

Handbook of Bioterrorism and Disaster Medicine. Robert E Antosia and John D Cahill, editors. New York: Springer. 2006. Soft cover, illustrated, 492 pages, \$89.95.

The field of disaster medicine has grown almost exponentially since September 11, 2001, and in the aftermath of hurricanes Katrina and Rita. Once the focus of emergency medicine and prehospital caregivers, this field of medicine is now expanding to critical care physicians, nurses, respiratory therapists, and hospital administrators. Many states are now actively planning for disasters and how best to prepare for them. The textbook, which is composed of 7 chapters, is well-written and easy to read. The chapters are designed, as noted by the editors, to be concise and well-supplemented with Web-based resources.

The text of Chapter 1 begins with general concepts of disaster medicine, including topics such as epidemiology, triage, logistics, and "public health preparedness," which is a concept utilized by the United States Federal Emergency Management Agency; it describes the stages in both natural and man-made disasters. The stages illustrated are risk assessment, mitigation, response, and recovery. It is important for health care workers involved in large-scale disasters to coordinate and communicate with the governmental and nongovernmental agencies dealing with the disaster. This chapter also includes a brief overview of intergovernmental and governmental organizations that might participate in disaster response.

Chapter 2 covers natural disasters such as hurricanes, tornadoes, floods, and wildfires, and illustrates some of the potential natural disasters we face everyday. Each natural disaster section includes a brief overview and definition of the illustrated disaster, then the various facets, such as the types of likely injuries and needed treatments.

Chapter 3 covers bio-events and man-made disasters, such as the epidemiology of war and weapons of mass destruction, including anthrax, plague, hemorrhagic fever, and ricin. Each pathogen is covered in a separate section, in a concise manner, including discussion of clinical presentation,

diagnosis, treatment, prognosis, prevention, and resources for additional information.

Chapter 4 covers the medical management of disaster-related injuries and disease. The first module in this chapter covers basic emergency medicine such as the "ABC's" (airway, breathing, circulation) and resuscitation for cardiopulmonary arrest, diagnosis and management of shock, intravenous fluid therapy, and decontamination. Each subject is again addressed in a brief, concise format that can be rapidly read. The module on decontamination is well written and gives the reader a quick overview of the decontamination process. This section also focuses on the importance of personal protection equipment, which is vital to keep health care workers from becoming patients themselves.

The second module of this chapter focuses on infectious diseases of disaster. Such pathogens as measles, malaria, tetanus, meningitis, and tuberculosis are also formatted in brief overviews. Each pathogen is illustrated as to presentation, diagnosis, treatment, prevention, and prognosis. Of interest, there is no section on avian flu, which is currently on almost everyone's "radar" as a potential for a natural pandemic event.

The third module of this chapter focuses on basic trauma management. Whether natural or man-made, the occurrence of some form of trauma is a given and needs to be properly addressed to decrease overall mortality. This module first covers concepts of wound care and management.

This section emphasizes the importance of obtaining a proper history of the injury and a thorough physical examination before formulating a care plan for a trauma patient. A subsection of this module offers a brief overview of general and specific wound management, which could be very helpful for those who have limited experience treating such injuries. This module then covers specific regional trauma, such as abdominal, thoracic, and neurologic trauma. Each regional trauma topic is broken down to a concise formatted overview and required care. This module concludes with coverage of such issues as blast, crush, and missile injuries, and burn management.

Chapter 5 was of special interest to me in that it was specific to pediatrics in disasters. The inclusion of pediatrics as a separate sec-

tion is very important, as children too will be affected during a major disaster. While it would be easy to treat pediatric injury and illness the same as we do with adults, the differences in pediatric physiology and anatomy warrant specific pediatric-focused care, including age-specific vital signs. The module "Evaluation and Management of Pediatric Disaster Victims" gives a quick overview for those caregivers who have not taken Pediatric Advanced Life Support. Important concepts about the pediatric airway, breathing, and circulation are listed, followed by a section on obtaining vascular access, which can be extremely challenging with the pediatric population. The authors also mention that normal saline or lactated ringers are the choice of fluid for initial fluid resuscitation. Utilizing fluids with D5 [5% dextrose solution] 0.25 normal saline or D5 0.5 normal saline should be reserved for maintenance fluids, not bolus administration for treatment of shock.

