

PEDIATRIC CRITICAL CARE TRANSFUSION AND ANEMIA EXPERTISE INITIATIVE

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Introduction/Hypothesis: Despite evidence that a lower hemoglobin threshold is safe in hemodynamically stable children, studies have shown that transfusion thresholds in practice are higher, exposing these children to the morbidity and mortality associated with RBC transfusion. Therefore, there is increased need for evidence-based blood management strategies for clinicians caring for critically ill children.

Methods: The Pediatric Critical Care Transfusion and Anemia Expertise Initiative has brought together a group of 49 international experts in pediatric transfusion/critical care in collaboration with the Pediatric Critical Care Blood Research Network (BloodNet), and the Pediatric Acute Lung Injury and Sepsis Investigators (PALISI), to conduct a consensus conference series on pediatric critical care blood management. The methodology is modeled after that used in the Pediatric Acute Lung Injury and Consensus Conference and will create consensus statements via a structured process outlining existing data in RBC transfusion. Novel features include engagement with implementation science experts to enable consensus uptake.

Results: Two of the three expert meetings have been successfully conducted. Ten topics were identified and include recommendations on indications for RBC transfusion in critically ill children 1) based on hemoglobin triggers in the general population, 2) based on physiological triggers in the general population, 3) traumatic brain injury, 4) congenital heart disease, 5) hematologic/oncologic disease, 6) respiratory failure, 7) shock, 8) bleeding, 9) extracorporeal support, and 10) alternative processing. The systematic review was performed. The short text recommendations were generated, discussed at the second meeting and will undergo voting using the RAND UCLA Appropriateness Method to achieve consensus.

Conclusions: The TAXI consensus series is the first consensus series to convene international and multidisciplinary experts to create consensus statements on transfusion practices to improve outcomes and safety for critically ill children at risk for, or who require, RBC transfusions.

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