Patient Blood Management

Scientific Evidence Compendium

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Introduction

Patient Blood Management (PBM) has transformed the approach to bleeding and transfusion management, shifting clinical practice from a product-centered model toward a patient-centered strategy focused on optimizing outcomes, preserving blood resources, and delivering targeted hemostatic therapy. Over the past two decades, a growing body of evidence has helped define when intervention is needed, how treatment should be guided, and which strategies are most effective in reducing bleeding complications and unnecessary transfusions.

This document brings together the landmark publications that have shaped PBM across some of the most challenging clinical environments: **Adult and Pediatric Cardiovascular and Aortic Surgery and ECMO**, **Liver Disease and Transplantation**, **Trauma and Traumatic Brain Injury**, and **Obstetrics and Postpartum Hemorrhage**. These specialties share a common need for rapid, evidence-based assessment of coagulation status and timely therapeutic decision-making.

This document has been developed as a evidence-based guide to Patient Blood Management implementation, consolidating the most influential publications across major clinical settings. By structuring the evidence around clinically relevant triggers, validated intervention strategies, and guideline recommendations, it provides healthcare professionals with a comprehensive resource to support evidence-based decision-making and the effective integration of PBM principles into clinical practice.

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Clinical Setting 1

Adult and Pediatric Cardiovascular and Aortic Surgery and ECMO

Development of Trigger (Cut-off) Values by (Observational) Studies (ROC Curve Analysis)

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Recommendations and Guidelines

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Clinical Setting 2

Liver Disease and Transplantation

Development of Trigger (Cut-off) Values by (Observational) Studies (ROC Curve Analysis)

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Recommendations and Guidelines

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Clinical Setting 3

Trauma and Traumatic-Brain Injury

Development of Trigger (Cut-off) Values by (Observational) Studies (ROC Curve Analysis)

1. Dirkmann D, Görlinger K, Peters J. Assessment of early thromboelastometric variables from extrinsically activated assays with and without aprotinin for rapid detection of fibrinolysis. Anesth Analg. 2014 Sep;119(3):533-542. https://pubmed.ncbi.nlm.nih.gov/24977914/

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Clinical Setting 4

Obstetrics and Postpartum Hemorrhage

Development of Trigger (Cut-off) Values by (Observational) Studies (ROC Curve Analysis)

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