A second module in this pediatric chapter focuses on pediatric-specific disaster-related considerations such as blunt trauma from falls or flying debris. This module also covers how the pediatric patient may differ from adults in such injuries as abdominal, cervical, and thoracic trauma. A third module focuses on the utilization of pediatric specialty teams in response to disasters that involve pediatric patients. This concept was employed during hurricanes Katrina and Rita, where specialty pediatric teams evacuated sick and injured children in National Guard aircraft, institutional aircraft, and ground ambulances. This allowed the specialized care to be instituted and maintained during the disaster aftermath. This module also contains 2 tables of pediatric equipment and medications that should be available to properly care for the sick or injured pediatric patient.

Chapter 6 addresses medical and humanitarian disasters, with concise modules on water, sanitation, and hygiene, shelter, refugees/displaced populations, and reproductive health issues.

Chapter 7 focuses on education, health issues, and resources. The first module in this chapter highlights emergency preparedness and focuses on the operational aspects of implementing a response to an external

disaster in a hospital setting. Issues such as the need for security, adequate communication, utilizing a command center, surge capacity, and adequate supplies, such as food, medicines and additional resources to be self-sufficient for 48–72 hours. Staffing needs are also addressed, including the use of volunteers who would probably show up to help staff in a disaster emergency.

Additional modules included in this chapter include Joint Commission emergency management standards, immunization schedules/recommendations, health care worker exposure to blood and body fluids, and posttraumatic stress disorder.

Overall this text is a useful and well written reference that addresses a wide variety of topics, with a concise and logical approach. In conclusion, this text is well written for those who need a concise primer on bioterrorism and disaster medicine, but it may be a bit too condensed for those who are well versed in these topics.

Steven E Sittig RRT-NPS FAARC
Department of Anesthesia
Mayo Clinic
Rochester, Minnesota

The author of this review reports no conflict of interest.

The Handbook of Critical Care Drug Therapy, 3rd edition. Gregory M Susla PharmD, Anthony F Suffredini MD, Dorthea McAreavey MD, Michael A Solomon MD, William D Hoffman MD, Paul Nyquist MD, Frederick P Ognibene MD, James H Shelhamer MD, Henry Masur MD. Amsterdam: Wolters Kluwer/Lippincott Williams & Wilkins. 2006. Soft cover, illustrated, 368 pages, \$39.95.

Originally formulated because of the “complexity of critical care medicine,” **The Handbook of Critical Care Drug Therapy**, now in its third edition, aims to be an accessible and quick reference for drug therapy, with an emphasis on content and organization. The book consists of 13 chapters, well-formatted tables, 3 appendixes, a table of contents, and an index. The chapters cover a mix of disease processes and therapies, and not all are on drug treatments; for instance, there is a table on colloids and crystalloids (Table 1.4) and one on blood components (Table 8). The title is slightly misleading. This text is intended for physicians practicing at the bedside, and is writ-

ten in such a manner. Pharmacists may find aspects of the book useful.

Chapter 1 covers acute resuscitation, including advanced cardiac life support and management of shock. The order of the chapter is erratic; drugs for advanced cardiac life support (ACLS) are covered first, then shock and its treatment, and later the ACLS algorithms. Table 1.1 would be accurate without the anti-arrhythmic agents heading, in which drugs such as atropine, epinephrine, adenosine, naloxone, and vasopressin are included. The figure titles would be more beneficial if placed at the top of the page, versus the bottom. Of note the ACLS guidelines listed are current with the 2005 update and are referenced accordingly.

Chapter 2 encompasses anesthesia, sedation, analgesia, and—surprisingly for a drug therapy reference—tracheal intubation techniques. Combining bolus and continuous infusions of paralytic agents (Tables 2.4 and 2.5) could make for easier use. Also, Table 2.4 appears to be missing some drug information. There is no mention of haloperidol in this chapter; instead it is located in Chapter 9, on neurologic and psychiatric therapies; however, neuroleptic malignant syndrome is included. In other parts of the book there are relevant notes underneath the tables. A disclaimer that patients must be well-sedated prior to neuromuscular blockade should have been included with Tables 2.4 and 2.5. This chapter also contains several tables that cover both intravenous and oral analgesia, and equi-analgesic dosing.

Chapter 3 presents cardiovascular therapies for unstable angina, heart failure, arrhythmias, pulmonary arterial hypertension, and vasoactive agents. This chapter in particular is repetitive in terms of drugs and dosing. For instance, redundant information on nitroprusside is included in 3 different tables. Perhaps it would be “user-friendlier” to list the drug’s indications and uses in the separate algorithms, but have one place where all the drug information is located. The index (discussed below) could also be made more helpful. As an example, nitroprusside is listed on 4 pages, even with one omission (on page 64). Also, the organization of this dense chapter could be better. Table 3.1 discusses fibrinolytic therapies, but it refers the reader to Table 3.2 to read the contraindications. Clinical trial doses, which may not be commercially available, are recommended in some tables—a point that should be noted, this being a drug ther-

apy book. Aspirin, which is available in oral doses of 81 mg and 325 mg, has recommended doses of 75 mg to 162 mg in multiple tables for acute coronary syndrome.

