



Physicians Caring for Texans

TexMed 2017 Clinical Abstract

Please complete all of the following sections and include supporting charts and graphs in this document. Submit a total of two documents - this document and the Biographical Data and Disclosure Form to posters@texmed.org by midnight March 17, 2017.

Procedure and Selection Criteria

- Submissions not directly related to quality improvement or research may be accepted and should follow the standardized format outlined below. Content should enhance knowledge in the field of clinical care and be relevant to a given patient population.

PROJECT NAME: Advances in the Use of Whole Blood in Combat Trauma Resuscitation

Institution or Practice Name: US Army, Armed Services Blood Program, USAISR

Setting of Care: Prehospital

Primary Author: Audra L. Taylor

Secondary Author: Jason B. Corley

Other Members of Project Team: Andrew D. Fisher, Andrew P. Cap, Ethan A. Miles, Sheila Rudesheim, Todd Cosgrove, and Jacquelyn Messenger

Is the Primary Author, Secondary Author or Member of Project Team a TMA member (required)?

Yes No

Please provide name(s) and their role in the project:

TMA Member Name:

Andrew D. Fisher, co-investigator and unit program co-director

TexMed Poster Session Specialty Subject Area: Please check if these apply.

Enhanced Perioperative Recovery

Disaster Medicine and Emergency Preparedness

Clinical

Background (15 points max):

Problem & Background: The resuscitative benefits of whole blood in trauma management are well known and documented. The evolution of whole blood use has resulted in the development of a Clinical Practice Guideline (CPG) for Fresh Whole Blood Collections to provide theater guidance for the collection and transfusion of type-specific product.

The ability to obtain a blood type from a patient can work well in facilities with laboratory support staff; however, this requirement can prove to be a challenge in austere settings where Special Operations personnel are deployed.

U.S. Army Special Operations Command, Fort Bragg, has partnered with the Army Blood Program and the U.S. Army Institute of Surgical Research to identify low anti-A/anti-B Titer Group O donors prior to deployment.

Special Operations units have been screened in CY 15-16 and this allows them to deploy with known donors to support combat casualty care at the Point-of-Injury (POI).

In addition, the ASBP has implemented a process to ship whole blood into theater through the Theater Distribution System to support Special Operations units with a product licensed by the Food and Drug Administration.

Intended Stakeholders (15 points max): Stake holders in the research include the Department of Defense, but also, Texas trauma centers and isolated regions of Texas where there are prolonged distances between the POI and definitive care.

Description of Accomplished Work (25 points max):

Methods: Volunteer Group O donors assigned to Special Operations units were screened for donation using the ASBP Form 572 (Donor Screening Record) and interviewed by ABP personnel.

If determined to be eligible for donation, the donor was issued a Donor Identification Number (DIN) and the tubes for the required viral marker and titer testing were collected and processed.

Transfusion Transmitted Disease (TTD) and titer testing were processed and shipped to the designated reference laboratories and the units were established in the Theater Medical Data Store (TMDS).

All results were placed in TMDS for theater access by the unit surgeon or designee. Donors with a positive TTD were identified as deferred and counseled by Preventative Medicine as required.

Concurrently, ASBP initiated shipments of Group O low titer whole blood from the U.S. to provide an FDA licensed product for use by Special Operations. WB is collected at the Armed Services Blood Bank Center—Pacific Northwest and all TTD and titer testing is performed prior to product shipment to theater. Titer testing for both Special Operations pre-screens and whole manufacturing involved testing for IgM antibodies.

Results: 1687 Group O personnel were tested. Personnel with a titer >1:256 are considered “high titer” (n=640) and will not be used as donors. Personnel with a titer <1:256 are considered “low titer” (n=1047) and may be used as whole blood donors. Concurrently, shipments of licensed Group O low titer whole blood occur weekly from an ABP donor center.

Timeframe and Budget (20 points max): May 2015-January 2017, while there is no set budget for this project, we have broken down different categories and have estimated the price of the program. Cost for all testing, including titers, comes out to a mean of \$77.48 per donor (3 testing sites). The average cost per donor for expendable supplies: \$1.60. The amount spent on travel in 2015-2016: \$15K. Finally, the total estimated cost of the program: \$231,855

Intended Use (25 points max): The implementation of the Group O low titer donor screening and whole blood production will continue to enhance and improve readiness and enhance battlefield trauma care. This could directly impact civilian models of disaster medicine and emergency preparedness.