

ings, but the lack of color differentiation in 3-dimensional flow fields, stress fields, and displacements makes those graphics almost worthless, especially when both the high and low ends of the scale bar appear black. The line art is generally better, but some of these figures are so pixilated that I felt I needed stronger glasses. It is unfortunate that studies so heavily dependent on computers for their completion are not supported by plots worthy of their results.

One of the more intriguing nonacademic aspects of this book was the cover art. At first glance one notices the outline of a female body with several internal organs. Closer examination shows that some of the organs are not physiologically accurate. And there is a breast nipple peeking out of the shadow of some title text. I guess we should be thankful that her genitals are hidden by a large molecule "fig-leaf."

I believe in the editors' vision that progress in computational biomedicine will continue to advance health care, and I enjoyed my romp through the areas of physiology and mathematics that I do not deal with on a day-to-day basis. But if you are not comfortable with terms like "computational fluid dynamics," "finite element methods," or "electrical circuit analogues," this book is probably not for you. Even if you are, I think the overwhelming breadth of this book and the cover price of \$269 will keep it off many bookshelves, save the libraries where it most appropriately belongs.

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**ACLS Quick Review Study Guide**, 2nd edition. Barbara Aehlert RN. St Louis: Mosby. 2002. Soft-cover, illustrated, 582 pages, \$21.95.

**Rapid ACLS** (pocket guide). Barbara Aehlert RN. St Louis: Mosby. 2003. Soft-cover, spiral bound, illustrated, 178 pages, \$15.95.

**Success in ACLS: Essential Skills**, 3rd edition. Video (49 min) plus booklet by Cindy Tait RN MPH, soft cover, illustrated, 138 pages. St Louis: Mosby. 2003. \$36.95.

The **ACLS Quick Review Study Guide** is an appropriate textbook for first-time advanced cardiac life support (ACLS) students and for those renewing certification. It starts

with basics and explains concepts simply yet thoroughly, making it useful for both physician and nonphysician learners. At 400 pages it is not really a "quick review" but instead is a user-friendly text for students who aspire to master the material.

The book is visually appealing and easy to use. The table of contents is color-coded to match the chapters, for rapid page-flipping. Pre- and post-tests are clearly written, are of similar difficulty to the actual ACLS final exam, and have useful explanations of the correct answers. Each chapter has an overview, followed by the material written in outline format, and a concluding test, with answers. Some sections are followed by study questions. I found no factual errors in the text or quizzes, and only one typographical error. Valuable enrichment material, such as relevant research data, is set aside in boxes to distinguish it from the text. Photographs, electrocardiogram tracings, and multicolored diagrams grace nearly every page, are of excellent print quality, and are well chosen to illuminate the material. The chapter on airway management is particularly well illustrated with diagrams of the relevant anatomy and photographs of airway devices.

The book is indexed, but not thoroughly; for example, the listing for "tachycardia" leads you to rhythm identification but not to tachycardia differential diagnosis or therapy. The reference lists and bibliographies in each chapter are impressive. The studies chosen from the primary literature are relevant and recent, many from 1999 and 2000.

This is a well-organized curriculum for teaching or learning ACLS. The first chapter covers initial survey and basic life support techniques, community and organizational issues in resuscitation, when to start and stop resuscitation, and needed topics in ethics and communication. Chapter 2 is a presentation of airway management that is extremely thorough yet builds from basic principles, making it valuable to students with little background in respiratory therapy. Chapter 3, on vascular access, is similarly useful and very well illustrated. Rhythm recognition is a difficult topic for many ACLS students, and Chapter 4 has as good an approach as I've seen to rhythm diagnosis. The illustrations of depolarization and repolarization are confusing, but otherwise the chapter addresses cardiac electrophysiology at the right level to get a novice student through rhythm recognition. I imagine many students will struggle through

atrial tachycardia, atrioventricular reentrant tachycardia, and atrioventricular nodal reentrant tachycardia, but I haven't seen any basic text that does a better job at elucidating this advanced topic. The sample strips illustrate the chosen rhythms well and are and clearly reproduced.

Chapter 5 does a good job of describing procedures that are best demonstrated live, such as defibrillation and pacing. Coronary syndromes are covered thoroughly, again starting with basics of anatomy and pathophysiology to accommodate students with different backgrounds. Chapter 5 incorporates treatment algorithms for potential complications of myocardial infarction such as dysrhythmias, pulmonary edema, hypotension, and shock. I think this material is misplaced here. Relocating this material to the algorithm-heavy "Putting It All Together" chapter would be more useful, since a student wanting to review shock would not logically look for it in the acute myocardial infarction chapter.

"Cardiovascular Pharmacology" (Chapter 7) is disappointing, marred by an overly detailed presentation of the autonomic nervous system, followed by tables in which each medication gets a page of small print, not a distilled version of what actions, doses, and contraindications are really crucial for students to learn.

"Putting It All Together" (Chapter 8) presents the author's versions of the ACLS algorithms and is the key chapter for mastering ACLS. The algorithms are presented as tables, which are clearly written and fairly amenable to memorization. There is hardly any explanatory text, which has the advantage of making the chapter easy to review but has the disadvantage of making it a daunting read for a student without much clinical experience. In addition, this lack of explanation puts the chapter out of step with the rest of the book.

Chapter 9, on stroke, returns to the book's usual style, starting with anatomy and proceeding through a detailed description of clinical syndromes. Inclusion and exclusion criteria for thrombolysis are mentioned but, strangely, are not highlighted, and no suggestions for blood pressure control are given.

The final chapter, "Case Presentations," is well designed to prepare students for the practical examination in an ACLS course. Each case has a wealth of open-ended questions, plus a list of essential and unacceptable actions. These cases make a perfect review for the experienced provider and al-

low less experienced students to simulate a megacode for each other.