Chapters 4 through 7 are succinct. Pulmonary therapies incorporate bronchodilator treatment, pleurodesis, and pulmonary embolism, although bronchodilator therapy in mechanically ventilated patients only makes it into the text underneath the table. There is no mention of therapies specifically for chronic obstructive pulmonary disease. In Chapter 5, renal, electrolyte, and acid-base disturbances are discussed. For the treatment of hyperkalemia (Table 5.3), calcium gluconate and chloride have the same dose listed, although calcium chloride, milliliter for milliliter, has 3 times more calcium than its gluconate salt—a fact noted by the authors as well. There is a repetitive section on diuretics in this chapter (already covered in Chapter 3).

Chapter 6 includes endocrine therapies, although glargine is omitted in the table of insulin preparations, yet an amylin analog (pramlintide) has its own table. Gastrointestinal topics such as gastrointestinal bleeds, infectious diarrhea, and nutrition are highlighted in Chapter 7.

Chapter 8 covers hematologic therapies, ranging from blood components, to immune globulins, to anti-coagulant therapies, and includes a table on heparin-induced thrombocytopenia. Sections of this chapter are also found elsewhere in the text, such as drug information on heparin, direct thrombin inhibitors, anti-platelet agents, and glycoprotein IIb/IIIa, and are perhaps unnecessarily included here. Four pages of this chapter are devoted to warfarin, a drug with limited use in the intensive care setting.

Chapter 9 is dedicated to cerebral matters, including stroke, seizure, and psychiatric disorders.

Chapter 10 is a thorough section that covers antimicrobial agents, specific pathogens, and disease processes. Also covered are drug dosages, prophylaxis regimens, and some pediatric doses, which also appear elsewhere in this text, although it is unclear why, as this book is ostensibly written with the adult patient in mind.

The book concludes with 3 small chapters that cover allergy, poisonings, and drug monitoring. The poisoning chapter could be condensed by combining Tables 12.2 and 12.4, which would make for easier use. The drug monitoring chapter could be simplified by moving the drugs that are included

in the serum drug concentration section to their corresponding chapters. For example, aminoglycosides could be left in the infectious disease section, and anti-epileptics in their corresponding chapter.

There are 3 appendixes, which cover intravenous administration guidelines, selected intravenous-to-oral conversions, and some oral drug doses. The oral drug dosing section is redundant and could be altogether deleted, as most of the relevant drugs are discussed elsewhere throughout the text.

The index lists drugs in both generic and trade name, as well as disease processes. The index would have been more beneficial had the authors identified the more important pages referenced for a particular therapy, such as in the example of nitroprusside discussed above.

There are some minor typographical errors throughout the text. For instance, in

Table 3.1 there is an extra "I" in GPIIb/IIIa, an extra space in the line of β -blocking agents, and a large, unnecessary dash in ACEI. In Table 5.9, sodium and potassium phosphate are shown with 2 negative charges. The routes of administration are missing for adenosine in Table 1.1, and for rasburicase in Table 5.12. ReoPro is misspelled in the index. There are some inconsistencies in Chapter 1 and elsewhere, such as normal saline referred to as 0.9% NaCl and normal saline, "mL" and "cc" used interchangeably, "ml" instead of "mL" inconsistently, and both "Ringer's lactate" and "lactated ringer's" are used.

Overall, the text is fairly accurate and complete in terms of content in critical care drug therapy, and then some. However, the book falls short of the mark for "quick reference" and organization. The repetitiveness of coverage of some drugs in various sec-

tions (evidenced by the index), the order of some of the chapters, and the back-and-forth referencing between tables and figures is hindering. In some sections it is unclear why items are included and others omitted. The 2-tone format is very useful in distinguishing between drugs and statements. Some of the tables are referenced, which is a definite plus. Physicians would consider this text useful and maybe "pocket it," if willing to seek out a few pages prior to gleaning the needed information.

Veena Karir PharmD
Department of Pharmacy
Harborview Medical Center
University of Washington
Seattle, Washington

The author of this review reports no conflict of interest.