Preface

Critical care medicine is a dynamic and exciting arena where complex pathophysiologic states require extensive knowledge and up-to-date clinical information. An extensive knowledge of basic pathophysiology, as well as awareness of the appropriate diagnostic tests and treatments that are used to optimize care in the critically ill is essential. Since our first edition 7 years ago, new information crucial to the care and understanding of the critically ill patient has rapidly accumulated. Because this knowledge base crosses many different disciplines, a comprehensive multidisciplinary approach presenting the information is essential, similar to the multidisciplinary approach that is used to care for the critically ill patient. We have strived to provide this content in an easily digestible format that uses a variety of teaching tools to facilitate understanding of the presented concepts and to enhance information retention.

To meet the demand to provide comprehensive and diverse education in order to understand the pathogenesis and optimum care of a variety of critical illnesses, we have substantially revised the prior topics in the first edition with updated information. We have also markedly expanded the number of topics covered to include acute lung injury and the acute respiratory distress syndrome, an expanded discussion of the physiology and operation of mechanical ventilation, obstetrical care in the ICU, neurosurgical emergencies, acute coronary syndromes, cardiac arrhythmias, role of whole body rehabilitation in the ICU, ethical conduct of human research in the ICU, and nursing care of the ICU patient. Nurses, physical and respiratory therapists, nutritionists, and pharmacists have contributed to the efforts of surgeons, anesthesiologists, radiologists, cardiologists, pulmonary and critical care physicians, and other healthcare professionals to provide the complete and up-to-date information that is presented in this second edition. This text should be useful not only for the internist, anesthesiologist, or surgeon who practices in the ICU, but also for the nurses, therapists, and other ancillary professionals who care for the ICU patient.

This second edition is also designed to make the dynamic environment of the critical care unit understandable and the approach to the patient both logical and successful. The book continues to build on the three main components presented in the first edition: (1) the description of the procedural tasks commonly performed for the critically ill patient, (2) explanations of the most common pathophysiologic states encountered, and (3) descriptions of specific disease entities with details regarding their differential diagnosis, diagnostic strategy, and therapeutic plan.

This book also uses several educational approaches that we have found useful in our own teaching sessions and prior textbooks. Clinical cases introduce chapters and highlight chapter segments to emphasize clinical relevancy. As an additional study aid, margin notes highlight important teaching points and facilitate easy review of the chapter content. To consolidate the principles outlined in each chapter, review questions with full-text explanations are provided at the end of each chapter. In this second edition, we have added in-text referencing for sentinel papers and also provided a suggested reading list at the end of each chapter. All these elements help reinforce the most important messages for the reader and provide ready sources of information for further self-education.
This textbook is the effort of many individuals across many disciplines who practice at Temple University School of Medicine and Temple University Hospital. Nonetheless, only evidence-based literature is used to provide the basic concepts and therapeutic and diagnostic strategies presented; the content does not represent the convention of care endorsed by any single institution.

We hope that you find the information helpful in your understanding of critical illnesses and the current evidence-based approaches to the care of the ICU patient.

Gerard J. Criner, MD
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