monary physiology and pathophysiology. The chapters on tracheostomy, chest tubes, and intracranial pressure monitoring were helpful reviews of critical care procedures that are not often part of everyday practice. I expected the chapters on sedation and drugs to be redundant, but they were nicely complementary.

Part II, on cardiovascular disease, begins appropriately with a chapter on shock. This chapter includes a greater percentage of basic science information than others. This seems appropriate given the introduction of novel agents for the treatment of sepsis. Some aspects of shock are redundantly presented in the general chapters on shock of specific etiologies, such as cardiogenic and distributive shock. This adds to the length of the book but allows individual chapters to stand alone as resources. The review of recent trials for septic shock (Chapter 22) was excellent. I found Chapter 24 on hypovolemic shock difficult to follow, perhaps because of its less-than-ideal organization. The chapters on nonsurgical management of traumatic shock and anaphylaxis were short but sweet. I appreciated the perspective provided by the number of trials of heart failure described in Table 27–2 in the chapter covering severe heart failure. The chapters on acute coronary syndromes and arrhythmias did an excellent job of summarizing treatment options for these ubiquitous critical care conditions. The chapters on cardiac valvular heart disease, acute aortic dissection, and hypertensive crisis were thorough but otherwise unremarkable. The chapter on the management of the post-cardiac-surgery patient is excellent and comprehensive.

Part III covers critical care pulmonary disease. The chapter on acute respiratory failure is rather broad and tries to cover too much material. It might be better to dedicate a chapter to acute lung injury, since it is so commonly encountered in the ICU. I enjoyed the chapters on chronic obstructive pulmonary disease and hypoventilation but mostly enjoyed the sections related to respiratory muscle dysfunction, nonpulmonary causes of respiratory failure, and upper airway obstruction. There is some overlap between the chapter on respiratory muscle dysfunction and later chapters on neuromuscular disease in the ICU. Chapter 42, on complications of critical illness, could serve as the cornerstone of the text. The complications included pneumonia, nosocomial pneumonia, and catheter-related bloodstream infections. I thought there should be separate chapters on severe community-acquired pneumonia, nosocomial pneumonia, and ventilator-associated pneumonia. I wish everyone would read and follow the recommendations in the chapter on weaning patients from mechanical ventilation. The chapters on pulmonary embolism and hemoptysis were thorough but did not add much to my understanding.

Part IV, on infectious diseases related to critical illness, was very helpful. The chapter dedicated to nosocomial infection could stand as a text on its own. The other chapters cover antimicrobial therapy, antifungal and antiviral therapy, immunosuppressed hosts, and specific critical illness infections such as toxic shock, typhlitis, Hantavirus, and meningoencephalitis.

Part V covers renal disease and metabolic disorders. These were helpful reviews but did not add much to my understanding of acute and chronic renal failure. The chapter covering electrolyte and metabolic abnormalities was excellent and informative. Included in this part were chapters covering diabetic emergencies, hypoglycemia, adrenal insufficiency, and thyroid disorders, which proved to be helpful reviews. These sections are already in need of updates, given the interest in tighter glucose control and relative adrenal insufficiency in patients with sepsis.

Part VI, "Neurologic Disease in the Critically Ill," includes the best review I have ever read of coma and neurologic criteria for brain death. It is written from a critical care perspective and provides a clear rationale for the evaluation of patients about whom it is imperative to be accurate. The chapters on muscular paralysis, seizures, and head injury complete an excellent section on neurologic issues pertinent to critical care.

Part VII includes the topics of liver failure, gastrointestinal bleeding, and pancreatitis. It also has chapters dedicated to the related topics of hemorrhage, thrombosis, and blood product use. This part concludes with chapters on nutrition and the care of cancer patients, which are important subjects but seem a bit out of place.

Part VIII covers the care of burn injuries, poisoning, hypothermia, and hyperthermia. These turned out to be great review material, along with the chapter on endocrinology for critical care.

Finally, Part IX covers ICU administration, ethics, acute and subacute psychiatric disorders, and severity of illness scoring systems. I thought the chapter on psychiatric disorders seemed out of place in Part IX. As well, Part IX might have been moved to the beginning, so as to provide a more global initial perspective on ICU care and management. The chapter on psychiatric disorders could be included in the neurology section, as could the chapters on sedation and pharmacology.

In summary, this book is large and rather expensive, but it is also timely, comprehensive, and well written. It is clear that each chapter is written to stand alone, and, with few exceptions, the chapters are clinically relevant. I like the idea that I can use this text as a starting point to review a critical care topic or prepare a lecture. The editors have provided some helpful uniformity with chapter outlines, lists of key points, and references. They have not, however, entirely tackled some of the more difficult issues of a comprehensive text, such as limiting redundancy. There are opportunities to improve upon this edition, but I have found my new favorite critical care text.

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Handbook of Evidence-Based Critical Care. Paul Ellis Marik MD MBBCh. New York: Springer-Verlag. 2001. Soft cover, illustrated, 535 pages, U.S. $50, €49.95.

One of the "catch phrases" in medicine over the last few years has been "evidence-based medicine." This term is now used almost daily, both at the bedside and in the published literature. Many basic practices in the care of critically ill patients have changed based on the principals of evidence-based medicine. Evidence-based medicine has become the reference tool by which to judge the effect of an intervention on patient outcome, because it provides the greatest justification for conclusion of causality. It is subject to the least bias and provides the most valid data upon which to base all measures of benefits and risks of particular therapies.

