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Citations in Patient Blood Management

James P. AuBuchon, MD, FCAP, FRCP(Edin)
Other related publications available from the AABB:

**Getting Started in Patient Blood Management**
By James P. AuBuchon, MD, FCAP, FRCP(Edin); Kathleen Puca, MD, MT(ASCP)SBB, FCAP;
Sunita Saxena, MD; Ira A. Shulman, MD; and Jonathan H. Waters, MD

**Standards for Perioperative Autologous Blood**
Collection and Administration, 4th edition

**Guidelines for Patient Blood Management and Blood Utilization**
Developed for the Clinical Transfusion Medicine Committee and the
Transfusion Medicine Section Coordinating Committee by
Joanne Becker, MD, and Beth Shaz, MD

**Blood Management: Options for Better Patient Care**
Edited by Jonathan H. Waters, MD

**The Transfusion Committee: Putting Patient Safety First, 2nd edition**
Edited by Sunita Saxena, MD

**Guidelines for Blood Recovery and Reinfusion in Surgery and Trauma**
Developed for the Scientific Section Coordinating Committee by
Jonathan Waters, MD; Robert M. Dyga, RN, CCP; and
Mark H. Yazer, MD, FRCP(C)

**Perioperative Blood Management: A Physician’s Handbook, 3rd edition**
Edited by Jonathan Waters, MD; Aryeh Shander, MD; and Karen King, MD

**Transfusion Medicine’s Emerging Positions: Transfusion Safety Officers and**
**Patient Blood Management Coordinators**
Edited by Susan T. Johnson, MSTM, MT(ASCP)SBB, and Kathleen E. Puca, MD, MT(ASCP)SBB
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Preface

Patient blood management (PBM), defined as an evidence-based, multi-disciplinary approach to optimizing the care of patients who might need transfusion, has continued to gain attention during the years since the publication of the previous list of Citations. The current compendium, including English articles listed in PubMed from January, 2010 through June, 2014, is indicative of the development of additional experience and knowledge in this important field of transfusion medicine. These are presented here to facilitate further dissemination of knowledge about the appropriate use of blood components and measures that can be implemented to avoid or delay the need for transfusion.

The articles have been grouped according to the topics they explore. Many articles have been listed in two categories to facilitate their being found in a manual search. For example, an article on the use of tranexamic acid in arthroplasty would be listed in Pharmacologic Interventions: Measures to Reduce Blood Loss, Including Anticoagulation Reversal, as well as Issues Pertinent to Particular Disciplines: Orthopedics and Neurosurgery. However, the approach used by the compiler may not match the reader’s, and the use of electronic searching tools for keywords is encouraged to expand the number of citations identified.

The compendium focuses on trials or reports of interventions to reduce the need for transfusion. Not all of the articles report decreased usage of transfusion, however, and careful reading of all papers of interest is advised. Not included are reports of the outcomes of transfusion per se, such as associating transfusion with poorer outcomes, or analyses of the effect of storage of blood components. Single case reports have also not been included.

The compendium is intended to serve as a companion to the many educational publications, seminars and web-based sessions offered by AABB on the topic of PBM. Given the ongoing evolution of medical knowledge and scientific understanding, all readers are advised to search the most recently published literature to ensure application of the most current concepts.

James P. AuBuchon, MD, FCAP, FRCP(Edin)
Compiler
Overview


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52. Roubinian NH, Murphy EL, Swain BE, et al for the NHLBI Recipient Epidemiology and Donor Evaluation Study-III (REDS-III) and the Northern California Kaiser Permanente DOR Systems Research Initiative. Predicting red blood cell transfusion in hospitalized patients: Role of hemoglobin level, comorbidities, and illness severity. BMC Health Serv Res 2014;14:213.


69. Wallis JP. Disentangling anemia and transfusion. Transfusion 2011;51:8-10.

Program Management, Financial Implications, Cost-Effectiveness Analyses

22. Farmer SL, Towler SC, Leahy MF, Hofmann A. Drivers for change: Western Australia Patient Blood Management Program (WA PBMP), World Health Assembly (WHA) and Advisory


52. Lin YC, Chang CS, Yeh CJ, Wu YC. The appropriateness and physician compliance of platelet usage by a computerized transfusion decision support system in a medical center. Transfusion 2010;50:2565-70.


