
Preface



WITH GREAT EXCITEMENT, WE PRESENT this inaugural edition of *Key Concepts in Transfusion Medicine*. This book replaces the well-known *Practical Guide to Transfusion Medicine*, which has traditionally been an excellent resource to so many people, both trainees and practitioners, in the field.





The main goal for this book is to help the readers build a solid foundation of both basic and advanced conceptual knowledge to help with daily practice of transfusion medicine. It is not intended to be a substitute for original research, review articles, and/or clinical training. We asked all authors to include as many evidence-based recommendations as possible, recognizing that much is still elusive. Readers are advised to continuously update their knowledge by attending national meetings and reading clinical journals.

Our hope is that this book will provide practical guidance to those involved in the clinical aspects of transfusion medicine with a special focus in the hospital setting. Specifically, it is written in such a way to facilitate the ease of learning for transfusion medicine trainees, both physicians and medical technologists. It is our goal to have this book as the go-to book for trainees in school, residency, and fellowship to learn transfusion medicine as well as when basic concepts needed to be refreshed quickly at bedside. Given the introductory nature of the book, it may also be useful to physicians and/or allied health professionals who deal with blood/blood components on a daily basis but who are not transfusion medicine specialists. It may help them to 1) understand transfusion medicine, 2) facilitate the discussions of complex transfusion issues, and/or 3) understand the logistics and

challenges of the blood and cellular therapy treatments and how they may influence patient care.

All chapters have been thoroughly reviewed and updated with fresh content. For example, up-to-date discussions of blood groups and revised definitions of several transfusion reactions, such as transfusion-related acute lung injury, will be valued by most readers. Hemovigilance is emphasized along with a summary of evidence for transfusion guidelines, when possible. Whole blood, which has re-emerged as a valuable treatment option, is highlighted, along with major blood components and derivatives. Furthermore, given that a strong knowledge of hemostasis is beneficial to the practice of transfusion medicine, laboratory testing for hemostasis and thrombosis along with coagulation derivatives are addressed in extensive detail.

To facilitate assimilation of key concepts and/or to alert readers to potential risky situations, we have provided a simple system of marginal notes to accompany the text, which included the following:

-  Key concept – this icon identifies an important concept that is worth remembering.
 - Example: Type-and-screen testing consists of ABO group, RhD type, and antibody screen.
-  Bright idea – this icon offers a short clinical pearl containing helpful information that is possibly worth committing to memory.
 - Example: Cryoprecipitate contains fibrinogen, Factor VIII, von Willebrand factor, and Factor XIII.
-  Caution – this icon helps the readers to be aware of situations that may pose a danger, but not always so.
 - Example: Plasma should be ABO compatible with the patient’s red cells.
-  Warning – this icon alerts the readers to information that if unheeded, is likely to result in untoward consequences.
 - Example: Blood bank samples must be correctly labeled with no discrepancies between the sample

label and patient record. Samples that fail these criteria will be rejected for testing.

We, the editors, would like to thank the many people who helped make this reference tool a reality. First, we thank the chapter authors, who have paying jobs to prioritize, after all. We also acknowledge the work done by the authors of *Practical Guide to Transfusion Medicine*: Marian Petrides and Gary Stack, who contributed to two editions, as well as Laura Cooling and Lanne Maes, who joined them on the second effort. We would also like to thank the AABB Publications team and their free-lance and staff colleagues for excellent technical and professional support.

We would like to thank the leadership at AABB and our institutions for their collaboration and support of this project. We are indebted to all our teachers and mentors for their encouragement and mentorships provided in our professional careers. We are grateful to all our trainees and colleagues for their questions, scientific curiosity and discussions, and intellectual stimuli. We would like to acknowledge with gratitude the support, patience, and love of our family members. Without their unconditional support—during a pandemic no less—this project could not have come to fruition.

We hope that this book will be useful to help readers enhance their knowledge of daily clinical practice as a refresher for some and a learning tool for others. Readers are encouraged to share feedback and suggestions with the editors via publications@aabb.org.

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