

From Under the Microscope

Happy holidays from the Pathologists! In keeping with the color of holiday red, I thought I'd update everyone on interesting projects we're working on in patient **blood** management (PBM).

On the Presence side of our system, Dr. Ellen Polisky, VPMA for Alverno Clinical Laboratories-Presence, hosted a kickoff meeting on December 4th to launch a system wide project for blood utilization. Many stakeholders attended with representation from nursing, quality, IT and laboratory leadership. The mission, goals and objectives were discussed and much enthusiastic conversation occurred over where efforts are best focused. Initial data collection and work will likely focus on standardization of restrictive transfusion criteria with implementation through the hospital's physician order entry system.

In our Franciscan Alliance hospitals, RBC utilization continues to meet our restrictive benchmarks. Many thanks for the success of this program goes to our blood bank staff, leadership and laboratory medical directors who audit this process, assuring that every transfusion is indicated and judicious use of our blood product resources occurs. This year we focused on our "yellow products" to determine if criteria were met when plasma, platelets and cryo were transfused. This audit revealed an opportunity for improvement where plasma is used to correct high INR's and an educational approach is planned which will emphasize the utility of alternatives such as vitamin K and 4-factor prothrombin complex concentrates.

Based on this success, we are now moving towards other areas of patient blood management where we can have a positive impact on patient outcomes. Using the experience and policy developed by our colleagues at Franciscan Saint Elizabeth's, a massive transfusion protocol (MTP) was written for our NIR hospitals. Our FSMH-Dyer and Hammond campuses as well as FSAH-CP facilities are applying for Level 2 trauma status and an MTP is a prerequisite for such certification. More importantly, an MTP saves lives. The gist of the MTP is a protocolized means to release blood products in a predefined ratio when blood loss exceeds a certain threshold. Infusing RBC's with plasma and platelets essentially reconstitutes whole blood and staves off the coagulopathy associated with trauma which can be aggravated by the dilutional effect of only replacing red blood cells.

Under the Microscope Cont'd

Suffice it to say, this is a complex initiative involving nursing and physician education at multiple facilities and inventory adjustments in our blood banks in collaboration with our blood supplier. Kudos to Peggy Leighty and her team at FSAH-CP, who have participated in 2 MTP's with survival of both patients. The QA process surrounding MTP is rigorous and lessons are learned with every patient.

Next, we are in the early stages of developing a preoperative anemia management program at FSAH-CP. One of the principles of PBM is to take advantage of alternatives to transfusion. In the case of elective surgery, preventing anemia through preoperative testing and correction of nutritional or other causes of anemia results in improved patient outcomes through reduced length of stay in the hospital and decreased mortality. Preoperative anemia is remarkably common in the elderly and can be seen in approximately 30% of cardiovascular and orthopedic surgery patients. Our program will work in collaboration with our blood supplier, Heartland and their associate medical director, Dr. Kyle Annen. To date we have garnered enthusiastic support from our clinical colleagues and are busy process mapping the preoperative testing process with our nursing colleagues and physician offices to determine how best to seamlessly integrate this service into patient care.

Lastly, please consider donating blood if you are at all able. Many of our hospitals and ministries have periodic blood drives but donations can occur at any time if you are able to travel to a blood donation center. Locations and hours are available on the following websites: <http://www.heartlandbc.org> and <http://www.redcrossblood.org>. We particularly need your help if you are a universal red cell donor (O neg) or universal plasma donor (AB). Platelets are always in short supply and require the donor to go to a facility with pheresis equipment for a donation process lasting approximately an hour and a half. Plasma rich products, like platelets and plasma are associated with a high risk of acute lung injury partly caused by antibodies to white blood cells, which develop during pregnancy. The mortality rate of TRALI approaches 50% which has led the regulatory agencies to limit plasma donations to men and never pregnant females, which of course limits the donor pool. So, please consider during this season of giving, to give the gift of life.



Submitted by:

Dr. Lyzak