

Executive Summary of Background Document

The AABB/THOR working party (WP) is suggesting that the AABB Standards Committee modify standard 5.15.1 to permit the use of low titer, group O whole blood (WB) in all massively bleeding patients regardless of their ABO group. Improved resuscitation strategies are needed for patients with life-threatening hemorrhage since there are approximately 30,000 preventable deaths after injury per year in the US, with 25,000 of these occurring prehospital. Data indicates that reconstituted whole blood in a 1:1:1unit ratio reduces death from hemorrhage. Prehospital use of blood products within 30 min of injury also improves survival; mortality is increased by 5% for every minute that initiating transfusion is delayed. Low titer group O whole blood has advantages over reconstituted whole blood as highlighted below. Nearly 220 experts from 24 countries have signed the WP's petition to support the modification of standard 5.15.1 to permit the use of low titer, group O WB in massively bleeding patients.

Benefits of Low Titer Group O Whole Blood Compared to Blood Components for Hemorrhagic Shock

Efficacy

- The cold stored platelets provide improved hemostasis compared to room temperature platelets
- More concentrated product that contains less anticoagulants and additive solution than an equal amount of components

Safety

- Reduced risk of hemolysis from the low titer minor incompatible plasma compared to the risk from untitered minor incompatible plasma or platelets
- Reduced risk of bacterial contamination compared to room temperature stored platelets
- Impressive safety record with over 1 million units transfused in combat and civilian settings

Logistic

- Increased access to platelets for both pre-hospital and early in-hospital resuscitations
- Simplifies and accelerates the provision of all blood components needed to treat hemorrhagic shock