

63 EVIDENCE BASED PRACTICAL GUIDELINE FOR THE MANAGEMENT OF MAJOR HEMORRHAGE IN CHILDREN AND TEENAGERS

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Background and aims: Management of major hemorrhage in any setting requires a multidisciplinary approach. The aim of this guideline is to provide recommendations for the hematological management of major hemorrhage in any clinical situation, with practical guidance for Clinical Hematologists and laboratory staff on the content and delivery of major bleeding protocols, including the use of blood components and transfusion alternatives. These updated guidelines are based on new studies, which have provoked reassessment of the principles of managing major hemorrhage in all clinical situations, and which mandate much closer working between hospital blood banks and emergency departments to provide timely transfusion support for patients with major bleeding.

Methods: The writing group was Pediatric hematologists-Oncologists who were transfusion and hemostasis experts, and consultation with the Trauma, Anesthesiologists, Obstetric-Gynecologists, Hematopathologists and critical care was made. Relevant systematic reviews were identified by searching PubMed and Embase using the term “bleeding” and “hemorrhage” combined with “management”, “trials”, “children” and “teenagers”. The search covered articles published up until April 2016. Only human studies were included and articles not written in English were excluded. The quality of evidence was judged by predefined Grades of Recommendation, Assessment, Development and Evaluation (GRADE) criteria.

Results: Definition of major hemorrhage: Standard definitions are not particularly helpful because they are retrospective. Our arbitrary definition of major hemorrhage is bleeding which leads to a heart rate more than 110 beats/ min and/or systolic blood pressure less than 90 mmHg for teenagers and less than third percentile for age in children. Early recognition of significant blood loss, ideally before major increments in pulse rate and falls in blood pressure, will allow prompt action to pre-empt shock.

Conclusion: Medical, nursing and midwifery staff involved in frontline care must be trained to recognize major blood loss early, know when to activate the local major hemorrhage protocol and take prompt and appropriate action (1D). Annual workshops for continuous medical education are highly suggested.