Ch.B., Steven K. Howard, M.D., Amanda R. Burden, M.D. Philadelphia, Saunders, an Imprint of Elsevier Inc., 2015. Pages: 432. Price: \$79.95.

Crisis Management in Anesthesiology is an important resource on my library shelf. I came across the first edition of this book when I graduated from anesthesia residency in 1995. The title was enticing, and I was motivated by a desire to improve my skills as a clinician in challenging and complex settings. It was the first book I had seen that detailed the cognitive processes of the anesthesia provider—something not explicitly taught in residency programs at the time. My original copy is full of dog-eared pages and underlined and starred passages. The book contained a catalog of critical events in anesthesiology, which I used as an efficient and high-value study tool for the American Board of Anesthesiology oral examinations. A few years later, I became the Director of our Department’s new anesthesia simulation center and was given the task of teaching crisis management to our residents. This book became the “bible” for our efforts.

Why did it take 20 yr to produce a second edition? Classic teaching suggests that scientific discoveries take an average of 17 yr to become widely implemented in clinical practice. The principles of crisis management are based in the social sciences, which are often viewed skeptically by the medical profession. Medical practice has certainly evolved in the last two decades, with an increased emphasis on patient safety and teamwork in healthcare settings. The proliferation of anesthesia simulation centers has provided a setting for structured teaching of crisis management. In 2009, the American Society of Anesthesiologists created a network of endorsed simulation centers to provide simulation training that allows American Board of Anesthesiology diplomates to earn points to fulfill the American Board of Anesthesiology’s Maintenance of Certification in Anesthesiology Part 4 requirements.

Crisis Management in Anesthesiology is divided into two sections. The first section, titled Basic Principles of Crisis Management in Anesthesiology contains four chapters. The first chapter explores fundamental aspects of the dynamic decision-making process during intraoperative anesthesia care. The best figure of the entire book (figure 1–4) is in this chapter and displays a model of the anesthesia provider’s cognitive processes during complex intraoperative decision-making. This diagram is worthy of extensive review and reflection, as it illustrates the interplay of different levels of mental activity such as paying attention to data streams, predicting future states, and prioritizing problems and activities.

The second chapter addresses the principles of anesthesia crisis resource management (ACRM). The authors describe how they adapted the principles of crew resource management in the aviation industry to the field of anesthesiology and chose the

term ACRM. The generic crew resource management acronym is now widely used in healthcare team settings. The authors point out that although the “C” in ACRM stands for “crisis,” the principles of ACRM include prevention of crises and apply in noncrisis situations as well. I would consider this chapter as the “meat and potatoes” of the book in terms of its practical, day-to-day use in the perioperative setting.

The third and fourth chapters are new to this edition. These chapters, which address teaching ACRM and debriefing, were added because the authors heard from many readers of the first edition who had a strong interest in teaching these skills, often with the use of simulation. If you are new to teaching crisis management, reading these chapters will provide a sound framework from a group of authors with a tremendous wealth of experience and passion for this material.

The second section of the book is titled Catalog of Critical Events in Anesthesiology. There are nine chapters addressing the following categories of events: generic, cardiovascular, pulmonary, metabolic, neurologic, equipment, cardiac anesthesia, obstetric, and pediatric. A total of 99 events are covered, with a standard format consisting of the name and definition of the event, etiology, typical situations, prevention, manifestation, similar events, management, and complications. The authors point out that the formatting of this section was not optimized for use as a cognitive aid during clinical patient care, although they refer readers to the Stanford Anesthesia Cognitive Aid Group Emergency Manual for Anesthesia (<http://emergency-manual.stanford.edu/>), which is composed of 23 cognitive aids that have enhanced graphic design with increased attention to usability in the clinical setting.

Crisis Management in Anesthesiology includes full access to the text and figures at the ExpertConsult.com Web site and on most mobile devices using the Inkling platform. A major advantage of the electronic version is the ability to immediately link to other chapters, which is very handy in the “similar events” part of the critical events section of the book. In addition, references with a PubMed ID can be accessed to open the PubMed abstract and full text link, if available.

Who should buy this book? The authors state in the Preface that they wrote it for everyone who administers anesthesia, from trainees to experienced practitioners. I have to say that I enthusiastically agree! I have some advice for how I believe a trainee should use this book. Read the first chapter once and the second chapter many times throughout your training. Print out figure 1–4 and discuss it with a teacher after any complex patient care encounter. In the catalog of critical events, read the generic and equipment event chapters early in your training and review the other events as they pertain to your patients. For more experienced practitioners, I would strongly recommend this book as a way to reflect on your current practices in the care of complex patients and challenging situations and to motivate, inspire, and teach others to do the same.

Manuel Pardo, Jr., M.D., University of California, San Francisco, San Francisco, California. pardom@anesthesia.ucsf.edu

(Accepted for publication November 23, 2015.)