Anemia – Recognition and Management


Use of Iron


Use of Erythropoietin


Utilization of Coagulation and Platelet Function Testing


Indications, Utilizations, and Guidelines


Red Blood Cells


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83. Roubinian NH, Murphy EL, Swain BE, et al. NHLBI Recipient Epidemiology and Donor Evaluation Study-III (REDS-III) and the Northern California Kaiser Permanente DOR Systems Research Initiative. Predicting red blood cell transfusion in hospitalized patients: Role of hemoglobin level, comorbidities, and illness severity. BMC Health Serv Res 2014;14:213.


Frozen Plasma and Cryoprecipitate


37. Keir AK, Stanworth S. Fresh-frozen plasma should not be given to nonbleeding premature infants with “abnormal” coagulation tests. Transfusion 2014;54:1681.


74. Zielinski MD, Park MS, Jenkins D. Appropriate evidence-based practice guidelines for plasma transfusion would include a high ratio of plasma to red blood cells based on the available data. Transfusion 2010;50:2762-4.


Platelets


42. Petricevic M, Biocina B. Letter by Petricevic and Biocina regarding article, “Platelet function measurement-based strategy to reduce bleeding and waiting time in clopidogrel-treated patients undergoing coronary artery bypass graft surgery: The timing based on platelet function strategy to reduce clopidogrel-associated bleeding related to CABG (TARGET-CABG) Study”. Circ Cardiovasc Interv 2012;5:e47; author reply e48.


Peri-Surgical Interventions

General Surgical Issues


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**Preoperative Blood Collection and Acute Normovolemic Hemodilution**


**Intra- and Postoperative Red Cell Recovery**


Issues Pertinent to Particular Disciplines

Cardiology, Cardiac Surgery, Thoracic Surgery, and Vascular Surgery


218. Schill DM. Plasma sequestration: A good therapy to prevent the deleterious effect of clopidogrel when clopidogrel is used within one to four days of coronary bypass surgery. Perfusion 2010;25:91-5.


Critical Care


**Gastroenterology**


General Surgery


Gynecology


Hematology and Oncology


3. Alfred A, Vora AJ. What is the minimum level of donor chimerism necessary to sustain transfusion independence in thalassaemia? Bone Marrow Transplant 2011;46:769-70.


Nephrology


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Obstetrics


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Orthopedics and Neurosurgery


blood salvage as transfusion alternative using a restrictive transfusion policy in patients with
a preoperative hemoglobin above 13 g/dl. Anesthesiology 2014;120:852-60.


223. Spahn DR. Anemia and patient blood management in hip and knee surgery: A systematic
review of the literature. Anesthesiology 2010;113:482-95.

224. Spahn DR. Severe bleeding in surgical and trauma patients: The role of fibrinogen replace-

erative management of anticoagulants and antiplatelet agents in spine surgery. Orthop Trau-


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A four-year follow-up of transfusion requirements and blood loss from 2008 to 2011 at the
Balgrist University Hospital in Zurich, Switzerland. Blood Transfus 2014;12:195-203.

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effect on allogeneic blood transfusions in primary total hip and knee replacement: A three-

231. Thomassen BJ, Pilot P, Scholtes VA, et al. Limit allogeneic blood use with routine re-use of
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patients undergoing elective surgery for degenerative conditions of the spine. Arch Orthop

235. Tse EY, Cheung WY, Ng KF, Luk KD. Reducing perioperative blood loss and allogeneic
blood transfusion in patients undergoing major spine surgery. J Bone Joint Surg Am 2011;93:
1268-77.


brain injury: The arguments for and against liberal transfusion. J Neurotrauma 2011;28:155-
65.


Oral/Facial Surgery and Otorhinolaryngology


**Pediatrics**


63. Keir AK, Stanworth S. Fresh-frozen plasma should not be given to nonbleeding premature infants with “abnormal” coagulation tests. Transfusion 2014;54:1681.


Transplantation


Trauma and Massive Transfusion


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111. Zielinski MD, Park MS, Jenkins D. Appropriate evidence-based practice guidelines for plasma transfusion would include a high ratio of plasma to red blood cells based on the available data. Transfusion 2010;50:2764.

Urology


Pharmacologic Interventions

Measures to Reduce Blood Loss, Including Anticoagulation Reversal


Effects of Antiplatelet Agents, Anticoagulation, and Hemodilution


43. Schill DM. Plasma sequestration: A good therapy to prevent the deleterious effect of clopidogrel when clopidogrel is used within one to four days of coronary bypass surgery. Perfusion 2010;25:91-5.


