
Preface

Perioperative Blood Management: A Physician's Handbook is a joint effort by AABB and the Society for the Advancement of Blood Management (SABM). Both organizations identified the need for a concise resource that addresses the full spectrum of perioperative blood management. This *Handbook* describes ways to use blood wisely, ways to conserve blood, and ways to avoid blood use entirely.

If the book had a mission statement, it would be to emphasize that optimal patient care should involve a combination of blood management strategies, rather than just one or two. It is intended to be a ready resource for surgeons, anesthesiologists, perfusionists, transfusion specialists, clinicians, nurses, and other members of the health-care team who provide care to patients undergoing surgery.

The book is divided into seven sections and a helpful appendix. The introductory section lays the foundation for those that follow. It briefly reviews the risks associated with allogeneic blood transfusion and the quality standards promulgated to improve the use of perioperative transfusion. This section also introduces the strategies involved in preoperative, intraoperative, and postoperative blood conservation.

The section on Preoperative Assessment and Management focuses on two mainstays of therapy—maintaining optimal hemoglobin levels and maximizing coagulation systems. Key concepts covered in this section include use of erythropoietin and iron therapies, effects of the patient's use of herbal supplements, and the need to avoid the use of anticoagulants such as warfarin, heparin, nonsteroidal anti-inflammatory drugs, and antiplatelet medications.

The Intraoperative Blood Management section opens with a discussion of transfusion triggers and closes by addressing autologous platelet gel. However, the core of this section discusses acute normovolemic hemodilution and intraoperative blood recovery (cell "salvage"). Details are given on patient selection, unit collection and processing, readministration, contraindications, and complications of these closely related techniques.

The discussion of intraoperative techniques continues in the next section, Adjunctive Intraoperative Therapies. A detailed review of pharmacologic agents includes recommendations on recombinant Factor VIIa, aprotinin, tranexamic acid, desmopressin, and epsilon aminocaproic acid. The use of these agents is described for cardiac, liver, orthopedic, urologic, transplant, and other surgical procedures. This section also includes an update on artificial oxygen carriers (“oxygen therapeutics”).

The section on Point-of-Care Testing highlights the benefits of hemoglobin level and coagulation testing in the operating suite. It describes in some detail the tests and equipment that can provide immediate feedback on hemostasis—thus directing the use of all other perioperative techniques to improve patient outcome.

The Postoperative Blood Management section echoes the basic concepts of blood use, blood conservation, and blood avoidance. It discusses the collection and readministration of postoperatively shed blood, and explores techniques for preventing and arresting bleeding and anemia following surgical procedures, so that blood transfusion is used sparingly. It concludes with a novel discussion on avoiding transfusion through the use of hyperbaric oxygen therapy.

The final section, Management of Special Patient Populations, provides a fresh perspective on the material presented thus far. In a sampling of surgical specialties—liver, cardiac, obstetric, and pediatric—specific practical applications of blood management techniques are described.

The *Handbook* concludes with an appendix that gives readers a brief summary of the organizations that address perioperative blood management issues, identifies some of the key resources the groups provide, and lists key contact information for follow-up and networking.

In keeping with the handbook format, the editors have condensed a wealth of information into a small space. No attempts were made to provide exhaustive coverage of any topic. AABB and SABM intend to co-publish a full textbook, *Blood Conservation in Medicine and Surgery*, in 2007. Until then, readers who wish more information are encouraged to use the reference lists as a first step in further exploration.

The hard work of the contributing editors on this first edition is deeply appreciated. It has been a rewarding experience to participate in the alliance between AABB and SABM to help keep practitioners up to date in this fascinating area of patient care. Special thanks are due to Laurie Munk and Jay Pennington for their relentless assistance in producing this valuable resource.

Jonathan Waters, MD
Jerome Gottschall, MD
Editors