In summary, I would strongly recommend this book to a first-time student of ACLS as a comprehensive and, in most sections, easy-to-study text. In addition, its organization, with the relatively short "Putting It All Together" and "Case Presentations" chapters, allow renewing or more advanced practitioners to use the book efficiently as a review.

The **Rapid ACLS Pocket Guide** is a 3×5-inch, fluid resistant, spiral-bound book meant for bedside use. The sections are color-coded and correspond to the **ACLS Quick Review Study Guide**. Additional sections contribute information on basic life support and pediatric and neonatal resuscitation. This narrow, chunky book takes up a lot of space in the pocket of a white coat but is just the right size to attach to a code cart. However, I do not think the book is optimally written for use during a code. For example, suppose one needed immediate help in treating a tachycardic patient. There is no table of contents and the index is not complete. Under "tachycardia" the index references a page on identifying supraventricular and multi-focal atrial tachycardia. There is no direction to other tachycardias, to a differential diagnosis, or to a treatment algorithm. By flipping through the 26-page section entitled "The ACLS Algorithms" one can find tachycardias, but there is no overview of treatment priorities, only lists of possible interventions for each specific rhythm. Anyone but the most experienced provider would find this a frustrating reference in the heat of the moment.

The strongest sections of this book are "Vagal Maneuvers and Electrical Therapy" and the sections on pediatric and neonatal resuscitation. The section on electrical therapy includes step-by-step instructions for defibrillation, cardioversion, automatic electronic defibrillator use, and pacing, which could be read aloud during a code for practitioners who rarely perform these procedures. The pediatric and neonatal resuscitation sections are concise and therefore easy to use. Additional helpful pediatric data, including normal vital signs and equipment sizes, is listed in the "Facts and Formulas" section, just a page away.

"Cardiovascular Pharmacology," a section likely to be used during a code, has strengths and weaknesses. This alphabetical list of medications gives doses, indications, mechanisms of action, and precautions for

each drug, and these pages are concise and easy to read. However, an important weakness is that trade names are included in parentheses but not indexed, so one would be at a loss to find "Levophed" or "Reopro." Similarly, "metoprolol" is under "B" for "β blocker." Bizarrely, thrombolytics are not included, though heparin and glycoprotein IIb/IIIa inhibitors are.

Long sections of the book are not appropriate for a bedside reference. For example, this 178-page book includes 42 pages on dysrhythmia recognition and 20 pages on the symptomology and electrocardiogram features of acute myocardial infarction. These sections might be useful for a student to study during slow times in the emergency department, but it is hard to imagine that they could be anything but distracting during acute patient care. In contrast, the section on stroke is too short to be helpful: it lists the Cincinnati Prehospital Stroke Scale and a differential diagnosis, but there is no checklist for thrombolysis, no dosages for thrombolytics, and no guidelines for blood pressure control during ischemic or hemorrhagic stroke, all of which are essential reference material to have at your fingertips at the patient's bedside.

The heart of this book is the ACLS algorithms. These have been formatted into lists, not charts or flow diagrams, to fit the book's dimensions. These lists would make acceptable prompts during a code, but they do not illuminate the logic of ACLS, making it difficult to understand the algorithms or to approach patient scenarios with flexibility. This pocket guide would not be my first choice for either patient care or for learning ACLS.

The video **Success in ACLS: Essential Skills** is designed to teach the clinical skills that are difficult to teach with a textbook. The video has a clean look and good sound and picture quality. The captions are easy to read, even on a small screen. The first half of the video shows paramedics performing procedures on mannequins in a studio, interspersed with footage from actual resuscitations. Airway procedures performed include use of oxygen delivery devices, suctioning, noninvasive airway adjuncts, and insertion of a laryngeal mask airway and endotracheal tube. Defibrillation, cardioversion, pacing, and use of an automatic electronic defibrillator are also demonstrated. Indications for these interventions are mentioned, but ACLS algorithms are not illuminated: this video is for teaching skills only. The accompanying booklet

amounts to lecture notes for the video, which obviates taking notes. The booklet is in black-and-white, has only a few illustrations, and would not be an inspiring learning tool outside of its use with the video.

The second half of the video reviews dysrhythmias at a very basic level. Jazzy music accompanies a moving tracing of various rhythms, along with a printed description of the rhythm. This section starts inauspiciously with "regular" (not "normal") sinus rhythm. A single strip represents supraventricular tachycardia, without reference to the multiple types of supraventricular tachycardia, recognition of which is essential to following ACLS guidelines. Second-degree heart block and junctional escape rhythms are also simplified to the point of inaccuracy. The accompanying section of the booklet reiterates the overly elementary descriptions of the rhythms. The only benefit I see of this section of the video is to show students what rhythms look like on a monitor as opposed to a printed strip. It is not a useful tool for teaching rhythm recognition at the level expected of ACLS students.

The booklet includes several sections not in the video. There is a glossary and a very brief description of the "ABCDs" (airway, breathing, circulation, differential diagnosis) of ACLS, a list of common ACLS medications, and ACLS protocols reproduced in small print from **ACLS Quick Review Study Guide**. The pharmacology section is more concise than the corresponding sections in the textbook and the **Rapid ACLS Pocket Guide**, but it is still a list, not arranged for teaching or learning in context. In an improvement over the **Pocket Guide**, thrombolytic medications are listed. However, the same indexing problems and inconsistencies are found in both works. For example, β blockers are listed under a group heading, but alteplase, anistreplase, streptokinase, and tenecteplase all warrant their own separate headings.

In summary, this video has value for teachers as a way of introducing students to airway and electrical therapy skills. The dysrhythmia section is too basic to be useful, and the pharmacology and ACLS algorithm sections of the booklet are not illuminating enough to justify the purchase.

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