The **Handbook of Evidence-Based Critical Care** provides us with an excel-

lent introduction to the topic. This softcover book is organized with an organ-system-based table of contents, which allows the reader to rapidly look up key topics in the practice of critical care. Each chapter is organized with major headings and subheadings, which makes for exceptionally easy reading and use of this reference work.

The first part of the book, "The Respiratory System," presents the essentials of 14 major topics in patient care. Topics as diverse as mechanical ventilation, acute respiratory distress syndrome, and the use of chest radiography are covered. The chapter on mechanical ventilation is excellent in that it gives the practitioner a concise introduction to the topic. All of the chapters in this section and in the whole book can be used by both students and experienced practitioners, and the brief way that topics are handled can be useful to all types of health care providers, therapists, nurses, and physicians.

The book covers many uncommon diseases, which makes it an excellent text to have in the intensive care unit library; Part 4, "Renal and Metabolic Issues," is a good illustration of this. Acid-base disturbances are described in helpful tables that would assist rapid diagnosis and treatment. Flow charts help to organize one's thoughts in approaching acid-base disturbance problems. I believe the most experienced attending would find this helpful for both patient care and the education of students.

Many broad-based topics are introduced in the section, "Miscellaneous Intensive Care Unit Topics." The reader is introduced to such topics as end-of-life issues, which is highly timely. The last chapter in this section, "Marik's Evidence-Based Commonsense Critical Care Rules," ends the book on a note of humor.

Overall, this is an excellent introduction to the concept of evidence-based medicine. It will be most helpful for students and junior staff members during their first rotation in intensive care. Since it is a true white-coat-pocket book, students can carry it on bedside rounds for easy reference. Nursing and respiratory care professionals will also find this book "a must" to introduce them to the broad-based field of critical care medicine. The writing is clear, logical, and highly organized, which makes for fast and enjoyable reading. I believe this book will get daily use in most intensive care units, by a wide range of readers.

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Mechanisms of Organ Dysfunction in Critical Illness. Timothy W Evans MD PhD and Mitchell P Fink MD, Editors. (Update in Intensive Care Medicine, Volume 38, Jean-Louis Vincent MD PhD, Series Editor) New York: Springer-Verlag. 2002. Soft cover, illustrated, 410 pages, U.S. $50, €49.95.

This book is a continuation of the very successful Update in Intensive Care Medicine series and aims to provide a state-of-the-art overview of many aspects of the pathophysiology of organ dysfunction in critical illness. As a basic scientist and physician, I was intrigued by the topic and excited to explore a collection of reviews from leading researchers in the biological and clinical aspects of critical care, as compiled by 2 prominent authorities in the field. After spending the last 2 months examining the book as both a reference resource and as educational reading, I have to say the results were mixed.

Given the burgeoning field of critical care research, which now integrates nearly every discipline of basic and clinical science, the topic of organ dysfunction is an important one, and the goal of assembling a collection such as this is admirable, if a bit daunting. The contents of **Mechanisms of Organ Dysfunction in Critical Illness** encompass a broad survey of the topic, ranging from mitochondrial biology and mechanisms of inflammation to organ-specific sections on the lung, kidney, gastrointestinal tract, and brain. Though this compilation is geared to those with more than a passing interest in and understanding of molecular and cellular biology, many of the chapters are accessible and of interest to a broad audience of both research and clinical personnel, providing an excellent primer in such topics as ventilator-induced lung injury and pulmonary vascular dysfunction in systemic inflammatory disease.

Unfortunately, the book is somewhat flawed in its lack of a uniform approach to the subject. The material often feels inaccessible and the chapters uneven in their execution, perhaps reflecting differences in the various authors' perceived audience. This is compounded by the book's lack of an integrating overview (the only introductory remarks are on the book's jacket) and its organization into loosely drawn divisions (eg, "Mitochondrial Biology," "Lung and Kidney," and "Organ Dysfunction: Detection and Intervention") without much framework for those unfamiliar with the topic. The chapters themselves range in their approaches to the stated topics.

Many chapters, such as the one by Losser et al, "Multiple Organ Failure and the Kidney," and the one by Kochanek and Clark, "Key Mechanisms of Secondary Neuronal Damage After Brain Trauma," achieve an admirable balance between nuts-and-bolts basic science and well organized integrative review. This approach allows access to the material and readily available "take home" messages for the uninitiated reader, while remaining interesting and informative to those already versed in the topic. Other chapters fail to live up to their titles, such as Lee and Downey's examination of the "Role of Leukocytes in Sepsis and Lung Injury," which, while fascinating reading, devotes 9 of its 11 pages to neutrophil elastase, leaving those unfamiliar with the fine points of neutrophil biology a bit in the dark.

Chapters of particular interest to those involved in the pulmonary aspects of critical care include excellent chapters on pulmonary vascular dysfunction (by Finney et al) and the influence of mechanical ventilation on organ dysfunction (by Whitehead and Slutsky). Matthay's chapter on pulmonary epithelial injury is also excellent, but too brief (4 pages) to really flesh out this very interesting subject. Other sections, such as those on mitochondrial biology and microcirculatory dysfunction, serve as good introductions to the issues of oxygen delivery and consumption, and, though a bit technical, may be very interesting to those involved in respiratory care.

Without exception the chapters are well-written and concise, though some are too brief. Most of the authors make an effort to clearly define their terminology, and there is less technical jargon than is typical of such a scientific volume. A use-